

GUYONG QUARRY – DETAILED RESPONSE TO PUBLIC EXHIBITION SUBMISSIONS

Submitted by NSW Government Office of Water (NOW) 12 November, 2009

Groundwater Assessment and Licensing

- Conflicting Statements

Proponent's response:

The statements do not necessarily conflict. The groundwater level measured in BH5 is 910.61m. However looking at Figure 7.1 on page 88 of Volume 1, it can be seen that BH5 is some distance away from the proposed quarry pit. In comparison the groundwater level measured in BH4 is 897.44m, and as shown on Figure 7.1 is much closer to the proposed quarry pit and Lewis Ponds Creek. On this basis BH4 can be assumed to be a better representation of the groundwater level below the proposed quarry pit. The final RL of the proposed quarry pit is 910m, which is 12.56m above the groundwater level in BH4. This suggests that it is highly unlikely that the final base of the quarry floor will intercept with the groundwater source and any water passing between the natural surface and the permanent source of groundwater may be referred to as vadose water in the unsaturated zone. As such there will be no impacts on the groundwater source. In relation to NSW Inland Groundwater Shortage Zones Order No.1 under the Water Act 1912, the project is not relevant in terms of:

- Permanent transfer of water, and
- Temporary transfers of only the unused portion of the active groundwater component
- History of extraction

The groundwater inflows of less than 2L/sec are expected to be produced from fractures which hold recharge water or vadose water. According to the Coffey report "*Flows from such features would tend to decline over a period of weeks as storage is depleted*". More importantly the interpretation of the hydraulic test carried out on BH5, which is in fresh basalt, indicates a permeability of less than 0.0001m/day.

Notwithstanding the above Hanson acknowledges the importance of avoiding impacts on the groundwater system in this area. Accordingly Hanson will obtain licences for the 5 bore constructed on site for the purposes of monitoring only. As per the recommendations of the Coffey report, Hanson since September 2009, commenced weekly monitoring of water levels in the 5 boreholes on site to monitor and improve confidence on the level of the groundwater across the site. This along with a regular census of bores within 3km will form the basis of a Groundwater Management Plan in consultation with and to the satisfaction of the NSW Office of Water.

- Recommended Conditions of Approval

Proponent's response:

The proponent is confident that by using the latest technology the water requirements can be complied with by relying on Landholders Harvestable Rights entitlement. This has been demonstrated in the Evans and Peck Report as part of the EA. The proponent will commit to developing a Groundwater Management Plan and a Surface Water Management Plan in consultation with and to the satisfaction of the NSW Office of Water prior to the commencement of activities.

The proponent will obtain the relevant licences for the 5 boreholes on site for the purposes of monitoring water levels and water quality.

As part of the Groundwater Management Plan the proponent will commit to obtaining the relevant licenses to the satisfaction of the NSW Office of Water prior to

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the commencement of any activities that will intercept or extract groundwater prior to the commencement of these activities.

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Submitted by NSW Roads and Traffic Authority (RTA) November, 2009

Proponent's response:

The proponent agrees to:

- Design the quarry entrance intersection in accordance with the RTA Road Design Guide.
- Provide a copy of construction plans for proposed roadwork associated with the access for RTA approval.
- Enter into a Works Authorisation Deed with the RTA.
- Conduct a Road Safety Audit at design and pre-opening stages.
- Give consideration to use of sight markers and other mitigation measures in the event of fog.
- Install truck warning (W5-22) and distance plate (W8-5) signage, supplement by twin flashing lights activated when a truck is exiting the site.
- The proponent acknowledges that RTA Property may acquire a strip of land along the Mitchell Highway for overtaking lanes.
- Design a suitably sized drainage system to allow longitudinal drainage flows along the Mitchell Highway not to be impeded.
- Not impede lines of sight with landscaping and signage along the Mitchell Highway.
- Obtain a road Occupancy Licence prior to any works commencing within 3m of the travel lanes.
- Not pass on any costs associated with the quarry entrance intersection to the RTA.

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Submitted by Stephanie Bestwick and Simon Warner, 22 November, 2009

1. The presence of Naturally Occurring asbestos

Proponent's response:

Rangott Mineral Exploration (RME) were commissioned by Hanson to conduct a thorough assessment of the site to determine whether there is naturally occurring asbestos on the site.

The study involved geological mapping and sampling (on the surface, excavator dug pits, and examination of core holes) of the areas within and around the development envelope of the proposed quarry (see figure 1 below). The report concluded that the basalt in the proposed extraction quarry pit, where drilling and blasting will occur, does not contain asbestos. Based on this the risk associated with exposure to asbestos due to drilling and blasting within the quarry pit is negligible. The RME report indicates that the risk of encountering asbestos increases further to the east away from the extraction area. The RME report has classified the areas of risk as shown in figure 2 below. In the western half of the proposed processing plant and stockpile area, there is an increasing thickness of cover of partly to deeply weathered Tertiary basalt. This cover material is unlikely to contain asbestiform minerals, except where mixing of Ordovician and Tertiary rock rubble may have occurred in the past. Tremolite asbestos has been detected in the Byng Volcanics rocks that are exposed sporadically along the eastern quarter of the proposed plant site, and for at least 150 metres to the east of the eastern boundary of the plant, and in all probability, are exposed much further to the east.

The mitigation strategies recommended in the RME report are:

- Excavating subsoil and clayey weathered Tertiary Basalt and Scree rocks from the western side of proposed plant site and connecting ramp to quarry pit and placing it over the eastern side of the plant site and compacting it **providing a safe cover of 1-2m over the high risk zone.**
- Excavation of the larger water storage dam retention pond will require constant wetting down of work areas. Wearing of appropriate dust masks in the work areas and downwind during this activity. The filters in air conditioning units on plant equipment should be fitted with filters to prevent fine asbestos fibres from entering the cabins, and washing down plant and equipment on completion of the dam construction will be necessary.
- The entire finished dams should be covered with a thin layer of subsoil or clay, overlain by a thin layer of topsoil, and vegetated with durable binding pasture.

Hanson will further investigate the feasibility of importing clay material to construct the dam to avoid/minimise any excavation work in the dam's construction.

As stated in the RME report, in all probability the areas much further to the east of the proposed development areas are likely to have a greater occurrence of natural asbestos. This would logically include adjoining properties. This is supported by anecdotal evidence of neighbours who have encountered it on their properties while ploughing their fields. Any land that is subject to activity or proposed development that disturbs ground that has the potential to contain naturally occurring asbestos should undergo a thorough risk assessment so that landowners and other members of the public are not put at risk.

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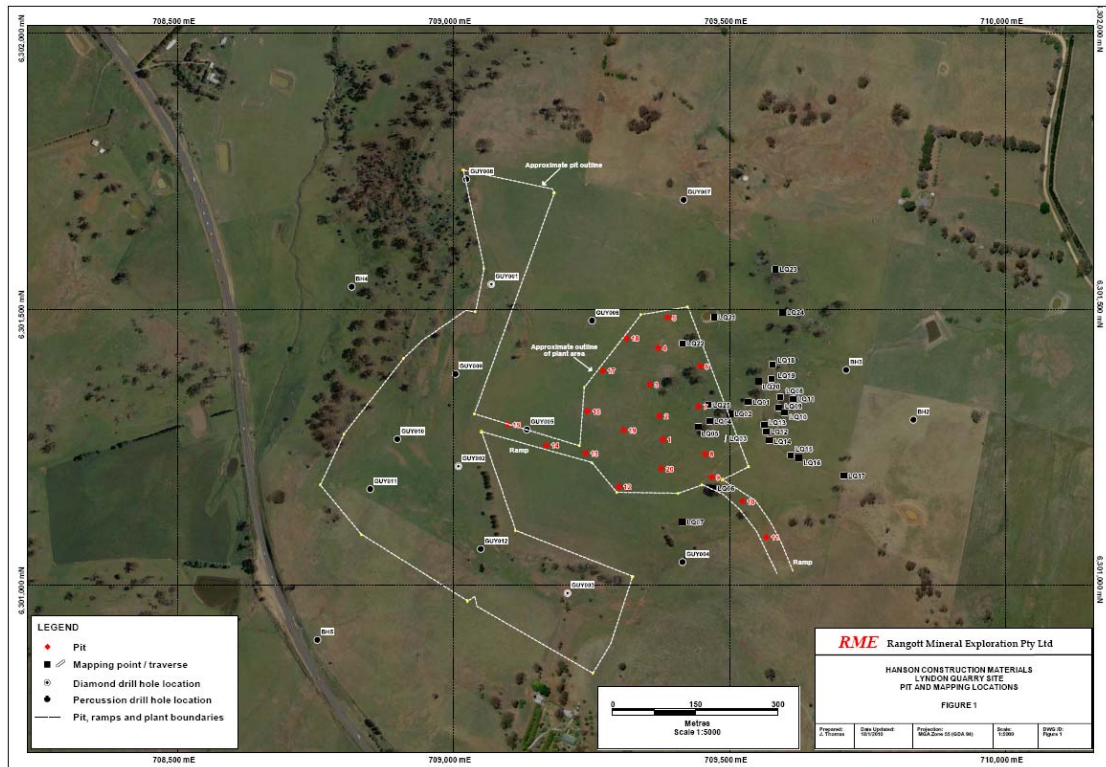


Figure 1- RME, naturally occurring asbestos pit and mapping locations for the proposed quarry site.

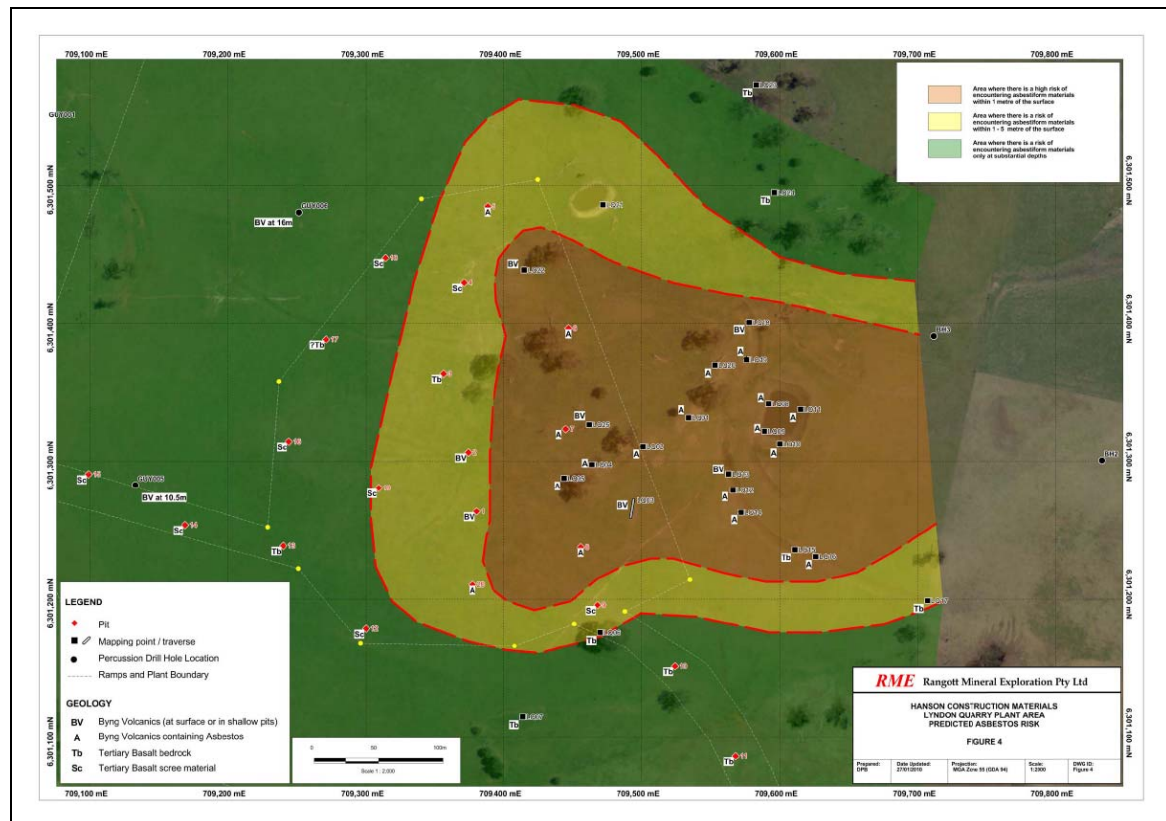


Figure 2- RME, predicted asbestos risk for the proposed quarry site.

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2. Increase traffic noise by truck from the quarry

Proponent's response:

In comparison to the total of 207 and 403 other vehicles passing the quarry site per hour in the morning and afternoon respectively, 5 quarry trucks entering and leaving the site during the same period will not be noticeable in terms of an increase in noise.

3. We believe dust will be more of a problem to nearby residences than Hanson's report indicates

Proponent's response:

The proponent understands that quarries are an emotive issue. However based on the air quality assessment conducted by Heggies Pty Ltd the project satisfies the requirements as determined by the regulatory authority DECCW.

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Submitted by Nancy Gordon (Gordon Family) "Bethune", 22 November, 2009

Proponent's response:

The visual impact from Bethune will be minimal. All the extraction will be done from the East side of the hill that faces Bethune. A portion of the top of the hill on the south west corner is planned to be removed in the later stages of the extraction but from Bethune this will not be seen at all.

As with all land holders we are governed by the Water Management Act 2000. This Act has a range of statutory water management plans covering aspects such as water sharing, and water sharing plans. A major element of a water sharing plan is protecting the water required to meet basic landholder rights. Three basic rights to access water are available to rural landholders' in NSW. Licences are not required for water taken under basic rights:

1. Domestic and stock water
2. Native title water
3. Harvesting runoff – farm dams

Harvestable right water is generally intended for essential stock and household use but can be used for any purpose. Harvestable right water allows for landholders in most rural areas to collect a proportion of the runoff on their property and store it in one or more farm dams up to a certain size. The quarry will source its water by collecting runoff and storing it in a dam. The quarry will not be using bores to access water. The bores we have installed on site are piezometers used for monitoring the groundwater, which we have given an undertaking to monitor on an ongoing basis.

All the production facilities and extraction activities will be on the east side of the hill that faces Bethune and the truck access is on the South East side of the property. The Carina Vale property is located between the proposed quarry and Bethune. Being the closest property in this direction, the noise assessment was carried out on Carina Vale. The noise assessment on the Carina Vale property measured over a 10 day period the existing noise levels from current sources such as the roads, birds, any farming activity and other rural background noises. The measured noise level was above 30dBA for 90% of the time both day and night. Or the equivalent of a constant noise level of at least 60dBA for the entire time. Based on this, the acceptable noise level limit has been determined (by Heggies Pty Ltd) to be 42dBA during the day and 35dBA during the night at Carina Vale (this is the noise experienced outside the building). The noise modelling predicts that the noise coming from the quarry operations would not exceed 33dBA during the day, and 35dBA during the night (if the quarry were to operate at all of a night). Therefore as the noise assessment has demonstrated that the noise coming from the quarry operation will be lower than the noise level currently being experienced at Carina Vale it can be concluded that there is no increase attributed to the quarry. Consequently if it has been demonstrated that there is no impact on Carina Vale then it implies that there will also be no impact on Bethune as Bethune is further away from the proposed quarry than Carina Vale.

The EAR has demonstrated that the site would have minimal impact if operated 24 hours. However, the weekend production work hours is expected to be similar or to our Bathurst Quarry.

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Submission by Mrs Janis Elizabeth Pritchard, 20 November, 2009

Proponent's response:

Hanson regrets that many residents feel that they were not provided with sufficient time to absorb the contents of the EA report. The proponent used the services of independent experts to study the effects a new quarry may have on the existing environment. The purpose of the environmental assessment is to:

- Determine whether the proposal will have any serious impacts on the existing environment; and if there are serious impacts;
- Determine what can be changed on the proposal to bring the impacts down to an acceptable level.

In order to achieve these 2 points it takes a considerable amount of time for the experts to assess each modification as a separate iteration. This is done so that the proponent is made to present to the Department of Planning the best case proposal that will have on-balance the smallest amount of environmental impact while providing the most benefit to the broader community. All stakeholders including the proponent, the residents and government agencies have to rely on the independent experts presenting the environmental assessment that addresses all the requirements of the planning process.

The water the proponent proposes to use for the development is the amount as a land holder it is entitled to. This is the same entitlement that is granted to every other landholder in the state. Is a fundamental landholder's right that should not be taken away. To state "*The water that Hansen proposes to use whilst crushing will mean the whole water table level in the area will be non existent...*" is simply not true. The water used on the development will be sourced from surface runoff not groundwater.

Traffic will not become horrendous due to the presence of the quarry. As demonstrated in the McLaren Traffic Management Report the quarry during the peak hours will generate 5 trucks (note on average there will be only be 3 quarry truck movements per hour) entering and leaving the site during the AM and PM peak hours. During these hours the number of other vehicles currently passing the site is 207 and 403 respectively. The quarry truck movements are trivial in comparison. The RTA will be consulted in regards to the design of the quarry entrance intersection and the proponent has given a commitment to satisfy their requirements.

As demonstrated in the Heggies Pty Ltd report, blasting will not create a significant increase to the existing background dust levels.

There is little evidence that the mere presence of a quarry in the area has been shown to decrease property values. Hanson has a number of quarries in NSW that have been operating for more than 40 years. Over the years these quarries have been subjected to an increase encroachment of residential dwellings. It is difficult to believe that a significant number of people would capitalise large amounts of money building a family house near a quarry if they believed that it would ultimately result in a financial loss or a detrimental standard of living. Notwithstanding this, the historical house prices (RP Data) of properties within the vicinity of Hanson's existing quarries have all demonstrated positive growth in value in-line with the greater regional area in which they exist; and in some circumstances for example the suburb of Shell Cove adjacent to Hanson's Bass Point Quarry have far exceeded the growth trend of the local LGA. It should be noted that Hanson's Bass Point Quarry is more than 5 times the size of the proposed Guyong Quarry and Shell Cove has a population of 2,833(2006) compared to Guyong's population of 276(2006). This situation is similar for Hanson quarries at Somersby and Kulnura, NSW.

It is more likely that property values will be more negatively affected by the likelihood of Naturally Occurring Asbestos on all nearby properties that contain Serpentine rock.

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As a land owner the proponent is not seeking to create any subdivisions or concessional lots for future development, which present a greater threat to the Guyong's future than a quarry providing essential building materials for the greater Orange/Bathurst communities.

According to the Flora Study Report by Geoff Cunningham Natural Resource Consultants Pty Ltd:

"The vegetation is relatively heavily invaded by introduced plants"

And also:

"Completion of the 7-Part Test indicates that there will be no significant impact on any threatened flora species, endangered flora populations, endangered ecological communities or critical habitat resulting from development of the proposed East Guyong site."

According to the Fauna Study Report by the Western Research Institute Ltd:

"No species listed as threatened in the state Threatened species conservation Act 1975 (TSC Act) or commonwealth Environmental Protection and Biodiversity Act 1999 (EPBC Act) were observed during the survey"

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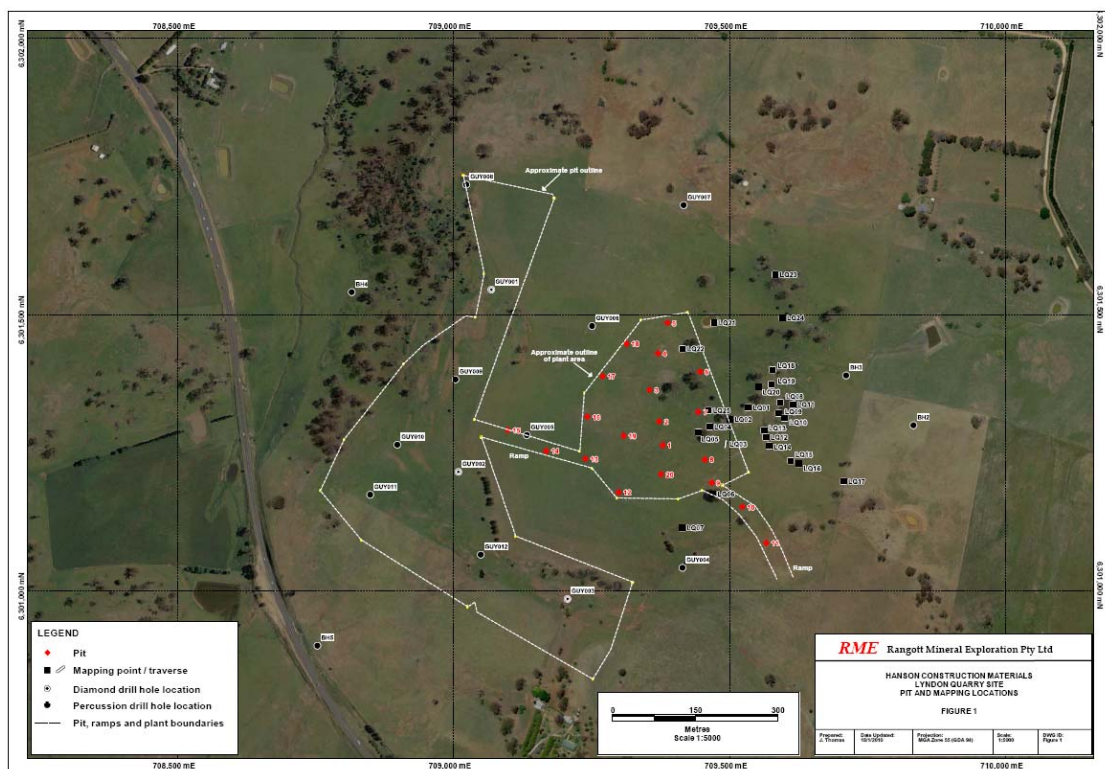


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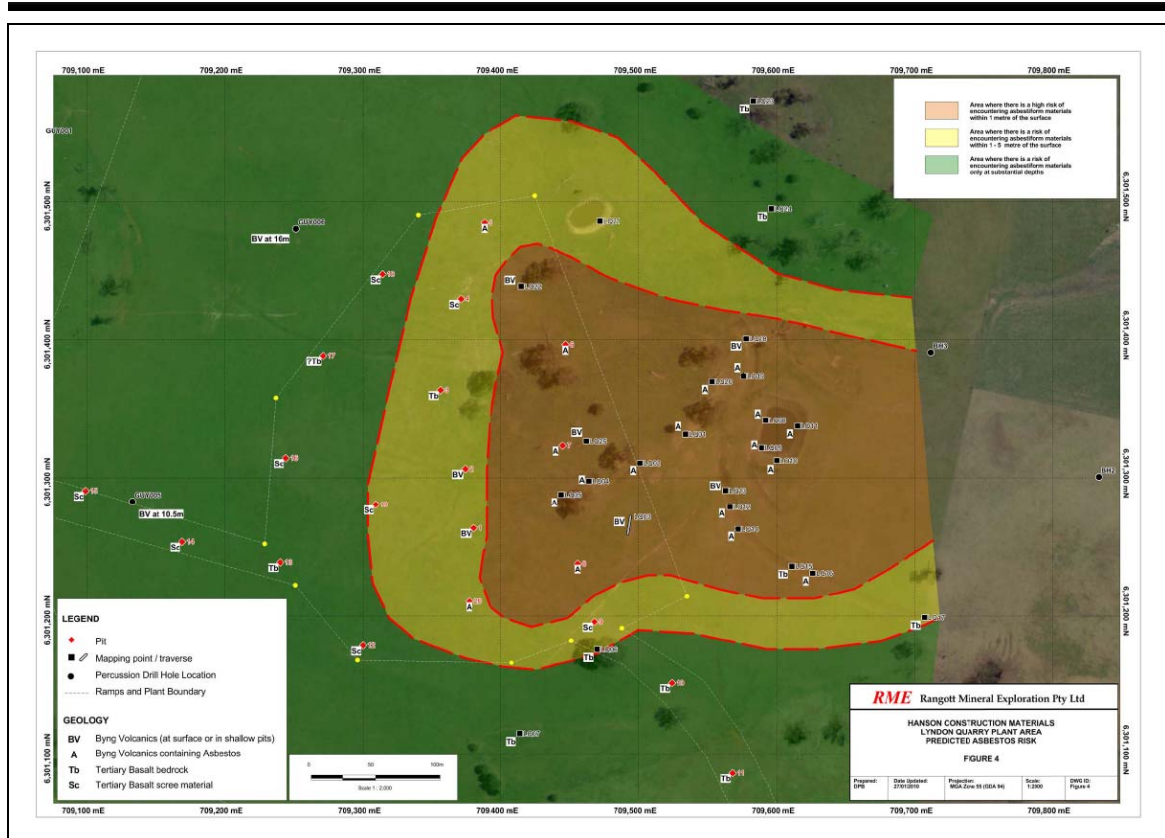


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Submission by E Hope Gordon, J Bruce and Sally Jane Gordon, 23 November, 2009

Consultation

Proponent's response:

When determining the stakeholders of a development proposal it can be difficult to decide who to include and at what level of consultation is applicable to each stakeholder. Certainly it is common sense to notify the immediate neighbours and this is generally what is stated in most LEPs although not always followed (in other areas across the state, the proponent has experience not being notified in relation to its neighbours development proposals). During the course of this environmental assessment it became evident that if the development was designed so the impacts on the immediate neighbours could be eliminated or reduced to a level below that required by legislation then given the large separation distances to the next nearest residents the impacts on these parties would be trivial. At some point a line has to be drawn to say this is the zone of primary concern. Bethune and East Bethune are 1.5kms (linearly) away from the proposed quarry. Given this distance and that Carina vale is located 1km closer to the quarry than both these properties, it is understandable that the proponent has not included the residences in the process. However, having said that, the submission will be addressed and any future consultation will include these residences.

Hours of Operation

Proponent's response:

The environmental assessment conducted on the project indicates that there is no significant impact above any regulatory criteria from quarrying activities regardless of the hours of operation. Drilling and blasting will be performed during daylight hours only. In particular the proponent agrees to restrict blasting on the premises to take place only between 9am and 3pm Monday to Friday and 9am to 1pm Saturday.

The proponent is willing to commit to operations occurring during daylight hours (these times obviously change between summer and winter). The proponent proposes not to operate the quarry on Sundays or Public Holidays, with the exception of emergency maintenance work. Accordingly there will be no impacts caused by lighting as this will be restricted to lighting for security purposes only.

Like quarrying farming is not restricted to daylight hours only. Harvesting and ploughing are often done at night time, creating noise and dust, to take advantage of windows of opportunity. Restricting quarry or farming to the hours of 8am to 5pm Monday to Friday is not a viable option in preserving the rural tranquillity.

Dust

Proponent's response:

Heggies Pty Ltd was contracted by the proponent to conduct a noise emission assessment in accordance with the Department of Planning's Director General's Requirements issued for the project. Heggies is a multi-disciplined firm of specialist engineers and scientists. With over 130 staff members and 30+ years experience, the company is one of Australia's most recognised and respected consultancies across industries and government agencies. Hanson has relied on the expert advice from Heggies Pty Ltd.

Why was Bethune not included in the air quality assessment?

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Proponent's response:

The background concentration measured by the DustTrak sampler on the Project Site indicate the maximum 24-hour average PM₁₀ being 28µg/m³. The background concentrations were supplemented by the DECCW monitoring data located in Bathurst using data collected over one year between 2002-2003. The data included a number of high readings due to bushfires in the area. These readings were disregarded and the adjusted data indicates that the 24-hour average PM₁₀ for Bathurst is 13µg/m³. This level of PM₁₀ is more consistent with an urban environment rather than a rural one and is a conservative figure that Heggies have adopted in their assessment.

The air quality assessment conducted by Heggies Pty Ltd indicates that:

- The dust deposition impact on the "Carina Vale" property from the proposed quarry is increased on the "existing background" level of 1.6 g/m²/month (which is 4 times the actual average reading of 0.4g/m²/month taken over a 4 month period) by merely 0.1g/m²/month for all stages of the Project (see pages 10 and 22 of the Air Quality Report in Volume 3).
- Impact on the "Carina Vale" property due to an increase in 24-Hour Average PM₁₀ is 0µg/m³ for all stages of the Project.
- Impact on the "Carina Vale" property due to an increase in Annual Average PM₁₀ is 2µg/m³ for all stages of the Project. Note the total Background + Increment of 15µg/m³, which is well below the DECCW a criterion of 30µg/m³.

Carina Vale is located approximately 500m from the proposed quarry development. Bethune is located 1.5kms in the same direction as Carina Vale from the proposed development. The air quality assessment has shown that Carina Vale (the nearest receiver in this direction) is not significantly impacted by the proposal. Therefore it can be assumed that Bethune, being a further 1km away from Carina Vale, will be much less impacted on than Carina Vale. This is the reason that Bethune was not assessed. It is standard practice to assess the impact on the nearest receivers. In this case Bethune is not one of the nearest receivers.

Why was meteorological data from Bathurst use?

Heggies were asked to provide advice on this and their comment is:

"Data was taken from the site met station between 22 October 2002 and 31 August 2003. Data was supplemented in the AQ assessment with TAPM data, which used observations from the met site, plus synoptic analyses to effectively 'fill in the gaps'. Comparison of the wind roses with Bathurst Data showed a good agreement."

Proponent's response:

To obtain an indication of likely background concentrations, a real-time dust monitor (TSI DustTrak) was installed at the proposed quarry location. Section 5.2 of the NSW DEC (DECCW) document "*Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*" states for Level 2 assessments, ambient monitoring data for at least one year of continuous measurements should be used in dispersion modelling. For this reason, the DustTrak results have been compared with DEC (DECCW) monitoring data. The nearest DEC monitoring station to the Project Site is located in Bathurst. Accordingly Bathurst meteorological data was used by Heggies.

As mentioned in the proponent's response to the submission by Heather McNair and Dave Mansfield:

"Figure 3 shows the Millthorpe (INALA) met station 9am September wind rose. Figure 4 shows the Millthorpe (INALA) met station 3pm September wind rose. Figure 5 shows the

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Millthorpe (INALA) met station 3pm October wind rose. Figure 6 is a Google map showing that the distances from the proposed Guyong quarry site to Millthorpe and Orange Airport are 7.5kms and 12kms respectively. These wind roses show predominantly Western and North-western winds during Spring. This shows a good agreement with the weather station on the site and the DEC monitoring station located in Bathurst, and indicates the wind in this area generally is not predominantly from the south-west as it is experience at the Orange Airport some 12 kilometres away."

Dust modelling shows changes in background dust levels at Fairview

Proponent's response:

Heggies were asked to provide advice on this and their comment is:

"The assessment was conducted using contemporaneous background data and meteorological data, in accordance with the methodology presented in DECC (2005) Approved Methods for Modelling and Assessment of Air Pollutants in NSW. The methodology uses background data and met files, so that the model predicts the dispersion of pollutants for Hr1 of Day 1 using the meteorological; parameters for that hour, then adds that contribution to the measured background concentration for that hour to make a prediction of the cumulative impact with the additional of the marginal increase provided by the new source. The model then makes the prediction for Hr 2 of Day 1, and so on throughout the defined assessment period.

The results presented in Table 9 of the Guyong Quarry report are maximum 24-hour PM10 concentrations, rather than annual mean concentrations, and as such the conditions prevalent for each 24-hour period varies, as discussed above. The conditions that lead to the maximum 24-hour impact at each receptor may therefore be independent of each other, and hence the background may vary by receptor location. It is worth noting that the prevailing meteorology which causes the pathway between the source and the receptor will also have a significant influence on the background pollutant concentrations, as this will determine dispersion from surrounding controlled sources (e.g. local industry etc) and uncontrolled sources (e.g. wind erosion from open soil).

However, it may also be prudent to consider the potential cumulative impacts assuming worst case background concentrations. Often, these conditions may be associated with dust storms or other elevated concentration events, which may not be reflective of the conditions that cause the maximum dispersion from the source to each specific receptor, and reliance on a flat background concentration will ultimately produce a more conservative assessment."

Groundwater

Proponent's response:

The proposed quarry development will not be reliant on extracting water from the groundwater source. The purpose of conducting a bore census is to provide stakeholders with an idea of the number of other registered bores in the area and the nature of the operation of these bores. This contributes to the overall hydrological picture of the area.

According to the Coffey Geotechnics Report in Volume 2:

"A total of 26 bores are registered as stock and domestic or general use, six are irrigation bores (although only one has a yield of over 2L/sec), a further two have unknown uses and one is a public and municipal bore."

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The 2 bores of the Bethune property may be among the 6 identified as irrigation bores? However, as the proponent has indicated the proposed quarry operations will rely only on what they are entitled to as through Basic Landholders Rights.

The figures shown in Table 7.3 of Volume 1 indicate that the amount of water the proponent is entitled to as a Landholder will be sufficient to operate the quarry. Nobody can predict the likelihood of the number of wet, average, or dry years in the years to come. However, like all other landholders who are dependent on water, the proponent will need to make alternative arrangements for sourcing water in the event that demand is not met. It is the proponent's obligation to ensure that its operations are adequately licensed; hence it will be necessary to monitor its requirements and ensure that its licensed entitlements are adequate in terms of volume, water source and purpose.

Cost/benefit Analysis

"If we take the statement in the report by Geolyse (Volume 3 of the ERA Strategic Planning Considerations p.9) that once the quarry was established "the existing land use would render the immediate locality unsuitable for residential development" then we can only assume by using the same logic that that it is also unsuitable for existing places of residence."

Proponent's response:

This statement is not true. The Geolyse Report in Volume 3 states:

"The development site and surrounding lands are zoned General Rural 1(a)"

Land zoned General Rural 1(a) may have a residential dwelling erected on it under provision of Cl.18 of the Cabonne Council LEP, however this does not make the land a "residential development". It makes it a rural land with house built on it.

Hanson is not aware of any existing approval for a residential subdivision on S1 and S2 on the plan attached to the letter. However any application for a residential subdivision of any nearby land is a matter between the relevant proponent and Cabonne Council. Cabonne Council would be obliged to consider any development proposals in accordance with the relevant LEP and DCPs.

According to Cl.9(a)(vi) of the Cabonne Council LEP:

The objective of this zone is to promote the proper management and utilisation of resources by:

(a) protecting, enhancing and conserving:

(iv) valuable deposits of minerals, coal, petroleum and extractive materials by controlling the location of development for other purposes in order to ensure the efficient extraction of those deposits,

There is little evidence that the mere presence of a quarry in the area has been shown to decrease property values. Hanson has a number of quarries in NSW that have been operating for more than 40 years. Over the years these quarries have been subjected to an increase encroachment of residential dwellings. It is difficult to believe that a significant number of people would capitalise large amounts of money building a family house near a quarry if they believed that it would ultimately result in a financial loss or a detrimental standard of living. Notwithstanding this, the historical house prices (RP Data) of properties within the vicinity of Hanson's existing quarries have all demonstrated positive growth in value in-line with the greater regional area in which they exist; and in some circumstances for example the suburb of Shell Cove adjacent to Hanson's Bass Point Quarry have far exceeded the growth trend of the local LGA. It should be noted that Hanson's Bass Point Quarry is more than 5 times the size of the proposed Guyong

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It is more likely that property values will be more negatively affected by the likelihood of Naturally Occurring Asbestos on all nearby properties that contain Serpentine rock.

As a land owner the proponent is not seeking to create any subdivisions or concessional lots for future development, which present a greater threat to the Guyong's future than a quarry providing essential building materials for the greater Orange/Bathurst communities.

Need for a quarry

Proponent's response:

The Hanson Bathurst Quarry has been providing aggregates for the building industries of Bathurst, Orange, Lithgow, Blue Mountains and even as far as Sydney Metropolitan. Road gravels are used by the RTA and councils to upgrade and build new roads that are safer, quieter and reducing accidents and travel times. Tests on the basalt show that it has a unique skid-resistance therefore making it an excellent alternative when replacing existing asphalts. Rail ballast is important in maintaining existing lines and for future upgrades allowing the continued use of our railways by passengers and freight. Globally concrete is the most ubiquitous man made material. Every person requires concrete, whether they are aware of it or not. Without aggregates we cannot produce the concrete to build house slabs, hospitals, schools, roads, airports, footpaths, dams, and council swimming pools.

The quarry at Shadforth is owned and operated by Boral. Boral is a competitor in the construction materials market. To imply that Hanson could merely source its material requirements from the Boral quarry at Shadforth is simply not a viable option. The construction materials market has a limited number of competitors and therefore reducing competition by not allowing Hanson to acquire its own source of materials for the market will push material prices up resulting in higher building costs that will be borne by the broader community. It is imperative to maintain a healthy competitive market to prevent a monopoly and maintain price competitiveness and lower building costs.

Furthermore, Hanson currently produces 250,00 tonnes p.a of aggregate from its Bathurst quarry which it supplies to concrete plants, local councils, builders, nurseries, etc. It is very doubtful that the Shadforth quarry could meet this extra demand let alone the increase to 400,00 tonnes p.a in 20 years.

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Submission by Doug Harris of "Fairview", 19 November, 2009

Public consultation process

Proponent's response:

Hanson regrets that it has failed to meet the community's expectation with regard to communication and consultation as part of the planning process. Unfortunately the project has been subjected to a number of new managers at different levels within Hanson. The commitments given at the initial public meeting were not handed over to new managers in a manner that ensured that the importance maintaining good communication was transferred.

Hanson has good relationships with neighbours at its other quarries and is determined to ensure that that our neighbours at Guyong are not impacted by the presence of this proposed quarry. Hanson has a good working relations with regulatory government agencies such as DECCW, DII (formerly DPI), and councils around the state, and considers itself a good corporate citizen.

Hours of operation

Proponent's response:

The environmental assessment conducted on the project indicates that there is no significant impact above any regulatory criteria from quarrying activities regardless of the hours of operation. Drilling and blasting will be performed during daylight hours only. In particular the proponent agrees to restrict blasting on the premises to take place only between 9am and 3pm Monday to Friday and 9am to 1pm Saturday.

The proponent is willing to commit to operations occurring during daylight hours (these times obviously change between summer and winter). The proponent proposes not to operate the quarry on Sundays or Public Holidays, with the exception of emergency maintenance work. Accordingly there will be no impacts caused by lighting as this will be restricted to lighting for security purposes only.

Like quarrying farming is not restricted to daylight hours only. Harvesting and ploughing are often done at night time (creating noise and dust) to take advantage of windows of opportunity. Restricting quarry or farming to the hours of 8am to 5pm Monday to Friday is not a viable option.

In relation to the noise emissions it should be noted that the Mitchell Highway runs between the Fairview property and the proposed quarry site. The Mitchell Highway is a significant source of noise that is often forgotten and generates noise at levels around 90dBA adjacent to the road without any mitigation.

Rangott Mineral Exploration (RME) were commissioned by Hanson to conduct a thorough assessment of the site to determine the whether there is naturally occurring asbestos on the site.

The study involved geological mapping and sampling (on the surface, excavator dug pits, and examination of core holes) of the areas within and around the development envelope of the proposed quarry (see figure 1 below). The report concluded that the basalt in the proposed extraction quarry pit, where drilling and blasting will occur, does not contain asbestos. Based on this the risk associated with exposure to asbestos due to drilling and blasting within the quarry pit is negligible. The RME report indicates that the risk of encountering asbestos increases further to the east away from the extraction area. The RME report has classified the areas of risk as shown in figure 2 below. In the western half of the proposed processing plant and stockpile area, there is an increasing thickness

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of cover of partly to deeply weathered Tertiary basalt. This cover material is unlikely to contain asbestiform minerals, except where mixing of Ordovician and Tertiary rock rubble may have occurred in the past. Tremolite asbestos has been detected in the Byng Volcanics rocks that are exposed sporadically along the eastern quarter of the proposed plant site, and for at least 150 metres to the east of the eastern boundary of the plant, and in all probability, are exposed much further to the east.

The mitigation strategies recommended in the RME report are:

- Excavating subsoil and clayey weathered Tertiary Basalt and Scree rocks from the western side of proposed plant site and connecting ramp to quarry pit and placing it over the eastern side of the plant site and compacting it **providing a safe cover of 1-2m over the high risk zone.**
- Excavation of the larger water storage dam retention pond will require constant wetting down of work areas. Wearing of appropriate dust masks in the work areas and downwind during this activity. The filters in air conditioning units on plant equipment should be fitted with filters to prevent fine asbestos fibres from entering the cabins, and washing down plant and equipment on completion of the dam construction will be necessary.
- The entire finished dams should be covered with a thin layer of subsoil or clay, overlain by a thin layer of topsoil, and vegetated with durable binding pasture.

Hanson will further investigate the feasibility of importing clay material to construct the dam to avoid/minimise any excavation work in the dam's construction.

As stated in the RME report, in all probability the areas much further to the east of the proposed development areas are likely to have a greater occurrence of natural asbestos. This would logically include adjoining properties. This is supported by anecdotal evidence of neighbours who have encountered it on their properties while ploughing their fields. Any land that is subject to activity or proposed development that disturbs ground that has the potential to contain naturally occurring asbestos should undergo a thorough risk assessment so that landowners and other members of the public are not put at risk.

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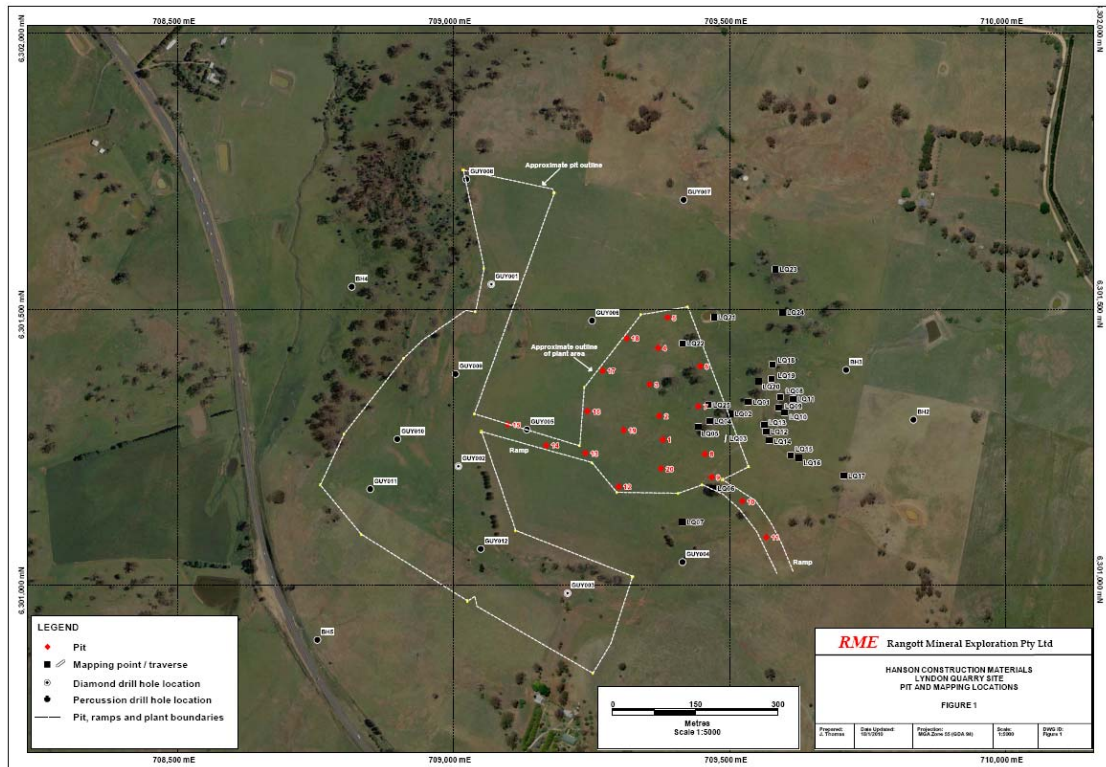


Figure 1- RME, naturally occurring asbestos pit and mapping locations for the proposed quarry site.

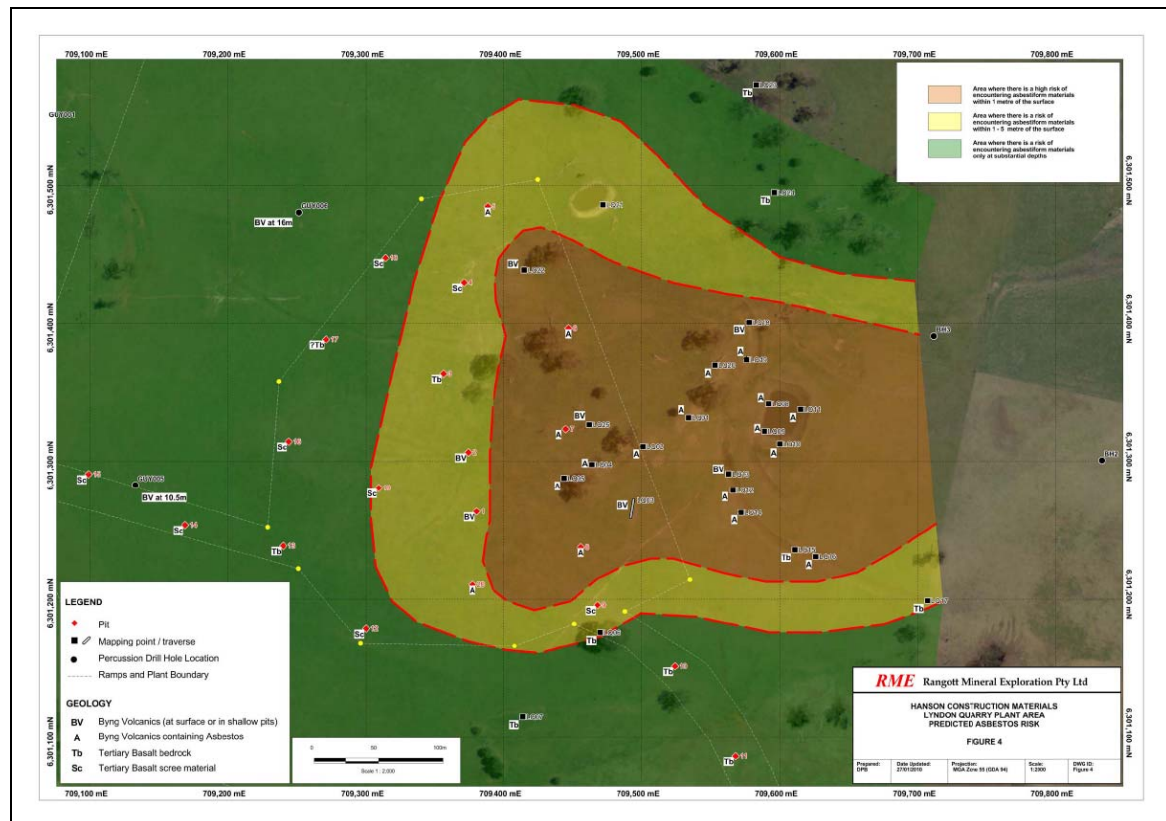


Figure 2- RME, predicted asbestos risk for the proposed quarry site.

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Hanson is aware of the damage that has been caused by the public's perception of lack of consultation. As stated above Hanson regrets what has occurred, and advises that Hanson tries to maintain good relationships with its neighbours at all its quarries. Most of Hanson's quarries have been operating for 30-40 years and this in itself is testament to the Company's ongoing commitment to being an integral part and fabric of the local communities.

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Submission by Dorothy McNair, 3 December 2009

"I want to put forward my opposition to this project as it will involve a great increase in this area on the Mitchell Highway, of trucks and traffic. I know families living in this area and I know it will be an increased hazard for them."

Proponent's response:

As demonstrated in the McLaren Traffic Management Report in Volume 3, the quarry during the peak hours will generate 5 trucks (note on average there will be only be 3 quarry truck movements per hour) entering and leaving the site during the AM and PM peak hours. During these hours the number of other vehicles currently passing the site is 207 and 403 respectively. The quarry truck movements are trivial in comparison. The RTA will be consulted in regards to the design of the quarry entrance intersection and the proponent has given a commitment to satisfy their requirements.