



# Community **NEWS**



## CONTACT DETAILS

To contact FGM reception phone (03) 5439 9000 between the hours of 6:30am to 6:30pm.

This number is also the 24 hour call number. After hours and on weekends all calls are transferred through to the processing plant office, which is manned 24 hours, 365 days per year.

If you wish to receive this newsletter via email or would like to be removed from the distribution list please email [fgm.community@klgold.com.au](mailto:fgm.community@klgold.com.au)

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## WELCOME

Welcome to the third edition of the Fosterville Gold Newsletter for 2019.

The long cold and wet Winter days provided perfect conditions for our revegetation program this year, details of which are provided in the newsletter.

We have also outlined information on our noise monitoring program, progress on the ventilation shaft project and a new edition to the FGM community team.

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## WELCOME - CONTINUED

We have continued to progress our Social Responsibility Program and have developed the “5 Social Pillars of Responsibility” to assist in providing a guideline to determine which groups or programs we will contribute to or partner, while maintaining a balanced, diverse and equitable program.

Over the past months we have formed partnerships with many well deserving groups including Bendigo Foodshare, Bendigo Stadiums Fosterville Gold Reading Program, LEAD Loddon Murray Power to the People Program and the Be.Bendigo Innovation Festival & Bendigo Business awards.

### SOCIAL RESPONSIBILITY

Our responsibility towards the community and environment in which we operate.

A commitment to making a positive and lasting impact.

Essential for operational and financial success.



## OTHER ACTIVITIES

Other activities have included sponsoring the MS 24hr Mega Swim, the Write Unto Art festival, The Biggest Blokes Lunch launch and donations towards various fundraising events.

## BENDIGO FOOD SHARE

FGM feels very privileged to be able to support the valuable service that Bendigo Foodshare provides to the wider Bendigo Community.

Bendigo Foodshare is run predominantly by volunteers who rescue food and provide it to schools, community groups and emergency relief centres across the region.

The sponsorship includes annual maintenance and fuel for one of the food vans, maintenance for the second and the production of the Bendigo Foodshare quarterly newsletter.



## COMMUNITY TEAM UPDATE

Please welcome the newest member of our Community Team, Jack Baseggio

Jack joined FGM in January as an Environment and Community Advisor. Jack is an experienced environmental professional, having previously worked on wind farm developments, the Geelong Ford Factory decommissioning as well as overseas in Abu Dhabi. Jack had moved to Bendigo with his wife and is currently finishing off some renovations on his house.

Outside of work Jack enjoys fishing and camping. Jack has joined FGM during an exciting period of growth and activity, and he looks forward to meeting with community members at upcoming FGM community events.



## NORTHERN SITE PROJECTS UPDATE

Several projects are proposed to be conducted across the northern extent of MIN5404.

### Flotation Tailings Dam Number 4 (TSF4)

FGM's Tailings Dam TSF4 will soon be undergoing a wall raise. The construction and future raises of TSF4 were approved as a part of the initial application to build the tailings dam in September 2014. TSF4 is located adjacent to Fosterville North Road as can be seen on the map.

The TSF4 wall raise is expected to occur over a period of approximately 9 months, with site setup and foundation preparations beginning in mid-September. Construction will then commence in October and completion is expected by the end of April 2020. Machinery operations will be limited to occur during dayshift only (7am to 5pm Monday – Friday and 7am – 1pm on Saturday).



### 3D Seismic Survey

A 3D seismic survey is planned to occur over November and December 2019 and will be undertaken in a grid formation across the northern area of MIN5404.

The map below shows the tentative area where the survey may occur. The 3D seismic survey uses an energy source to detect contrast differences between rock types at depth. To generate the energy source the survey will use a seismic truck and/or bobcat with a drop weight, which will travel in a north – south direction. Geophone receivers will be placed at designated intervals in an east – west direction, which will be used to record reflections from the seismic energy source.



Seismic Truck

### Exploration Drilling

FGM is continuing to undertake exploration activities in the northern area of MIN5404 with several Diamond Drill Rigs currently operating. This is planned to continue for the duration of the year and into 2020. The drill rigs will continue to be housed in noise attenuation sheds.

Fosterville Gold Mine will continue routine environmental monitoring (including noise and dust monitoring) to assess and manage any potential impacts to community throughout the duration of these projects.

## FOSTERVILLE FAMILY AND FRIENDS DAY

The Fosterville Family and Friends Day will be held this year on Sunday the 29<sup>th</sup> September from 11.00am.

This community event is held every year at the Winzar's old mud brick remnant, Main Street, Fosterville. Join in on the History of the town & listen to the stories. Tea & Coffee, a warm fired and hot plate will be provided but please BYO lunch.

## PASSION AND PATHWAYS INDUSTRY VISIT

Fosterville Gold Mine was very pleased to be a host company for the Industry visits by two schools through Passion and Pathways program.

The Passion and Pathways, Primary Schools & Workplaces in Partnership was conceived in Bendigo and has been enriching the lives of Year 6 students Primary school students, from low socio-economic communities since 2012.

The program aims to raise student aspirations to value learning, training and employment and the Industry Visits provide real experiences in the work place to learn about different industries and various employment opportunities that they may not have known existed. It is hoped the experiences through the Passion and Pathways program in combination with the Industry Visits encourage students to stay at school, continue to learn and break the cycle of poverty.

Employees were actively involved in what they would present and discuss with each group of students, how they

would explore the job opportunities available in the mining industry and how they began their mining careers.

The interaction with the students is not only beneficial for the students but provides the FGM employees with an enriching experience that they all enjoyed.



## CAREERS NIGHT MONASH UNIVERSITY

Kirkland Lake Gold was invited by Monash University to be involved in their Science Industry Week, specifically the School of Earth, Atmosphere and Environment Industry Night.



Josephine Baily, Graduate Geologist & Lauren Swann, Mine Geologist

The event was well attended, with over 200 students and industry guests taking the opportunity to network and gain an insight into the range of career pathways available with a science degree.

Choosing a career in mining can be a daunting experience, especially when you have had no exposure to the industry and no idea what to expect. Students from many different disciplines were able to ask questions about the type of work we do, the lifestyle (FIFO, DIDO and mining towns), advice on how to get their first job and opportunities for career advancement. We talked about the many different professional careers possible in mining, including: Environmental, Data Science, Geology, Mining Engineering, Surveying, Chemical Engineering/Metallurgy, Community Engagement, Management/Business, Safety and Finance.

The modern mining industry is more than just trucks and high-vis uniforms. We were able to proudly share many examples of innovative science and research currently being undertaken at Fosterville, including Artificial Intelligence in our logging process, cutting-edge XRF technology to aid in Exploration, high-tech cameras for modelling point-cloud data underground and the many research initiatives at the Mill, among others.

Mining Industries in Australia are struggling to attract the workforce of the future, with many high school and university students knowing little to nothing at all about mining. Events such as this are crucial in making young people aware of the exciting and rewarding careers on offer around Australia

## CENTRAL DEBORAH GOLD MINE UNDERGROUND RESCUE TRAINING

Central Deborah Gold Mine is a historic underground mine in the centre of Bendigo. Amongst other attractions, the mine offers the paying public a chance to descend into the mine to experience past mining practices and conditions.

In recent weeks the Central Deborah Gold Mine facilitated a mock rescue scenario to provide an important training opportunity for Central Deborah staff, volunteers and first responders.

The mock scenario was based around 2 guides and 3 members of the public not being able to return to the surface.

The mines rescue team from Fosterville Gold Mine assisted along with the CFA's Oscar 1 Mine Rescue Team and Ambulance Victoria. A lot of planning and effort went into prepare for the afternoon which was led by Daniel McMahon at ISH24.

Collaboration with other services to ensure the skills and equipment are available to respond to such a unique situation is critical and something Fosterville Gold Mine is proud to be a part of.

### Oscar 1 Donation

Fosterville Gold Mine also recently donated a Kestrel anemometer to the Oscar 1 Mines Rescue Team.

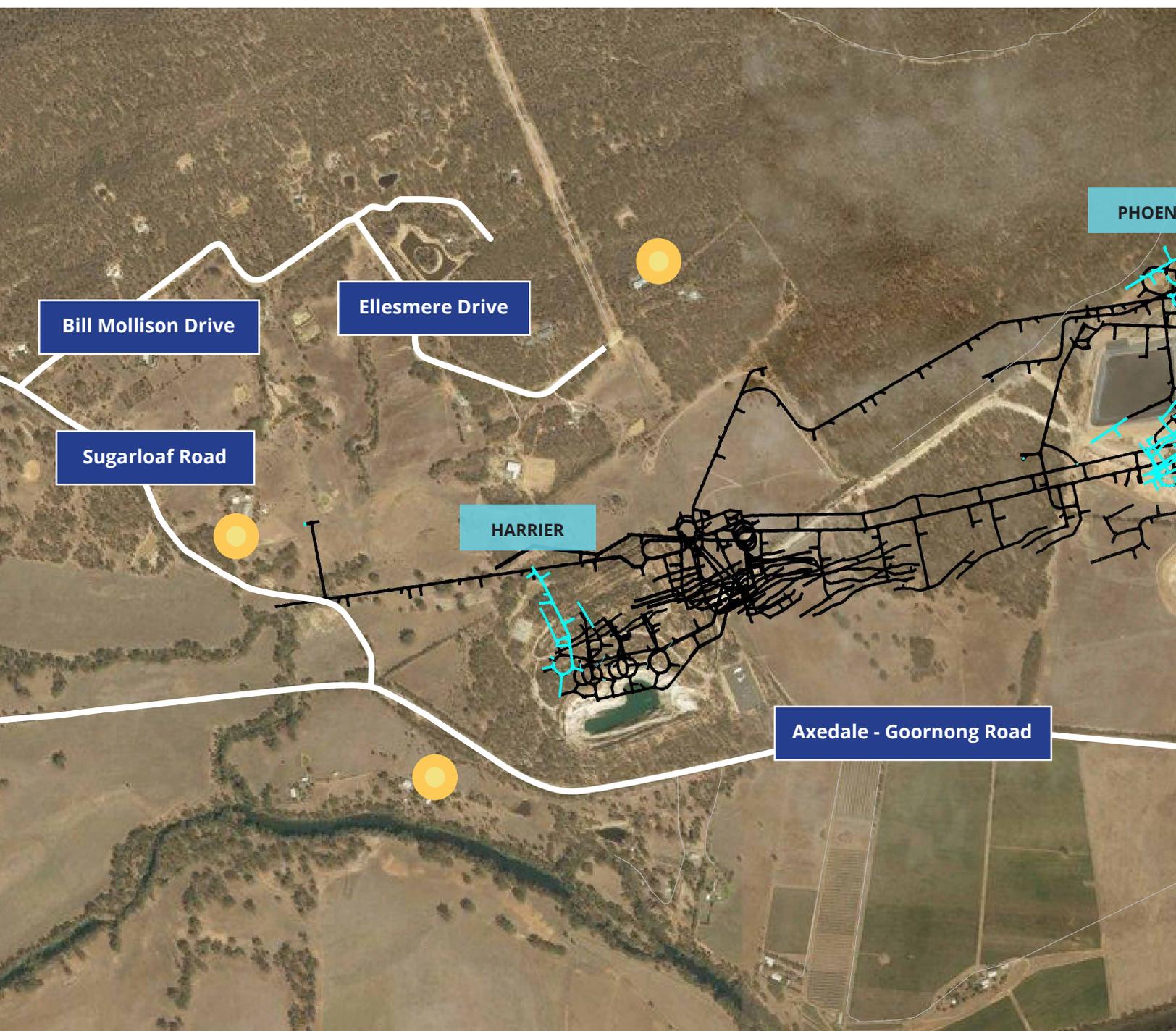
This instrument assists rescue crews in understanding wind speed, temperature, humidity and heat stress information. The instrument is critical when responding to shafts, mines and restricted spaces.



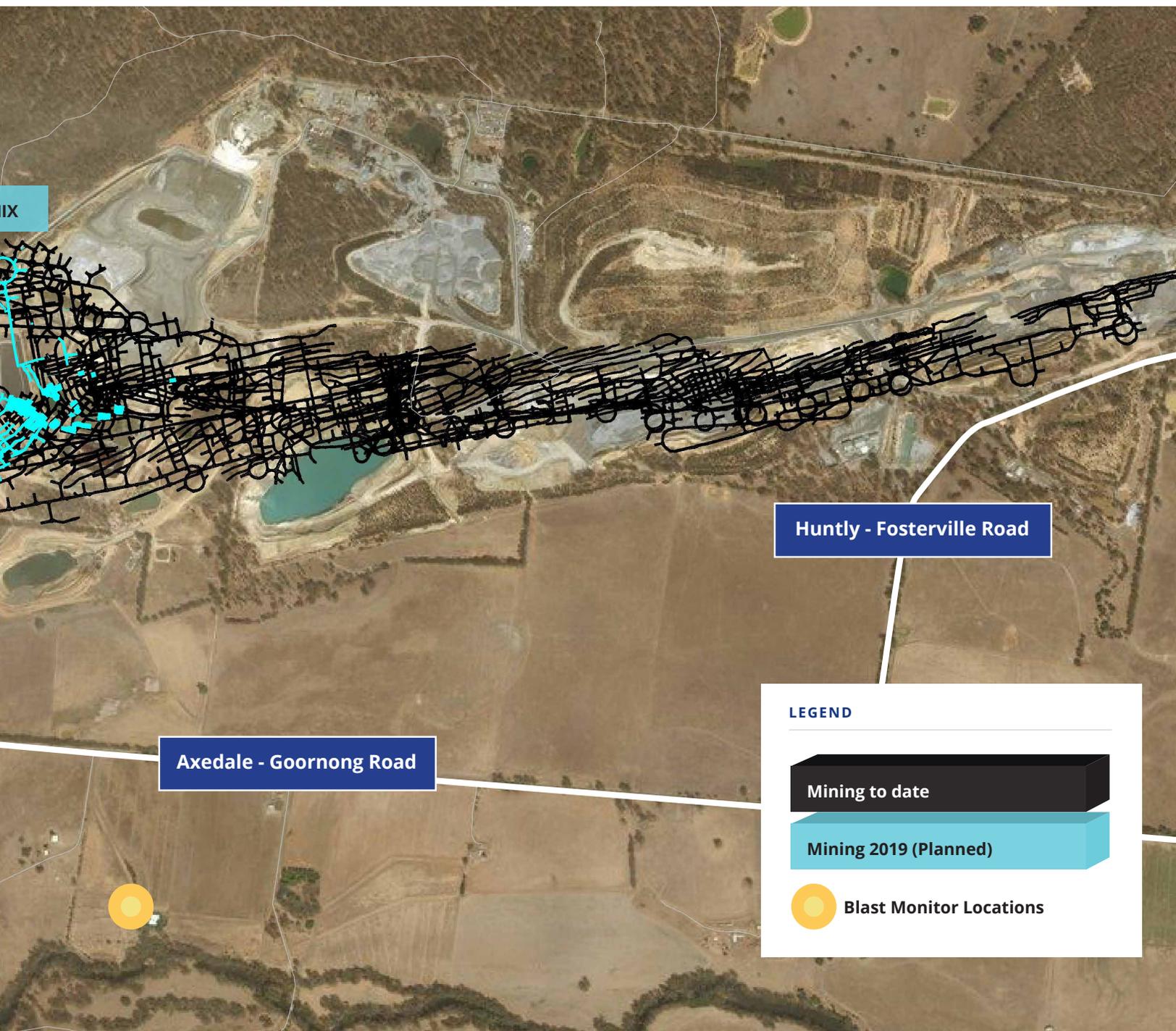
Left to right: Tyson Taylor (FGM) & Owen Shay (Oscar 1, 3rd Lieutenant)

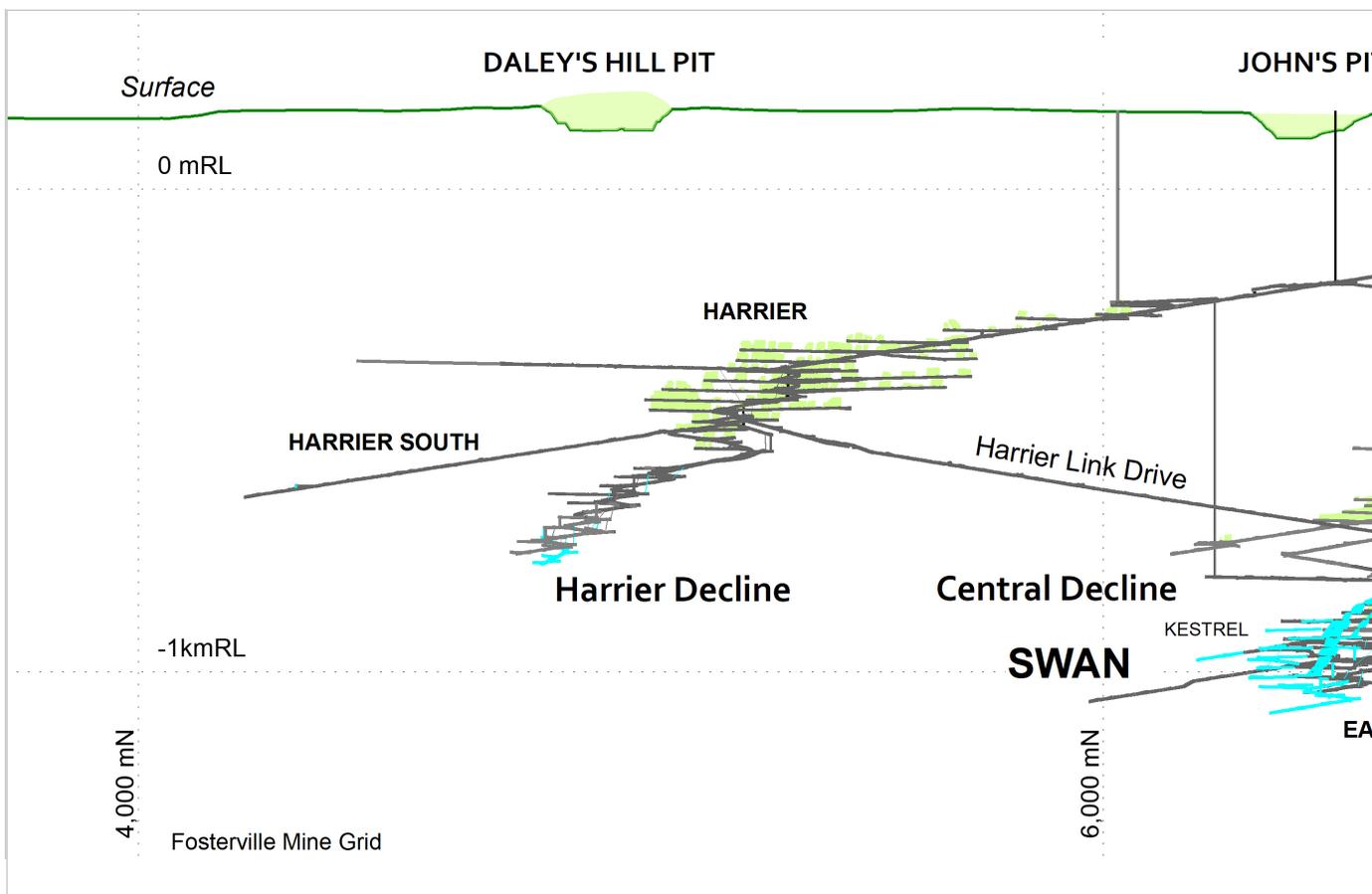
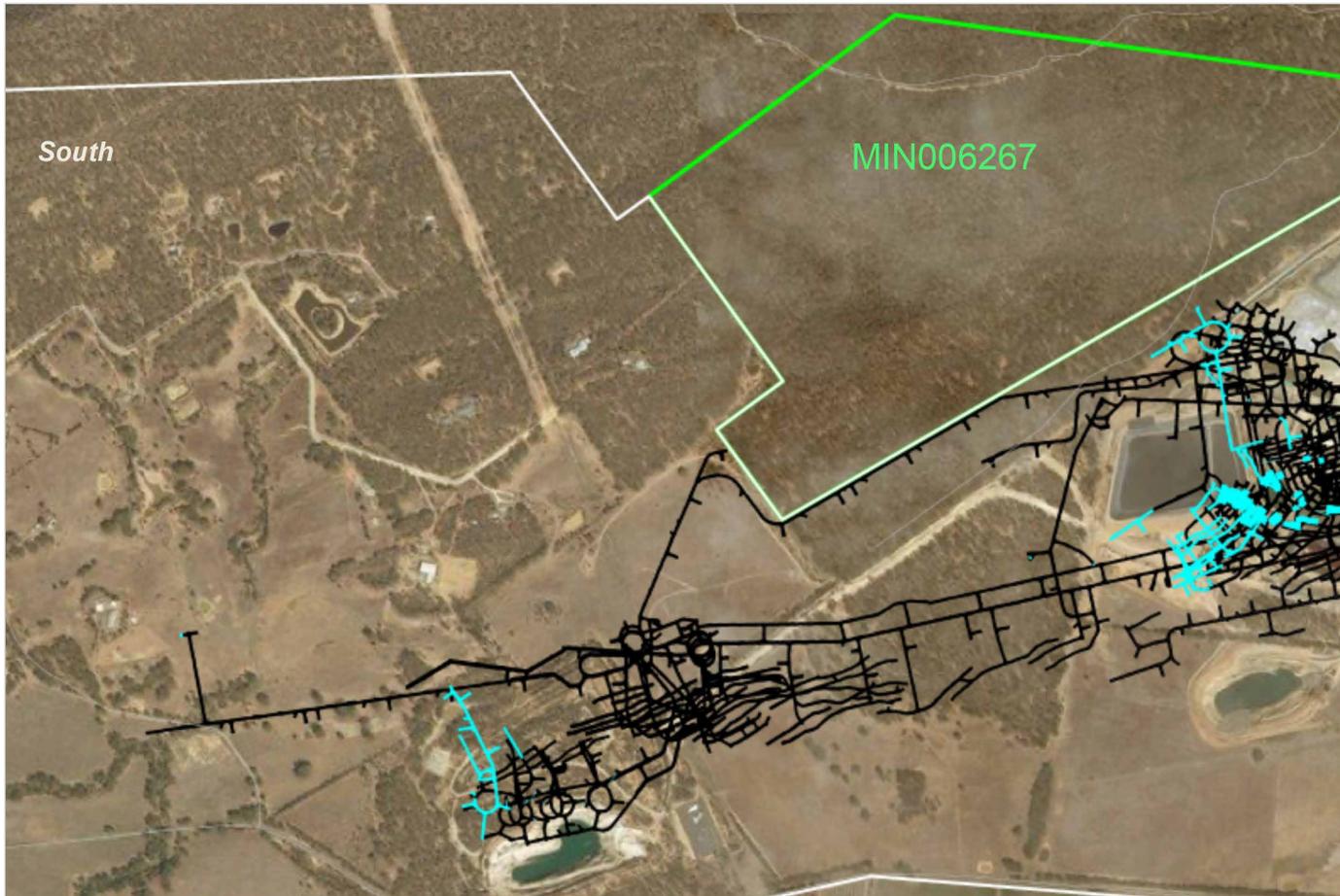
## FOSTERVILLE GOLD MINE - UNDERGROUND WORKINGS

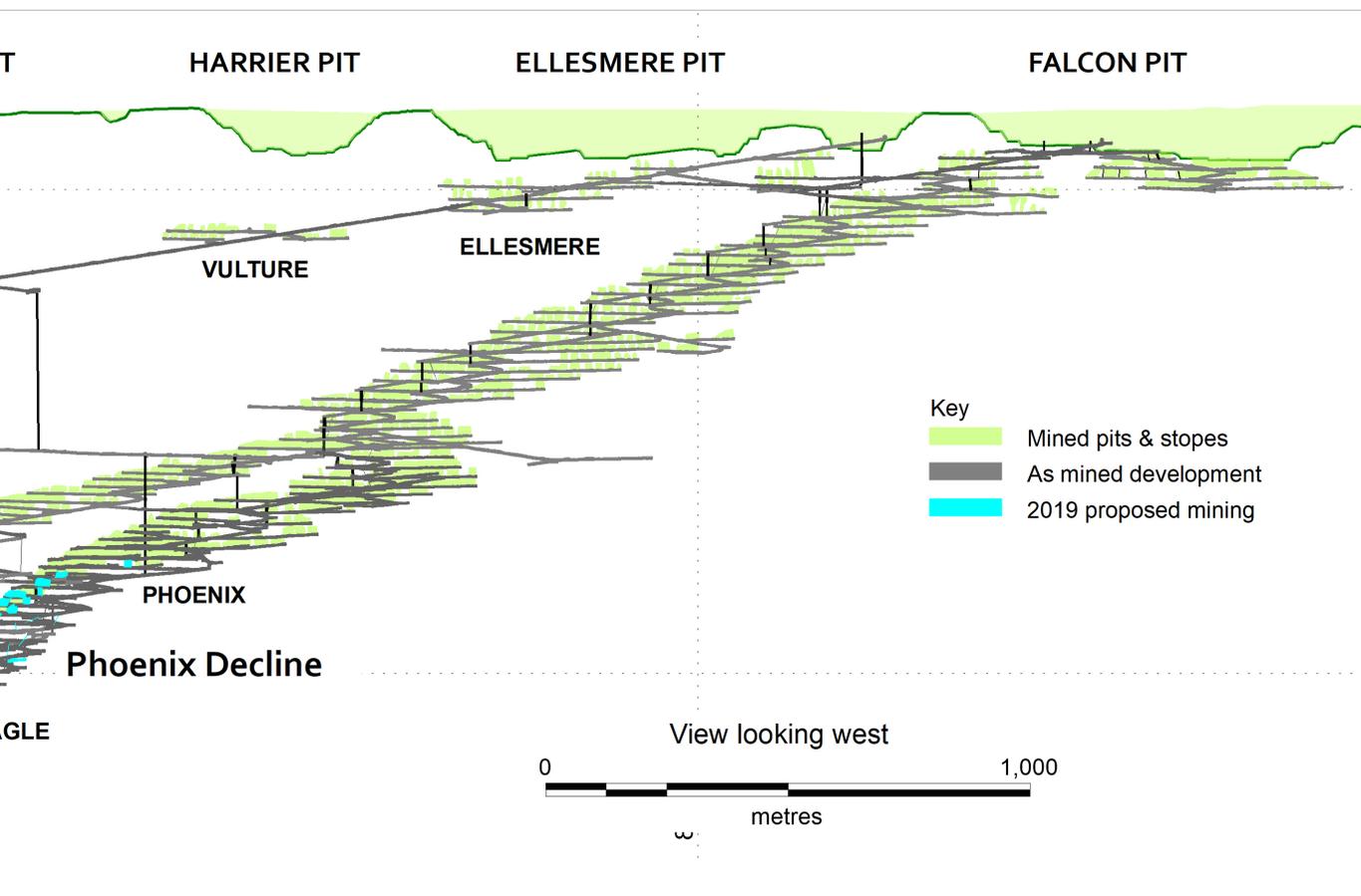
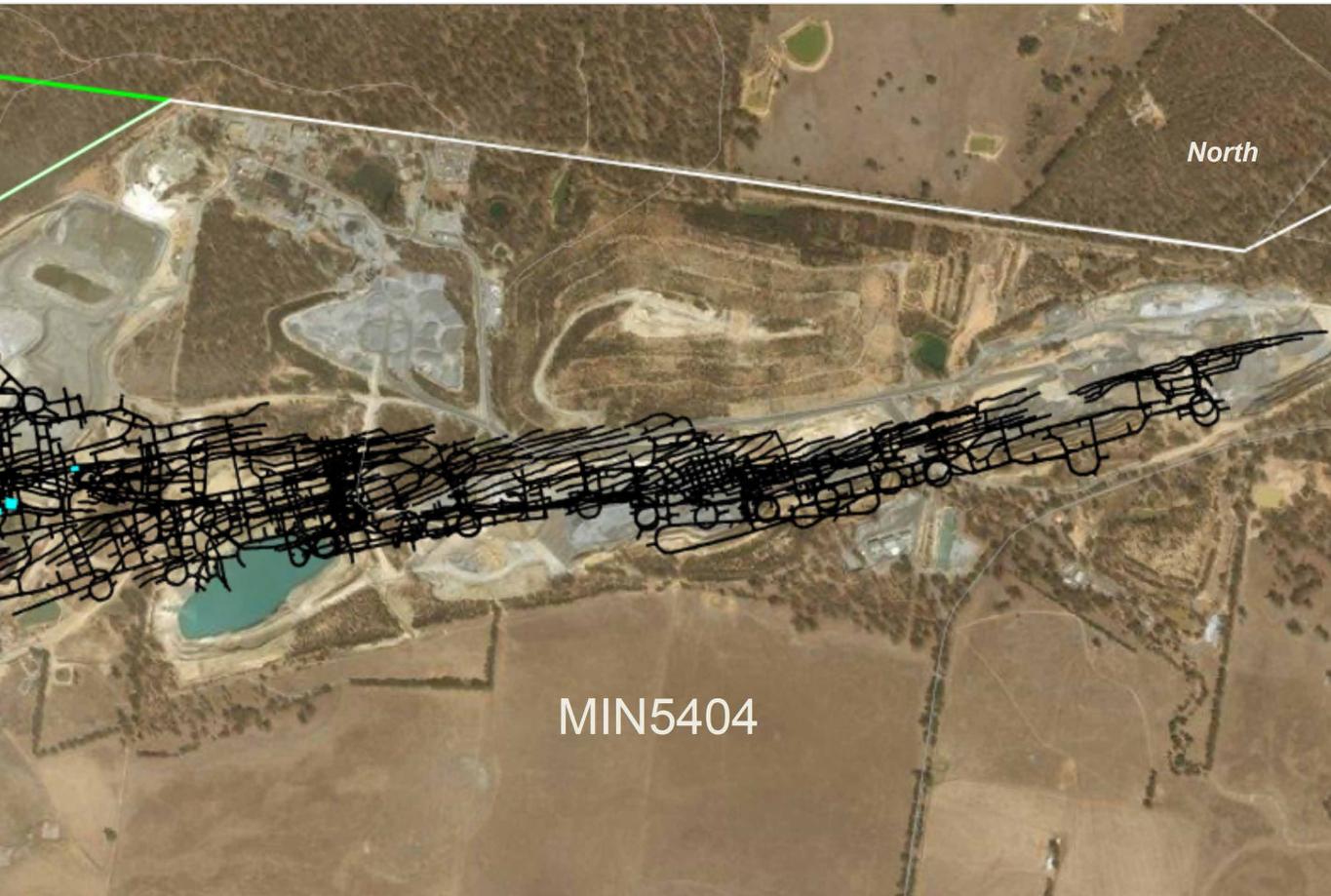
The map below is a surface projection of the current and proposed underground workings. At its deepest point the mine is now 1.2 km vertically below surface with the two main production areas of Harrier and Phoenix at depths of 800m and 1.2km respectively.



Since the commencement of Underground Mining in 2006 Fosterville Gold Mine has developed over 100km of underground tunnels.







## BLAST NOTIFICATION SYSTEM

Blasting is an essential part of the gold mining process and is used in both open pit and underground operations.

As FGM's underground mine advances, nearby residents may feel ground vibration from some firings. FGM undertakes production firings within designated firing periods (6:30am-7am and 6:30pm-7pm), however independent development firings may also be conducted at other times.

FGM monitors ground vibration from its operations using a network of blast monitors (geophones) installed on the surface at designated locations. The monitors measure peak particle velocity (PPV) in mm/s and provide data which is used to ensure FGM maintain compliance with the vibration limits detailed in FGM's Mining Licence.

As part of our commitment to keeping the community informed and process of continuous improvement to minimise adverse impacts to the surrounding environment, FGM has implemented a Blast Notification System for interested community members. The system aims to provide residents with notification in advance of planned production firings. Notifications are provided via SMS.

Any residents interested in registering to receive FGM's blast notifications are encouraged to contact the Community Team via email [fgm.community@klgold.com.au](mailto:fgm.community@klgold.com.au) or phone (03 5439 9000).

## VENTILATION UPGRADE PROGRESS REPORT

Fosterville Gold Mine (FGM) is currently mining at a depth of 1,160m below the surface. At this depth, the virgin rock temperature (VRT) is approximately 40°C. As we continue to mine deeper it is expected that this temperature will continue to increase at a rate of 2.2°C per 100 metres.

With the addition of diesel machinery underground we have now reached what is referred to as the transition zone where the current ventilation and air-cooling is no longer sufficient. To continue mining deeper we are completing a major ventilation upgrade to deliver fresh cool air to the bottom of the mine.

As communicated in previous newsletters FGM has been developing over 1000m of vertical shaft infrastructure as part of this ventilation upgrade. The shaft has been developed in three different sections. The first section was completed with a Raise Bore Machine which drilled a 570m x 5.0m diameter vertical hole from the Phoenix 4190 Level to the Harrier 4760 Level.



Raise Bore Head (Drill Bit)



Platform (stage) that miners work on and man cage they travel down



Looking down the 1.8m diameter hole

The second section is a 395m x 5.5m diameter hole also drilled by a Raise Bore Machine from the Harrier 4760 to the surface. This drilling is currently in progress and once completed ground support will be installed in this section of the shaft.

The third section is a 120m shaft, which is being developed using drill and blast methods. Initially a smaller Raise Bore Machine is used to drill a 1.8m

diameter hole from the Phoenix 4070 level up to the Phoenix 4190 level. Then miners use hand held air powered rock drills to drill around the 1.8m hole and use explosives to strip the hole out to 5 metres diameter. The broken rock falls down the 1.8m hole and is removed from below. The new excavation is then supported with rock bolts and mesh before repeating the process.



Hand held air powered rock drill

Once all this shaft infrastructure is in place we can turn on our new surface fans to increase our airflow drawn into the mine by 65%.

## NOISE MONITORING AT FOSTERVILLE GOLD MINE

Fosterville Gold Mine (FGM) routinely undertakes noise monitoring to ensure compliance with our mining licence conditions and to minimise any impact we may have on surrounding landholders

The Environmental Protection Authority (EPA) sets the standards for industry noise limits in Rural Victoria. These limits are determined by the planning zone in which the majority of houses (sensitive receptors) are located relative to the mine site.



### The three planning zones within our region include:

- FZ – Farming zone
- PCRZ – Public conservation and resource zone
- RLZ – Rural living zone

Noise limits are also dependant on the time of day i.e. day, evening or night, with lower limits also applying for weekends and public holidays. Limits are based on a 30-minute average and consider the background noise levels when assessing for compliance. Limits also apply for exploration activities outside of the mining lease.

FGM undertakes noise monitoring at 10 different locations surrounding the site, all considered to be the closest receptors. Monitoring is carried out weekly with the times rotated between day, evening and night periods to ensure compliance against all specified noise limits.

These results are then shared at quarterly Environmental Review Committee (ERC) meetings and any non-compliances are reported to our regulators, Earth Resources Regulation and the Environment Protection Authority.

Fosterville is currently working on a number of improvements and initiatives to ensure we continue to operate within our limits into the future, and some of the noise abatement projects undertaken to date include:

- The installation of noise attenuation curtains around the primary crusher, which are designed to absorb noise, whilst enabling access for maintenance.
- The use of shipping containers surrounding larger drill rigs on site.
- The installation of noise attenuation sheds around exploration drill rigs for surface exploration, which provide a fully enclosed working environment with noise attenuation.
- The fitting of fan and engine noise shrouds on ROM loaders.

## REHABILITATION PLANTING

Our planting contractor Goldfields Revegetation have been busy in the past months, making the most of the rain to plant out a number of areas.

Work has included rehabilitation along the eastern side of Harrier Pit and a large screen planting to the south of site, both of which will improve visual amenity from Axedale-Goornong road, helping the operation blend into the Sugarloaf range behind us.

A mix of over 1400 local trees, shrubs and grasses have been planted as tubestock and 2kg of wattle seed has also been spread over the areas so far this year.





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