

Correnso & Martha Exploration Project: Community Q&A October 2011

Newmont Waihi Gold has received a range of questions about the Golden Link proposals. Some of these have already been addressed in the *Correnso and Martha Exploration Questions & Answers* that were distributed to households when the proposals were originally announced. Below are recent questions posed by community members, and our answers.

Air Quality

What comes out of the vent shaft after a blast?

For a short period immediately following a blast the emission will contain diluted blast fumes. Monitoring of the Favona vent shaft shows that we are well within all the relevant health criteria. For all measures the emissions from the Favona vent shaft are between about 30 and 3,500 times less than the criteria. Personal exposures will typically be even less than this when distance from the vent shaft and wind direction and speed are factored in.

Blasting, vibration

What does six millimetres a second, peak particle velocity, vector sum, actually mean? That kind of vocabulary is not common in normal household conversation. How will that feel at my house?

We have some information about vibration and blasting at our Golden Link information office, including a vibration monitor. Vibration is measured as ground velocity in millimetres per second (although the magnitude of the actual movement is only fractions of a millimetre). The vibration experience is directly related to the size of the blast and the distance from the blast. The maximum blast vibration levels permitted at Waihi's mining operations are specified in the consent conditions. These limits are lower than other known international standards for blast vibration. The maximum permitted level for vibration levels at Favona and Trio is 6mm/s (millimetres per second). For the Martha open pit the limit is 5mm/s.

The vibration limits we will seek for Correnso would be no greater than this. We expect that production blasting (used to mine ore) will take place once every two to three days, with smaller development blasts (used to construct access tunnels) occurring more frequently. This would result in approximately 30 seconds of blasting per day (e.g., 10 seconds per blast, 3 times per day), the majority of which would be at very low levels.

The 5mm/s can be compared to vibration levels for a range of day to day activity as set out in the table below.

Household activity	Vibration level (mm/s peak particle velocity, vector sum, immediately adjacent to the activity)
jumping	up to 250
nail hammering	up to 100
walking	up to 40
shutting door	up to 30
sliding door	up to 10
Blast vibration consent limits at Favona and Trio	up to 6 (maximum ground vibration at consent boundary for not more than 6 seconds duration)



Fixed vibration monitoring stations are located at selected sites. A mobile vibration monitor is also used to collect additional data. Information from every blast is recorded and is immediately available to the Hauraki District Council. (The Council also carries out independent monitoring of our performance). This data also becomes a reference for designing future blasts. Levels set by the consent conditions are for personal comfort and are well below the levels known to cause either superficial damage, such as cracking of plaster, or structural damage to any of the building elements.

Building surveys

Are you going to check buildings for structural defects, e.g., cracks, and compare every 6 months?

Will we get any structural benchmarking undertaken so future damage can be identified?

Recent consents have required us to complete independent building surveys for selected properties close to our projects. This is to ensure that there is a clear baseline record of the condition of houses before mining begins. We will be seeking to do the same for Correnso for some properties.

There is no physical threat posed to the structural integrity of residential properties by mining. Vibration at Correnso would be no greater than that already felt by residents closest to Favona. However, if a resident feels that damage occurred at their property due to mining activity we may commission a further independent building survey to assess the cause. If that survey should confirm that damage was caused by mining activities the company would cover the cost of repairs.

There are a number of factors that can have a bearing on the condition of a property. These include age, construction quality and materials, temperature, wind loads, moisture content and maintenance.

Community improvements

If the company improves our area, will that improve our home values?

We have already started the process of gathering comments and suggestions for how we can collectively achieve the development of the new programme and there are lots of good ideas coming through. We will continue to seek professional advice on which household and community improvements are most likely to increase property values. We do have available a report from Boffa Miskell that summarises in general a range of improvements and the percentage increase in property values these improvements can make.

We know that one of the key issues of concern to many people is maintaining and improving property values, particularly in the proposed Correnso area. Our objective from the outset is that the community should not be adversely affected in the long-term. We share the objective held by most people of developing practical options that encourage people to stay in Waihi and protect people's investment in their homes and properties. When we made our announcement in late August, we committed to working with the community to develop a new programme to maintain and improve property values in Waihi East. This is in addition to offering the existing Amenity Effect Programme.

Insurance, bank loans

Will mining at Correnso affect my property being used as security for a bank loan?

Could this affect our insurance premiums or our ability to get cover?

While there is a lot of rumour on this issue we have yet to see a documented case of insurance premiums increasing or insurance or mortgages being denied because of mining in Waihi. The only reason why it should would be if there is a threat to the structure and value of the property because of mining. Modern mining means that there is no such threat. We have provided detailed information and evidence on how we mine to local banks, valuers, and insurance agents, as well as to the Insurance Council of New Zealand and the Bankers Association. We will continue to meet with insurers and bankers and to provide them with answers to any questions they have about potential effects of mining on property. We would request that if any resident has clear evidence of them being disadvantaged by insurance companies or banks citing the mine as a reason they should get in touch with us directly by calling 0800 NEWMONT (0800 639-6668).

It is important to note that no insurance company in New Zealand, or indeed in most of the world, will provide insurance cover for land subsidence. We are 100% confident that our operations have not over the past 24 years caused subsidence. Nor has the settlement from dewatering, which was known about and its magnitude predicted prior to the start of dewatering, been shown to cause structural or cosmetic damage to property. It is also notable, that insurance premiums right throughout New Zealand are increasing due to huge losses felt by insurers in the past 12 months.

Monitoring

Will there be any monitoring equipment placed in the school or community?

What type of monitoring is there? How often is this checked and who is it checked by?

At present we do not envisage a need for permanent monitoring equipment at the school. A portable vibration monitor (about the size of a school bag) could be placed there at times if this was requested.

Monitoring is carried out for many aspects of our operations, including sound, air quality, vibration, settlement, groundwater and river water quality and quantity. Some of our monitoring is carried out by our own technicians, following standard procedures as set out in the conditions for our resource consents. Other monitoring is carried out by independent specialists or by the councils. All monitoring results are peer reviewed by the councils and many are subject to independent peer review.

Property purchase

Will you buy my house?

When we made our announcement in late August we committed to working with the community to develop a property policy. We also stated that we have a preference for not purchasing property outright and that we will work with homeowners on a range of other options. In the past we have not purchased property unless we felt that a buffer zone was required between our operations and residents in order to meet our consent limits at that location. We are aware that some houses in Waihi East were already for sale at the time of the Correnso announcement. Some home owners have since said that as a result of the announcement they feel they must sell their property. We will be working to develop a policy that we anticipate will deliver optimal outcomes for the all of the community. We have stated that there will be a policy in place by the time we lodge consent applications early next year.

Safety

Can you guarantee that people on the surface will be safe if you mine under them?

There is no danger to anyone on the surface from the Correnso proposals. We take rock out of the mine but we also put a lot back in. Modern mechanised mining, which operates from the bottom up, requires all stopes (mined out areas) to be filled so that we can access the ore in the next level above. Filling provides lasting stability. There will be no large voids. We would not be sending our workers underground if the conditions were not safe. We will not put anyone on the surface at risk either.

What size earthquake can tunnels (backfilled and operational) safely withstand, given the increasing number of earthquakes in our region?

The ground surface and ground-based structures are more exposed to earthquake damage than underground structures. Overseas studies of how tunnels perform during earthquakes show that they suffer little damage from earthquake shaking even during major earthquakes, e.g. the underground Manapouri Power Station has withstood a major earthquake with little to no damage, and the Lyttleton road and rail tunnel were only slightly affected by the recent Christchurch earthquakes (there were problems with the road tunnel portal). Our studies show:

- Tunnels deep in rock are safer than shallow tunnels.
- Correnso will not be subjected to the damaging surface waves generated during major earthquakes, and hence will be less susceptible to earthquake damage than overlying property.
- Damage to the portal (mine entrance) could be expected under a major earthquake. This is a commercial risk to NWG.
- Some earthquake damage within the mine may be expected if it intersects a fault and if the earthquake causes movement on that fault.

- Any movement on a fault through the mine will also affect the overlying property, but not as a result of the presence of the mine.
- In summary, the presence of an underground mine would not increase damage to surface property caused by an earthquake.

What types of emergency response plans are in place, should an unforeseen event occur?

We have extensive emergency response plans. We have a dedicated Mines Rescue team that trains regularly underground. We have underground refuge chambers. All of this is to ensure the safety of staff working underground. There is no possibility of any activity 200-300 metres below the ground that would have any effect on the surface.

Stopes

How long does it take to complete a stope?

A stope is the name given to a section of the ore body that is being mined. Should the Correnso proposal go ahead, it is anticipated that stoping will occur from 2015 until 2020. At the lowest level of any workings the rock is mined out between two levels, producing a working area or stope underground that measures approximately 10 - 15 metres high, 20 metres long and 5 metres wide. Individual stopes may be 15,000 tonnes to 25,000 tonnes in total volume but we would expect to extract 1,000 tonnes per day from them and then backfill them at a similar rate. It therefore takes approximately 30 days to 50 days to mine each stope but only a portion of a stope is open at any time. We may have generally three or four stopes (but sometimes more) operating at any one time in different parts of the ore body.

Subsidence

What are the chances of further subsidence events like the 2001 Barry Road collapse?

Our underground mining methods leave no room whatsoever for subsidence to occur. First, the stopes are much smaller than the historic voids. Second, we will backfill all of the mined-out areas with waste rock so there will be no large unfilled stopes that could initiate a collapse.

After the ore is mined the empty space is filled with waste rock which forms a solid floor for the next level above. Heavy machinery, such as loaded boggers (48 tonnes) and loaded trucks (50.5 tonnes) working on the fill provide compaction and stability.

At the Favona underground mine, stopes have been backfilled as work has progressed from the bottom of Favona (332 metres below the surface) towards the top. Mining will be completed there by the end of this year, when we will then move to the Trio mine using the same methods. If the Correnso mine should go ahead, mining would also occur from the bottom up.

Tunnels

Why can't the tunnels stay under roads and not under the school and private properties?

Some tunnels have to be constructed in specific locations so that we can access the ore body. The location of these cannot be changed. However, wherever possible we have positioned the access tunnels to follow the roads, which are mostly owned by the Council, to minimise the lengths of tunnels under other landowners' property. The stability of the roads or any other overlying property is not compromised in any way.

Further information

I still have questions and concerns about the proposals. What can I do?

It's really important that you get good information and have an opportunity to talk through the facts of the proposal for Correnso and the Martha Exploration Project. We have visited over 500 homes near the proposal areas. If we

have missed your home and you would like to meet, or you have already had a discussion but have more questions, please call 0800 NEWMONT. We are happy to visit in the evenings at times to suit. We have also been working hard with community organisations and attending specific discussions about the proposals. Please call us if your organisation would like us to attend a meeting.

Further Q&As

We have not published the full list of Q&As here as some have been answered in previous publications or are specific to individuals or particular locations.

The full list includes:

Amenity Effect Programme (AEP), Air Quality, dust, health, Blasting, vibration, Building surveys, Community improvements, Correnso ore body, Ground water, dewatering, Insurance, bank loans, MEP, Monitoring, Polling, survey, Safety, Stopes, Subsidence, Tunnels, Visual effects, Waihi East School.

There is also additional information in the form of appendices available on: community consultation timelines, AEP, a report on the value of public space in communities, traffic vibration compared with that produced at Favona, and a diagram of the groundwater system. This material is available at the Golden Link Information Office.

To find out more...

Call in to the Golden Link information office in Seddon Street beside the Memorial Hall. It is open weekdays from 10.00am to 2.00pm.

We are keen to attend community organisation meetings or host meetings in our Golden Link information office.

Check out our website www.marthamine.co.nz .

Our 0800 NEWMONT (0800 639 6668) freephone is available to residents 24 hours a day, seven days a week.

You can contact us by email at this address: waihi.info@newmont.co.nz