

Actinolite issue Reedy Creek

From Gold Coast Quarry Web site @

<http://www.goldcoastquarry.com/assets/Documents/Q%20-%20Geological%20and%20Geotechnical%20Report/Appendix%20Q%20-%20Geological%20and%20Geotechnical%20Report%20-%20Part%2037.pdf>

Extract from appendix 1, Boral Reedy Creek Geological Studies done by GEOCHEMPET SERVICES, MALENY

Three holes bored, Seven samples taken, Actinolite found in two samples, one from each of two holes.

3% actinolite found in sample.

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Sample Label : Reedy Creek DDH01 56.9 m

Work Requested : Petrographic analysis in relation to use as source rock for road base, concrete aggregate and sealing/asphaltic aggregate

Methods : Account taken of ASTM C 295 Standard Guide for *Petrographic Assessment of Aggregates for Concrete* and of the content of the 1996 joint publication of the Cement and Concrete Association of Australia and Standards Australia, entitled *Alkali Aggregate Reaction - Guidelines on Minimising the Risk of Damage to Concrete Structures in Australia*

Identification : Meta-greywacke

Description :

The sample consisted of a drill core specimen of unweathered, greenish medium grey, hard, robust, meta-greywacke. It is cut by a few healed joints or quite thin veins spaced about 8 to 90 mm apart. The rock is not obviously foliated.

A representative specimen was selected for thin sectioning. An approximate average mineralogical composition of the rock, expressed in volume percent and based on a brief count of 100 widely spaced points in the thin section, is:

Durable Minerals

28% feldspar (plagioclase and microcline)

22% quartz

25% epidote group minerals

3% calcite

3% actinolite

2% sphene/leucoxene

<1% opaque oxide

Weak &/or Deleterious Components

12% sericite

4% chlorite

1% carbonaceous matter

In thin section the rock is seen to be meta-greywacke with remnant primary textures of

moderately sorted, sandy style, now modified by very mild deformation, fine veining and partial, fine recrystallization of regional metamorphic style. Original clasts are mainly in the range 0.05 to 0.7 mm. The fracture veins are about 0.1 mm wide. Quartz occurs as mildly to moderately strained residual sand grains. Microcline and plagioclase feldspars persist as slightly deformed sand grains. The plagioclase is now liberally flecked with an epidote group mineral and sericite. Sparse clasts of former carbonaceous mudstone are slightly deformed. Clasts of detrital sphene, opaque oxide (partly altered to sphene/leucoxene) and epidote are present in low abundance. Other clasts (some recognizable as former volcanic lithic clasts) and matrix components have

recrystallized variously to fine feldspar, chlorite, epidote group minerals, sericite, actinolite and sphene. The fracture veins contain calcite. No pyrite was detected.

Comments and Interpretations :

The sample from Reedy Creek DDH01 56.9 m represents not obviously foliated metagreywacke which is considered to be a low grade regional **metamorphic rock** generated by quite mild deformation, veining and partial recrystallization of former moderately sorted, quartzofeldspathic, labile arenite.

For engineering purposes the rock may be summarised as

- meta-greywacke (a metamorphic rock type)
- not obviously foliated
- crystalline
- non-porous
- cut by a few thin veins of calcite
- unweathered
- hard
- strong
- carrying about 17% of weak, soft minerals (comprising 12% sericite, 4% chlorite and 1% carbonaceous matter)
- not carrying any obvious pyrite

The meta-greywacke is predicted to be **durable**.

Because the meta-greywacke carries about 22% quartz (free silica) with degrees of strain ranging from negligible to moderately strained it seems prudent to regard the rock as having **potential for mild or slow deleterious alkali-silica reactivity in concrete**.

In short, meta-greywacke of the type represented by Reedy Creek DDH01 56.9 m is predicted to be **suitable for use as a source of concrete aggregate, provided that** appropriate precautions are taken in mix and engineering design to take account of its perceived potential for mild or slow deleterious alkali-silica reactivity.

The rock is predicted to be quite **suitable also for use as a source of road base and sealing/asphaltic aggregate**.

Free Silica Content :

The free silica content is about 22% (in the form of crystalline quartz about 0.05 to 0.7 mm in grainsize)

1% actinolite sample - GEOCHEMPET SERVICES, MALENY

MAY, 2005 Page 8 of 15

Sample Label : Reedy Creek DDH02 47.2 m

Work Requested : Petrographic analysis in relation to use as source rock for road base, concrete aggregate and sealing/asphaltic aggregate

Methods : Account taken of ASTM C 295 Standard Guide for *Petrographic Assessment of Aggregates for Concrete* and of the content of the 1996 joint publication of the Cement and Concrete Association of Australia and Standards Australia, entitled *Alkali Aggregate Reaction - Guidelines on Minimising the Risk of Damage to Concrete Structures in Australia*

Identification : Meta-greywacke

Description :

The sample consisted of a drill core specimen of unweathered, greenish medium grey, hard, robust meta-greywacke. It is cut by several healed joints or quite thin veins spaced about 30 to at least 80 mm apart; pyrite and calcite can be seen on one exposed fracture vein surface. The rock is very faintly foliated.

An approximate average mineralogical composition of the rock, expressed in volume percent and based on a brief count of 100 widely spaced points in the thin section, is:

Durable Minerals

40% feldspar (plagioclase and microcline)

22% quartz

18% epidote group minerals

1% calcite

1% actinolite

2% sphene/leucoxene

<1% opaque oxide

Weak &/or Deleterious Components

9% sericite

6% chlorite

1% carbonaceous matter

trace pyrite

In thin section the rock is seen to be meta-greywacke with remnant primary textures of moderately sorted, sandy style, now modified by very mild deformation, fine veining and partial, fine recrystallization of regional metamorphic style. Original clasts are mainly in the range 0.05 to 1 mm. Partial recrystallization has generated many new mineral grains as fine as 0.005 to 0.03 mm. No fracture veins are represented in the thin section. The meta-greywacke carries a thin bed of carbonaceous siltstone and it displays a faint metamorphic foliation transgressive to the bedding.

Quartz occurs as mildly to moderately strained residual sand grains. Microcline and plagioclase feldspars persist as slightly deformed sand grains. The plagioclase is now flecked with an epidote group mineral and sericite. Disseminated clasts of former

carbonaceous mudstone are deformed by the foliation. Clasts of detrital sphene, opaque oxide (partly altered to sphene/leucoxene) and epidote are present in low abundance. Other clasts (some recognizable as former volcanic lithic clasts) and matrix components have recrystallized variously to fine feldspar, chlorite, epidote group minerals, sericite, actinolite and sphene. Pyrite is present in trace amounts as very sparse small grains and small aggregates of fine grains and within the calcite veined observed in hand specimen..

Comments and Interpretations :

The sample from Reedy Creek DDH02 47.2 m represents faintly foliated metagreywacke which is considered to be a low grade regional **metamorphic rock** generated by quite mild deformation, veining and partial recrystallization of former moderately sorted, quartzofeldspathic, labile arenite.

For engineering purposes the rock may be summarised as

- meta-greywacke (a metamorphic rock type)
- faintly foliated
- crystalline
- non-porous
- cut by a thin vein of calcite
- unweathered
- hard
- strong
- carrying about 16% of weak, soft minerals (comprising 9% sericite, 6% chlorite and 1% carbonaceous matter)
- carrying a trace amount of pyrite

The meta-greywacke is predicted to be **durable**.

Because the meta-greywacke carries about 22% quartz (free silica) with degrees of strain ranging from negligible to moderately strained it seems prudent to regard the rock as having **potential for mild or slow deleterious alkali-silica reactivity in concrete**.

In short, meta-greywacke of the type represented by Reedy Creek DDH02 47.2 m is predicted to be **suitable for use as a source of concrete aggregate, provided that** appropriate precautions are taken in mix and engineering design to take account of its perceived potential for mild or slow deleterious alkali-silica reactivity.

The rock is predicted to be quite **suitable also for use as a source of road base and sealing/asphaltic aggregate**.

Free Silica Content :

The free silica content is about 22% (in the form of crystalline quartz about 0.05 to 0.7 mm in grainsize).

Council City Planning Committee Meeting 27 Nov 2013 from 3 Dec 2013 Council minutes

6 OTHER MATTERS

Occurrence of Mineral Actinolite

On 14 November 2013, petrographic reports of source rock samples for the proposed Gold Coast Quarry were submitted to Council by resident groups opposed to the quarry development. The results of the petrographic analysis indicate a presence of the mineral 'Actinolite' in the sample rock.

Council minutes page 11 - On 23 March 2012, Council's Implementation and Assessment Branch invited several external town planning consultants to respond to Council's Consultant Brief for the independent review of the environmental impact statement for the Gold Coast Quarry. On 12 June 2012, after a review of each of the external town planning consultant's responses, Council engaged the services of Buckley Vann Town Planning Consultants to undertake the independent review of the environmental impact statement for the Gold Coast Quarry once the EIS is prepared and provided to Council for comment.

These reports were provided to Buckley Vann Town Planning Consultants and their consultancy team to be included in their independent report

Council City Planning Committee Meeting 27 November 2013 from 3 December 2013 Council meeting minutes

http://www.goldcoast.qld.gov.au/documents/ma/planning-20131127-adopted_report_part_1.pdf

670th Council Meeting 3 December 2013 13

City Planning Committee Meeting 27 November 2013 Adopted Report

ITEM 1 (Continued)

REVIEW OF ENVIRONMENTAL IMPACT STATEMENT FOR GOLD COAST QUARRY – LOT 105 ON SP144215 & LOT 901 ON RP907357 – OLD COACH ROAD, REEDY CREEK AND TALLEBUDGERA CREEK ROAD, TALLEBUDGERA VALLEY – DIVISION 13 PD97/621/02

RECOMMENDATION

That Council resolves as follows:

1 That Council adopt the contents of the independent report titled *"Independent Review of the Gold Coast Quarry (GCQ) Environmental Impact Statement (EIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate,"* prepared by Buckley Vann Town Planning Consultants, dated 28 May 2013.

2 That Council provide a submission to the Coordinator-General on the Gold Coast Quarry Environmental Impact Statement.

3 That Council's submission on the Gold Coast Quarry Environmental Impact Statement shall include the attached report titled *"Independent Review of the Gold Coast Quarry (GCQ) Environmental Impact Statement (EIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate,"* prepared by Buckley Vann Town Planning Consultants, dated 28 May 2013, in the submission to the Coordinator-General.

4 That Council request the Coordinator-General to require the proponent to prepare a Supplementary Environmental Impact Statement Report that addresses the issues raised in Council's Submission, including but not limited to the impacts on traffic, road network and the proposed site access location, conflicts with the Gold Coast Planning Scheme 2003, the impacts on ecological and environmental values, and clarification around end use details.

5 That Council request the Coordinator-General to provide Council with the opportunity to review the Supplementary Environmental Impact Statement Report and provide comments to the Coordinator-General prior to the Coordinator General finalising their Environmental Impact Statement Evaluation Report.

6 That Council request the Coordinator-General to publicly exhibit the Supplementary Environmental Impact Statement Report.

CARRIED

ADOPTED AT COUNCIL 11 JUNE 2013

RESOLUTION G13.0611.007 moved Cr McDonald seconded Cr Robbins

That Committee Recommendation CP13.0605.001 be adopted as printed.

CARRIED UNANIMOUSLY

6 OTHER MATTERS

Occurrence of Mineral Actinolite

On 14 November 2013, petrographic reports of source rock samples for the proposed Gold Coast Quarry were submitted to Council by resident groups opposed to the quarry development. The results of the petrographic analysis indicate a presence of the mineral 'Actinolite' in the sample rock.

These reports were provided to Buckley Vann Town Planning Consultants and their consultancy team to be included in their independent report. The results of the petrographic analysis have been reviewed by two consultant team members from ECOROC and ASK Consulting to determine the potential for human health risks as a result of the mineral being present in airborne dust generated from quarry activities over the life of the quarry. A more detailed summary of ECOROC and ASK Consulting's assessment of the occurrence of Actinolite can be found in Section 1.2 – Occurrence of Mineral Actinolite of Buckley Vann Town Planning Consultants independent report.

7 CONCLUSION

Council's Planning, Environment and Transport Directorate re-engaged the services of Buckley Vann Town Planning Consultants and several associated specialist consultants to undertake an independent review and detailed assessment of the Supplementary Report to the Gold Coast Quarry EIS.

A copy of Buckley Vann Town Planning Consultants report titled "*Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate,*" dated 20 November 2013, is attached to this report.

Buckley Vann Town Planning Consultants report raises several outstanding significant concerns with the proposed development that still require further consideration by the proponent, including the potential need to redesign some components of the proposal. The key recommendations of Buckley Vann Town Planning Consultants report is that:

- 1) Council makes the Coordinator-General aware that there is insufficient information to be satisfied that the impacts associated with the proposed development can be satisfactorily managed or that there is a substantive need for the proposed quarry. As a result, there is insufficient information to adequately condition an approval with any certainty based on the information provided; and
- 2) In the event that the Coordinator-General decides to approve the application despite 1) above, Council requests the Coordinator-General apply the conditions provided in Appendix B in the Coordinator General's Evaluation Report and Recommendation, which include requirements for the proponent to provide further information to allow an assessment of the proposal against the planning framework applicable to a future material change of use development application.

It is therefore recommended that Council provide a submission on the Supplementary Report to the EIS to the Coordinator-General including the recommendations contained within Buckley Vann Town Planning Consultants report. It is also recommended that Council request the Coordinator-General to require the proponent to address Council's outstanding concerns prior to the Coordinator-General finalising their Evaluation Report and Recommendation on the Gold Coast Quarry EIS.

However, as noted in the key recommendations of Buckley Vann Town Planning Consultants report, in the event that the Coordinator-General elects to approve the Gold Coast Quarry EIS despite Council's raised concerns, it is also recommended that Council provide conditions as set out in Appendix B of Buckley Vann Town Planning Consultants report in the submission to the Coordinator-General to be included in the Coordinator-General's Evaluation Report.

Changed Recommendation

COMMITTEE RECOMMENDATION CP13.1127.001

moved Cr Gates seconded Cr Caldwell

That Council resolves as follows:

1 That Council adopt the contents of the independent report titled "Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate," prepared by Buckley Vann Town Planning Consultants, dated 20 November 2013.

2 That Council provide a submission to the Coordinator-General on the Supplementary Report to the Gold Coast Quarry Environmental Impact Statement.

3 That Council's submission on the Supplementary Report to the Gold Coast Quarry Environmental Impact Statement shall include the attached report titled *"Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate,"* prepared by Buckley Vann Town Planning Consultants, dated 20 November 2013, in the submission to the Coordinator-General.

4 That Council's submission advise the Coordinator-General that Council does not support the Gold Coast Quarry EIS in its current form due to the outstanding issues raised in Council's submission, including but not limited to the impacts on traffic, road network and the proposed site access location, conflicts with the Gold Coast Planning Scheme 2003, and the impacts on ecological and environmental values.

5 That in the event the Coordinator-General approves the Gold Coast Quarry EIS despite Council's strong objection, the conditions as detailed in Appendix B of Buckley Vann Town Planning Consultants independent report be included with Council's submission in the interests of protecting the public from the impacts of quarrying.

6 That Council request the Coordinator-General to require the proponent to address the issues raised in Council's Submission prior to the Coordinator-General finalising their Evaluation Report and Recommendation on the Gold Coast Quarry Environmental Impact Statement.

7 That Council request the Coordinator-General to provide Council with the opportunity to review any further information prepared by the proponent that addresses Council's Submission and provide comments to the Coordinator-General prior to the Coordinator-General finalising their EIS Evaluation Report.

8 Condition 50 of Appendix B of Buckley Vann Town Planning Consultants independent report be amended as follows:

50a) Prior to commencement of the use, an assessment of the health risks to residents of exposure to quarry dusts arising from the occurrence of the mineral actinolite within the rock proposed to be quarried and processed, is to be prepared by a suitably qualified consultant.

The risk assessment is to address:-

1) Mode of occurrence and concentration of the mineral within the geology of the site

- 2) Whether the mineral actinolite occurs in an asbestos form ('asbestiform')
- 3) If the mineral actinolite is identified in an asbestos form, then further risk assessment is to include:-
- (i) Specific composition and structure of the mineral;
 - (ii) Potential for the mineral to be liberated and transmitted by quarrying activities;
 - (iii) Likelihood of the dust being inspired by site employees or the general public;
 - (iv) Adoption of a suitable medical model of toxicity to humans; and
 - (v) Preparation of a risk management plan setting out detailed control measures to ensure the health and safety of residents is not impacted by dusts generated from quarrying activities.
- 50b) The EMP must also require measurement of asbestos-form actinolite in samples of airborne particulates collected in conjunction with ongoing silica monitoring. Should this proportion be significantly higher than (double or more) the May 2005 Geochempet petrographic analysis result of 3%, then a health risk assessment of exposure of nearby residents to asbestos must be undertaken, and a management plan prepared that ensures the VicEPA asbestos and silica criteria are met at sensitive receptors.

CARRIED

Boral actinolite GCCC planning-20131127-adopted_report_part_1.pdf

P27 Buckley Van review

P170 Buckley Van Actinolite review (pasted below)

5.7.9 Silica and Actinolite

Relevant Section of EIS	Appendix GG, Air Quality (Section 10, Respirable crystalline silica assessment)
Description of the Assessment	<p>The EIS adopts the appropriate criterion for crystalline silica, which is an annual average of $3 \mu\text{g}/\text{m}^3$ measured as the PM_{2.5} fraction. The methodology used follows the modelling methodology with specific, appropriate modifications for silica. This is based on the upper limit of the range of the proportion of silica measured in the rock. Therefore the predicted concentrations of silica are expected to be appropriate provided the modelling issues discussed in this review are resolved.</p> <p>Actinolite (a mineral that can exist in asbestos form) has also been found in two of the seven petrographic analysis samples, with the higher sample containing 3%. Based on the EIS modelling undertaken, this corresponds to an ambient concentration of 0.024 micrograms per cubic metre at the nearest residence, which is within the Vic EPA criterion for asbestos of 0.2 micrograms per cubic metre or 0.05 PCM fibres/m^3.</p>
Recommendations	It is likely that the proponent will undertake monitoring of occupational exposure to silica. It is recommended that results from that monitoring be used to confirm that the proportion of silica in these airborne samples be compared to the proportion of silica measured in the rock to confirm similarity.
Proponent's Response	The response confirms that monitoring of exposure of the workforce will continue throughout the lifetime of the quarry.
Assessment of Proponent's Response	The response is adequate provided the proportion of silica is comparable to the 32% assumed in the EIS.
Recommended Condition for CG's Evaluation Report	Refer to condition 49 and 50 provided in Appendix B.

P209 CG Terms of Reference

P288 Recommended conditions for CG

P301 Buckley van actinolite recommendation to Co-ord General (revised by council)

SILICA AND ACTINOLITE

- 40) A revised EMP is to be prepared requiring that the proportion of silica (quartz) in dust measured for occupational exposure assessment must be compared to the proportion of silica assumed in the EIS. Should this proportion be significantly higher (double or more), then the assessment of environmental impacts must be updated.
- 50) The EMP must also require measurement of asbestos-form actinolite in samples of airborne particulates collected in conjunction with ongoing silica monitoring. Should this proportion be significantly higher than (double or more) the May 2005 Geochempel petrographic analysis result of 3%, then a health risk assessment of exposure of nearby residents to asbestos must be undertaken, and a management plan prepared that ensures the VicEPA asbestos and silica criteria are met at sensitive receptors.

P302

DUST MONITORING REQUIREMENT

- 52) A revised EMP is to be prepared requiring:
- a) replacement of "air emissions monitoring" with "ambient air monitoring";
 - b) specification of the following criteria:
 - i. 6th highest 24-hour PM10 average in the year not to exceed 50 µg/m3;
 - ii. annual average insoluble dust deposition rate not to exceed 120 mg/m2/day;
 - c) specification that at least seven dust deposition monitoring sites near the site boundary in the vicinity of receptor areas A, B, C, D, E, H & I;
 - d) amendment to the methods proposed to include AS/NZS3580.9.9:2006 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM10 low volume sampler - Gravimetric method as an alternative to AS3580.9.6-2003;
 - e) specification that monitoring of PM10 particulates must be undertaken every sixth day during the operation of the quarry. The instrument must be located in the vicinity of the northern or eastern ends of the site boundary. Monitoring must be undertaken according to the latest version of AS3580.9.6 or AS/NZS 3580.9.9.

P304 end of Boral in council minutes

670 Council Meeting 27 3 December 2013 Adopted Minutes

9 RECEPTION & CONSIDERATION OF COMMITTEE REPORTS (Continued)

9.3 CITY PLANNING Cr Caldwell, Chairperson of the City Planning Committee, presented the Report of the City Planning Committee held on Wednesday, 27 November 2013.

RESOLUTION G13.1203.015

Moved Cr Caldwell Seconded Cr Bell

That the Report of the City Planning Committee Meeting held on Wednesday, 27 November 2013, covered by Recommendations numbered CP13.1127.001 to CP13.1127.008 be received.

CARRIED

ITEM 1 REVIEW OF ENVIRONMENTAL IMPACT STATEMENT FOR GOLD COAST QUARRY – LOT 105 ON SP144215 & LOT 901 ON RP907357 – OLD COACH ROAD, REEDY CREEK AND TALLEBUDGERA CREEK ROAD, TALLEBUDGERA VALLEY – DIVISION 13 PD97/621/02

MOTION Moved Cr Tate Seconded Cr Bell

That Committee Recommendation CP13.1127.001 be adopted as printed which reads as follows:-

1 That Council adopt the contents of the independent report titled "Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate," prepared by Buckley Vann Town Planning Consultants, dated 20 November 2013.

2 That Council provide a submission to the Coordinator-General on the Supplementary Report to the Gold Coast Quarry Environmental Impact Statement.

3 That Council's submission on the Supplementary Report to the Gold Coast Quarry Environmental Impact Statement shall include the attached report titled "Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate," prepared by Buckley Vann Town Planning Consultants, dated 20 November 2013, in the submission to the Coordinator General.

4 That Council's submission advise the Coordinator-General that Council does not support the Gold Coast Quarry EIS in its current form due to the outstanding issues raised in Council's submission, including but not limited to the impacts on traffic, road network and the proposed site access location, conflicts with the Gold Coast Planning Scheme 2003, and the impacts on ecological and environmental values.

5 That in the event the Coordinator-General approves the Gold Coast Quarry EIS despite Council's strong objection, the conditions as detailed in Appendix B of Buckley Vann Town Planning Consultants independent report be included with Council's submission in the interests of protecting the public from the impacts of quarrying.

6 That Council request the Coordinator-General to require the proponent to address the issues raised in Council's Submission prior to the Coordinator-General finalising their Evaluation Report and Recommendation on the Gold Coast Quarry Environmental Impact Statement.

7 That Council request the Coordinator-General to provide Council with the opportunity to review any further information prepared by the proponent that addresses Council's Submission and provide comments to the Coordinator-General prior to the Coordinator-General finalising their EIS Evaluation Report.

8 Condition 50 of Appendix B of Buckley Vann Town Planning Consultants independent report be amended as follows:

50a) Prior to commencement of the use, an assessment of the health risks to residents of exposure to quarry dusts arising from the occurrence of the mineral actinolite within the rock proposed to be quarried and processed, is to be prepared by a suitably qualified consultant. The risk assessment is to address:-

1 Mode of occurrence and concentration of the mineral within the geology of the site

2 Whether the mineral actinolite occurs in an asbestos form ('asbestiform')

3 If the mineral actinolite is identified in an asbestos form, then further risk assessment is to include:-

i Specific composition and structure of the mineral;

ii Potential for the mineral to be liberated and transmitted by quarrying activities;

iii Likelihood of the dust being inspired by site employees or the general public;

iv Adoption of a suitable medical model of toxicity to humans; and

v Preparation of a risk management plan setting out detailed control measures to ensure the health and safety of residents is not impacted by dusts generated from quarrying activities.

50b) The EMP must also require measurement of asbestos-form actinolite in samples of airborne particulates collected in conjunction with ongoing silica monitoring. Should this proportion be significantly higher than (double or more) the May 2005 Geochempet petrographic analysis result of 3%, then a health risk assessment of exposure of nearby residents to asbestos must be undertaken, and a management plan prepared that ensures the VicEPA asbestos and silica criteria are met at sensitive receptors.

CLOSED SESSION LOCAL GOVERNMENT ACT 2009 AND SUPPORTING REGULATIONS

PROCEDURAL MOTION Moved Cr Tate Seconded Cr Gates That Council move into Closed Session pursuant to section 275 (1) of the Local Government Regulation 2012, for the consideration of the following item for the reason shown:- Item Subject Reason 1 Review of Environmental Impact Statement for Gold Coast Quarry – Lot 105 on Sp144215 & Lot 901 on RP907357 – Old Coach Road, Reedy Creek and Tallebudgera Creek Road, Tallebudgera Valley Prejudicial Matter CARRIED
PROCEDURAL MOTION Moved Cr Tozer Seconded Cr Betts

Gold Coast Quarry: Coordinator-General's evaluation report on the environmental impact statement

December 2013

Air quality

The background sources of dust emissions in the project area at present are from industrial activity to the north of the project, including the existing West Burleigh quarry, the Reedy Creek Landfill, the Elanora wastewater treatment plant, the Burleigh Heads Bakery and exhaust emissions from vehicles travelling along the Pacific Motorway.

Additional emissions of Total Suspended Particulates (TSP), Particulate Matter (PM)₁₀ and PM_{2.5} would be generated by quarrying activities, including: material excavation, handling, crushing, screening and haulage; wind erosion of exposed areas and stockpiles; and drilling and blasting.

The proponent has proposed a number of dust control measures and treatments to manage the project's dust emissions, including: plant enclosures; dust suppression of stockpiles and pads, internal roads, and blasting areas; sealing of selected internal roads; and the covering of loads and wheel washing of all trucks leaving the quarry.

The results of the predictive modelling presented in the EIS found that the maximum concentrations of nitrogen dioxide (resulting from explosives used in blasting) and particulate matter as TSP, PM₁₀ and PM_{2.5} would not exceed the relevant standard and guidelines set out in the Environmental Protection (Air) Policy 2008 (EPP (Air)) at all residential sensitive receptors, with the exception of two locations for PM₁₀. However, it is standard in the assessment of PM₁₀ concentrations to consider 5 exceedances per year as acceptable. The modelling results indicate the 6th highest per centile predicted maximum 24-hour average ground-level concentration of PM₁₀ which are below the EPP Air criteria. It is noted that the ground-level concentrations of TSP, PM₁₀ and PM_{2.5} could exceed the regulatory limits in limited areas of the buffer zone to the north and south of the quarry operating pit. However, these predicted exceedances are not considered large enough to adversely affect vegetation.

In addition to particulate matter TSP, PM₁₀ and PM_{2.5}, the EIS and further information provided to the Coordinator-General following the EIS process, specifically assessed respirable crystalline silica, and mineral actinolite and other fibrous minerals similar to asbestos (asbestiform). Crystalline silica and asbestiform minerals such as actinolite can be present in hard rock and can be released as a result of the cutting, drilling, blasting and processing of the hard rock.

Crystalline silica is controlled and monitored as part of PM_{2.5} and can generally be adequately managed through control measures. The EIS assessed the level of crystalline silica to be below the relevant regulatory limits at all residential sensitive receptors. In terms of risks to workers, the proponent has committed to conducting routine monitoring of its workforce to exposure to crystalline silica and will be required to comply with the relevant provisions of the *Mining and Quarrying Safety and Health Act 1999*.

The presence of actinolite and other asbestiform minerals in the Gold Coast quarry hard rock resource was considered as part of the geological and geotechnical assessment of the project. An analysis of rock drill core samples indicated that actinolite may form between 1 per cent and 3 per cent of the total mineralogical composition of the rock. Actinolite and other asbestiform minerals are commonly found in greenstone hard rock resources. The Gold Coast quarry is a meta-greywacke hard rock resource which does not exhibit the presence of greenstone and is not associated with asbestos mineralisation. Given the

preliminary core sample analysis findings, further drilling and analysis of rock drill core samples was undertaken post-EIS process, which did not detect the presence of any asbestiform minerals such as actinolite. The proponent will be required to comply with the relevant provisions of the *Mining and Quarrying Safety and Health Act 1999* which would protect workers from any risk of exposure. A condition has been stated to address the risk to human health of exposure to asbestiform minerals.

The dust control measures and treatments committed to by the proponent to manage the project's dust emissions, together with the site specific meteorology, terrain and land-use (i.e. vegetated buffer zone) demonstrate that the predicted dust emissions from project activities would not cause a risk to human health and would not cause a nuisance to the community.

Since the release of the additional information to the EIS, the proponent has provided further information to the Coordinator-General⁴ about the likely presence of actinolite and other asbestiform minerals in the Gold Coast Quarry hard rock resource. This information was provided in response to issues raised by the community with GCCC during the advisory agency comment period on the additional information to the EIS. GCCC raised this matter with the Coordinator-General as part of its submission on the additional information. I have considered this further information in my evaluation of the environmental effects of the project. Further details can be found in Section 5.4.

5.1.5. Topography, geology and soils

Topography

The project site is located within the intermediate area of the Gold Coast which is topographically defined by the Lamington Plateau of the Gold Coast hinterlands to the west and the urbanised coastal areas of the Gold Coast to the east. This intermediate area is constituted by a complex group of ridges and intervening gullies containing several sub-catchments draining to the east of the project site.

Three ridgelines, each of which contain secondary spurs and steep slopes, predominantly border the site's perimeter. Heights of the surrounding ridgelines vary from approximately 10 m in the east to 187 m in the west.

Geology

The geology of the site and surrounding areas is dominated by meta-greywacke rocks of the Neranleigh-Fernvale Beds. This geological unit hosts the majority of extractive industry resources in the area. The principal rock types on the site are meta-greywacke and argillite and both rock types are variably exposed in subcrop and sporadic outcrop across the site. By volume, greywacke accounts for approximately 85–90 per cent of the extractive resource on site.

On the basis of the geotechnical investigations that were completed, substantially more hard rock than the estimated 79 million tonnes could be extracted from the site. However, the extent of hard rock resource that can be extracted from the site is dictated by:

- the location of identified areas and species of ecological significance
- utilising the existing topography as much as possible to assist in minimising external views into the proposed quarry
- maintaining an extensive buffer area that will assist in achieving compliance with relevant state parameters in terms of acoustics and air quality.

The failure of a slope, namely a quarry bench (particularly through the use of explosives and rock durability) was identified as a potential risk to operations. A comprehensive geotechnical assessment was completed on the site pursuant to *AS1726 Geotechnical Site Investigation 1993*. This is described in detail in Appendix Q of the EIS.

The geotechnical assessment undertaken developed a series of limit equilibrium models for the main slopes. These models were then applied during various stages of quarry development to understand the minimum failure surface of each particular slope. From the mapping presented for each of the five phases of quarry development, landslide and/or slope failure was identified to present a low to moderate risk if no treatment was provided. This risk would be further reduced with slope treatment.

The risk of off-site landslides or slope failure occurring as a result of the quarry operations was assessed in the EIS. This assessment determined that the quarry operations were unlikely to cause vibration impacts which would destabilise any surrounding land. It was evaluated that separation distances provided in the buffer zone were more than adequate to almost fully attenuate vibration and any landslide response trigger.

Crystalline silica

Silica is a component of hard rock (namely quartz) and overburden and is present in varying levels in both crystalline and non-crystalline forms.

Given the potential health risk respirable (breathable) silica presents for both workers and sensitive receptors in close proximity to the project, core samples were studied to determine what percentage of free silica was contained in the quarry's resource area.

Petrographic analysis of seven rock core samples indicated that 16–32 per cent of the resource may contain free silica of which grainsizes of crystalline quartz ranged from 0.01 to 1.5 mm.

Actinolite and other asbestiform minerals

Actinolite is a member of the amphibole family of silicates that includes a wide-ranging group of minerals. It is common in greenstone (altered ocean-floor basalts and other mafic and ultramafic rocks) that can occur as part of the Neranleigh–Fernvale Beds and associated low-grade metamorphic ophiolites (including greywackes) in South East Queensland.

Although the Gold Coast Quarry is located within the Neranleigh–Fernvale Group, on a meta-greywacke hard rock resource, it does not exhibit the presence of greenstone and is not associated with asbestos mineralisation.

The Petrographic Reports attached to the Geological and Geotechnical Report at Appendix Q of the EIS, identified that actinolite constituted between approximately 1 per cent and 3 per cent of the total mineral composition of core samples assessed. These amounts were deemed as very low and it was determined that they did not pose a significant risk in regard to air quality.

I note advice from DEHP that asbestos containing rock would most likely be considered a hazardous contaminant under the EP Act and would be managed in accordance with the contaminated land provisions of the EP Act.

5.4.4. Crystalline silica

The likely presence of silica in the hard rock resource was discussed in Section 5.1.5 of this report.

Silica dust can be created at any point during cutting, drilling, blasting or processing of hard rock and overburden, and from wheel action on the haul roads.

Prolonged exposure to respirable crystalline silica at elevated levels may impact human health adversely. Crystalline silica must be in the form of very fine particles, generally with an aerodynamic diameter less than three or four micrometres (μm), for it to be drawn into the lungs (respirable).

Presently, there are no air quality objectives in Queensland specifically for respirable crystalline silica. Accordingly, objectives from the Victorian Environmental Protection Agency (VIC EPA) of $3 \mu\text{g}/\text{m}^3$ (annual average) have been used to report respirable crystalline silica in $\text{PM}_{2.5}$.

If respirable crystalline silica is produced by the activities of the Gold Coast Quarry, concentrations would be greatest in close proximity to the source of emissions. Therefore, the risk of exposure to respirable crystalline silica will be greatest for those working in close proximity to dust producing activities. This exposure will be managed under the *Mining and Quarrying Safety and Health Act 1999*. In this regard, the proponent has committed to conducting routine monitoring of the exposure of its workforce to respirable crystalline silica throughout the lifetime of the quarry.

The assessment of respirable crystalline silica has used the maximum free silica content measured in the Petrographic analysis reported in Section 5.1.5 of this report and assumed that 32 per cent of respirable dust generated from the quarry would be in the form of crystalline silica.

Dispersion modelling of respirable crystalline silica dust in PM_{2.5} has been undertaken for the project operating at maximum capacity producing operation of the project at 2 Mtpa.

In Queensland, crystalline silica is controlled and monitored as part of PM_{2.5} and can generally be adequately managed through PM₁₀ control measures. The EIS assessed the level of crystalline silica to be below the relevant regulatory limits at all residential sensitive receptors. The maximum annual average GLCs of PM_{2.5} at each sensitive receptor predicted by the dispersion modelling, with a background concentration of 5.5 µg/m³ derived from measurements at Springwood EHP station, and reported against EPP Air criteria is Table 5.7.

The predicted annual average GLCs of respirable crystalline silica in PM_{2.5} at each sensitive receptor and reported against VIC EPA criteria is presented in Table 5.7.

Table 5.7 Predicted annual average ground-level concentrations

Receptor Area	Respirable crystalline silica (µg/m ³) Annual average		PM _{2.5} (µg/m ³) Annual average (cumulative)	
Predicted	VIC EPA objectives	Predicted	EPP Air objectives	
A	0.15	3.0	6.0	8.0
B	0.18	3.0	6.1	8.0
C	0.07	3.0	5.7	8.0
D	0.12	3.0	5.9	8.0
E	0.05	3.0	5.6	8.0
F	0.02	3.0	5.6	8.0
G	0.03	3.0	5.6	8.0
H	0.01	3.0	5.5	8.0
I	0.09	3.0	5.8	8.0
J	0.25	3.0	6.3	8.0
K	0.12	3.0	5.9	8.0
L	0.04	3.0	5.6	8.0

The predicted concentrations of respirable crystalline silica in PM_{2.5} from project operations are well below VIC EPA assessment criterion at all sensitive receptors.

The predicted maximum ground-level concentrations of TSP, PM₁₀ and PM_{2.5} resulting from the project activities are below the relevant Air EPP objectives at all sensitive receptors. Based on the findings of this assessment, the emissions of respirable crystalline silica from the Gold Coast Quarry do not present a risk to human health to the residents who live in communities adjacent to the proposed quarry.

5.4.5. Asbestiform minerals

The likely presence of actinolite and other asbestiform minerals in the Gold Coast quarry hard rock resource was discussed as part of the geological and geotechnical assessment of the project in Section 5.1.5 of this report.

The risk to human health from asbestiform minerals in the Gold Coast Quarry hard rock resource was raised by the community with the Gold Coast City Council during the advisory

agency comment period on the additional information to the EIS. The Gold Coast City Council raised this matter with the Coordinator-General as part of its submission on the additional information. In response to these concerns the proponent provided the results of further analysis of rock drill core samples undertaken by the Queensland University of Technology (QUT).

Seven core samples of greywacke were analysed using Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM), X-Ray Diffraction (XRD) and Polarized Light Microscopy (PLM). The seven 50 mm diameter core samples represented a depth ranging from 28.7 metres to 101.0 metres.

The *Analysis of Quarry Core Samples for the Presence of Asbestos Fibre* report confirmed that no actinolite was discovered in any of the analysed core samples. X-ray diffraction analysis of the core samples determined the rock cores comprised predominantly quartz, albite, muscovite, chlorite and calcite. No amphibole minerals including actinolite and tremolite were detected and no serpentine minerals (precursors to chrysotile asbestos) were identified.

PLM analysis of the crushed rock samples did not detect the presence of any acicular amphibole minerals and no fibrous minerals similar to asbestos were detected in any of the core samples.

SEM and TEM analysis did not detect the presence of any asbestos minerals in the core samples. No prismatic tremolite or actinolite was observed in the additional study.

I note that should asbestiform minerals become airborne that concentrations would be greatest in close proximity to the source of emissions. Those working in close proximity to dust producing activities would be at greatest risk of exposure to asbestiform minerals. This exposure will be managed under the *Mining and Quarrying Safety and Health Act 1999*.

Based on the findings of this assessment, the emissions of asbestiform minerals do not present a risk to human health to the residents who live in communities adjacent to the proposed quarry.

5.4.6. Coordinator-General's conclusions

The results of the predictive modelling presented in the EIS found that the maximum concentrations of oxides of nitrogen (NO_x) (resulting from explosives used in blasting) and particulate matter as TSP, PM₁₀ and PM_{2.5} do not exceed the relevant standard and guidelines set out in EPP Air at all residential sensitive receptors, with the exception of two locations for PM₁₀.

The dust control measures and treatments committed to by the proponent to manage the project's dust emissions, together with the site specific meteorology, terrain and land-use (i.e. vegetated buffer zone), demonstrate that the predicted dust emissions from project activities would not cause a risk to human health and not cause nuisance to the community. It is noted that the ground-level concentrations of TSP, PM₁₀ and PM_{2.5} would exceed the regulatory limits in limited areas of the buffer zone to the north and south of the quarry operating pit. However, these exceedances are not considered large enough to adversely affect vegetation and related flora and fauna, and are not considered a threat to human health.

A number of conditions have been stated to ensure mitigation measures are implemented and air quality is protected at sensitive locations around the proposed quarry (refer to Appendix 1).

Part F. Hazard and risk

Condition 13. Actinolite and other fibrous minerals similar to asbestos

Prior to commencement of the use, an assessment of the health risks to residents at sensitive receptor locations surrounding the quarry residents of exposure to quarry dusts

arising from the occurrence of the mineral actinolite or other fibrous minerals similar to asbestos within the rock proposed to be quarried and processed, is to be prepared.

The risk assessment is to address:

- (a) The mode of occurrence and concentration of the mineral within the geology of the site
- (b) Whether the mineral actinolite occurs in an asbestos form ('asbestiform')
- (c) If the mineral actinolite is identified in an asbestos form, then further risk assessment is to include:
 - (i) Specific composition and structure of the mineral
 - (ii) Potential for the mineral to be liberated and transmitted by quarrying activities
 - (iii) Likelihood of the dust being inspired by site employees or the general public
 - (iv) Adoption of a suitable medical model of toxicity to humans
 - (v) Preparation of a risk management plan setting out detailed control measures to ensure the health and safety of residents is not impacted by dusts generated from quarrying activities.

City Planning Committee Meeting 8 July 2014

http://www.goldcoast.qld.gov.au/documents/ma/planning-20140708-adopted_report_P1%281%29.PDF

Boral actinolite GCCC planning-20140708-adopted_report_P1(1).PDF

683rd Council Meeting 11 July 2014 4
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P4 Council in receipt of development application from Boral

Then full history

P23 Discussion:

Air Quality. *The modelling provided has uncertainties associated with the method used for wind erosion, the topographic resolution, and the particle size parameters. Background air quality has also not been assessed using local measurements and the EMP does not include sufficient control measures. The assessment has identified that proposed dust suppression methods of water trucks wetting dust sources, vacuums/dust collectors on extraction machinery, enclosing crushing plant and including mist sprayers, fitting conveyors with wind covers and washing loads and vehicles before exiting the site will manage impacts when combined with a condition to comply with the requirements of the Environmental Protection (Air Quality) Policy. The impacts can therefore be suitably managed within the accepted limits.*

Officer conditions for development

P46

DUST MANAGEMENT

46 PM₁₀ particulates monitoring

Background monitoring of PM₁₀ particulates must be undertaken prior to commencement of site preparation every sixth day for a period of at least three months. The instrument must be located in the vicinity of the northern or eastern ends of the site boundary. Monitoring must be undertaken according to the latest version of AS3580.9.6 or AS/NZS 3580.9.9.

Timing

As indicated within the wording of the condition.

P47

47 Crystalline Silica

The applicant must monitor exposure of workers to crystalline silica and provide Council with a copy of the results on a 6 monthly basis. The data is to be accompanied by a report detailing the results, any risks to residents and proposed mitigation measures should readings indicate risk of Crystalline Silica.

Note: Measured concentrations shall be assessed against an annual average of 3 µg/m³ measured as the PM_{2.5} fraction.

Timing

As indicated within the wording of the condition.

48 Dust Management

a The release of dust and particulate matter from clearing, construction or operational activities must not cause 'environmental harm' or an 'environmental nuisance' (within the meaning of those terms set out in the *Environmental Protection Act 1994*) at any sensitive receptor as stated in schedule 1 of the *Environmental Protection (Air) Policy 2008*.

b A dust management plan must be submitted to, and approved by, Council prior to the issue of any development permit for the carrying out of clearing or building work.

c The environmental management plan must:

i Be prepared by a suitably qualified professional;

ii Provide details of sources of dust and particulate emissions;

iii Identify measures and work practices that will be implemented to ensure that the release of dust and particulate matter from construction activities does not cause an 'environmental nuisance' (within the meaning of that term set out in the *Environmental Protection Act 1994*) at any sensitive receptor as stated in Schedule 1 of the *Environmental Protection (Air) Policy 2008*;

iv Identify the procedures to be adopted for monitoring and reporting of air emissions;

v Provide details of complaint response procedures that will be adopted; and

vi Identify the procedures to be adopted for revision and review of the dust management plan.

d The approved environmental management plan must be complied with and kept on-site at all times.

Timing

At all times

P63

73 Actinolite risk management

As part of the quarry's ongoing risk management practices, if rocks or mineralisation containing the mineral actinolite in concentrations in excess of 3% are encountered, or actinolite is detected in dusts from quarrying activities in excess of the expected concentrations modelled in the EIS, then a report detailing the results of a risk assessment to determine the nature, form and distribution of the mineral actinolite within the rock to be quarried and its dusts, is to be prepared by a suitably qualified professional and a copy submitted to Council.

The risk assessment is to address:

a Mode of occurrence and concentration of the mineral within the geology of the site;

b Whether the mineral actinolite occurs in an asbestos form ('asbestiform');

c If asbestiform minerals are identified, then further risk assessment is to include:

i Specific composition and structure of the mineral;

ii Potential for the mineral to be liberated and transmitted by quarrying activities;

iii Likelihood of the dust being inspired by site employees or the general public;

iv Adoption of a suitable medical model of toxicity to humans; and

v Preparation of a risk management plan setting out detailed control measures to ensure the health and safety of residents is not impacted by dusts generated from quarrying activities.

Timing

As indicated in the wording of the condition.

P77 councillors refuse

10. The proposed development does not adequately address impacts of air quality and Council does not have certainty that the development will manage and mitigate unacceptable levels of air quality (especially dust) in surrounding residential areas in accordance with Performance Criteria PC19 and PC20 of the Emerging Communities Domain Code.

OTHER

Groundwork Petrology (Wrote Hanson's Petrology report)

[http://www.groundwork.com.au/expertise Petrography](http://www.groundwork.com.au/expertise_Petrography)

Geochempet Services (used by Groundworks clients Boral Reedy Creek and Hanson)

<http://www.geochempet.com/about.html>

Boral Reedy Creek – Alternative Rock Resources – Explanation of 1974 resource survey in SEQ

<http://www.goldcoastquarry.com/assets/Documents/H%20-%20Alternative%20Rock%20Resources/Appendix%20H%20-%20Alternative%20Rock%20Resources.pdf>

Boral Reedy Creek – Clarification of identified air quality matters – Mostly a report reviewing effects of dust on vegetation for Boral Reedy Creek.

<http://eisdocs.dsdp.qld.gov.au/Completed%20Projects/Gold%20Coast%20Quarry/AEIS/3.%20Attachment%20A%20-%20Air%20Quality.pdf>

http://www.holcim.com.au/fileadmin/templates/AU/doc/MSDS/Holcim/Holcim_Premixed_Concrete_Actinolite.pdf

This Safety Data Sheet (SDS) is issued by the Supplier in accordance with National standards and guidelines from Safe Work Australia (SWA – formerly ASCC/NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its SDS by any other person or organization. The Supplier will issue a new SDS when there is a change in product specifications and/or Standards, Codes, Guidelines, or Regulations.

Dependent on quarry location the rock type can be described as meta-dolerite, amphibolite, granite with dolerite dykes or greenstone with varying concentrations of actinolite, epidote, feldspar, chlorite, calcite, sphenechlorite, pyroxene and limonite

Notes: Cement in concrete contains trace amounts (2-10 ppm) of Chromium VI (hexavalent chromium). Natural rock dolerite aggregates, may contain traces (<0.01% by weight) of fibrous actinolite. None of these trace materials are present to any significant extent.

Respiratory Protection:

In dusty environments where dust may be generated from cutting or drilling dry concrete, use a wet method of cutting and drilling as the preferred method. Where this is not possible, use a respirator (filter mask) such as a P2 particulate respirator (AS/NZS 1715 and AS/NZS 1716).

Dust control measures providing respiratory protection against crystalline silica dust will also minimise and control any exposure to fibrous actinolite and chromium dust.

Where concrete surfaces are being finished by grinding or polishing using power tools to obtain a very smooth or decorative surface, more respiratory protection and local exhaust ventilation is needed. The risk of dust levels exceeding exposure standards during these special operations on concrete surfaces should be assessed, and a higher level of dust control should be applied.

Long Term Effects:

The aggregate in this product may contain traces of fibrous actinolite material, which is a form of asbestos (asbestiform fibres). Excessive long term exposures to asbestiform fibres can lead to mesothelioma, lung cancer and asbestosis. However, according to a statement from VWA Government health authorities (14 November 2013):

"Exposure monitoring results gathered during air monitoring programs at quarries and mine sites show that the levels of exposure from airborne mineral fibres are below the national occupational exposure standard and therefore present a low health risk."

Long term occupational over-exposure or prolonged breathing-in (or inhalation) of crystalline silica dust at levels above the WES carries the risk of causing serious and irreversible lung disease, including bronchitis and silicosis (scarring of the lung). It may also increase the risk of other irreversible and serious disorders including scleroderma (a disease affecting the skin, joints, blood vessels and internal organs) and other auto-immune disorders. IARC have recently classified respirable crystalline silica dust as carcinogenic to humans (IARC Group 1). This means it may cause lung cancer. Exposure to respirable silica is negligible when handling wet concrete. In the case of dust from activities associated with dry concrete (e.g. cutting, drilling and finishing), the recommended controls outlined in Section 8 should be followed.

Following considerable research and consultation with Government authorities, Holcim considers low exposures to concrete or dust containing such traces are without risk to health.

SECTION 15: REGULATORY INFORMATION

Exposures by inhalation to high levels of dust may be regulated under the Hazardous Substances Regulations (State) as they are applicable to Respirable Crystalline Silica, requiring exposure assessment, controls and health surveillance (ASCC/NOHSC).

Actinolite issue Reedy Creek

From Gold Coast Quarry Web site @

<http://www.goldcoastquarry.com/assets/Documents/Q%20-%20Geological%20and%20Geotechnical%20Report/Appendix%20Q%20-%20Geological%20and%20Geotechnical%20Report%20-%20Part%2037.pdf>

Extract from appendix 1, Boral Reedy Creek Geological Studies done by GEOCHEMPET SERVICES, MALENY

Three holes bored, Seven samples taken, Actinolite found in two samples, one from each of two holes.

3% actinolite found in sample.

MAY, 2005 Page 4 of 15

Sample Label : Reedy Creek DDH01 56.9 m

Work Requested : Petrographic analysis in relation to use as source rock for road base, concrete aggregate and sealing/asphaltic aggregate

Methods : Account taken of ASTM C 295 Standard Guide for *Petrographic Assessment of Aggregates for Concrete* and of the content of the 1996 joint publication of the Cement and Concrete Association of Australia and Standards Australia, entitled *Alkali Aggregate Reaction - Guidelines on Minimising the Risk of Damage to Concrete Structures in Australia*

Identification : Meta-greywacke

Description :

The sample consisted of a drill core specimen of unweathered, greenish medium grey, hard, robust, meta-greywacke. It is cut by a few healed joints or quite thin veins spaced about 8 to 90 mm apart. The rock is not obviously foliated.

A representative specimen was selected for thin sectioning. An approximate average mineralogical composition of the rock, expressed in volume percent and based on a brief count of 100 widely spaced points in the thin section, is:

Durable Minerals

28% feldspar (plagioclase and microcline)

22% quartz

25% epidote group minerals

3% calcite

3% actinolite

2% sphene/leucoxene

<1% opaque oxide

Weak &/or Deleterious Components

12% sericite

4% chlorite

1% carbonaceous matter

In thin section the rock is seen to be meta-greywacke with remnant primary textures of

moderately sorted, sandy style, now modified by very mild deformation, fine veining and partial, fine recrystallization of regional metamorphic style. Original clasts are mainly in the range 0.05 to 0.7 mm. The fracture veins are about 0.1 mm wide. Quartz occurs as mildly to moderately strained residual sand grains. Microcline and plagioclase feldspars persist as slightly deformed sand grains. The plagioclase is now liberally flecked with an epidote group mineral and sericite. Sparse clasts of former carbonaceous mudstone are slightly deformed. Clasts of detrital sphene, opaque oxide (partly altered to sphene/leucoxene) and epidote are present in low abundance. Other clasts (some recognizable as former volcanic lithic clasts) and matrix components have

recrystallized variously to fine feldspar, chlorite, epidote group minerals, sericite, actinolite and sphene. The fracture veins contain calcite. No pyrite was detected.

Comments and Interpretations :

The sample from Reedy Creek DDH01 56.9 m represents not obviously foliated metagreywacke which is considered to be a low grade regional **metamorphic rock** generated by quite mild deformation, veining and partial recrystallization of former moderately sorted, quartzofeldspathic, labile arenite.

For engineering purposes the rock may be summarised as

- meta-greywacke (a metamorphic rock type)
- not obviously foliated
- crystalline
- non-porous
- cut by a few thin veins of calcite
- unweathered
- hard
- strong
- carrying about 17% of weak, soft minerals (comprising 12% sericite, 4% chlorite and 1% carbonaceous matter)
- not carrying any obvious pyrite

The meta-greywacke is predicted to be **durable**.

Because the meta-greywacke carries about 22% quartz (free silica) with degrees of strain ranging from negligible to moderately strained it seems prudent to regard the rock as having **potential for mild or slow deleterious alkali-silica reactivity in concrete**.

In short, meta-greywacke of the type represented by Reedy Creek DDH01 56.9 m is predicted to be **suitable for use as a source of concrete aggregate, provided that** appropriate precautions are taken in mix and engineering design to take account of its perceived potential for mild or slow deleterious alkali-silica reactivity.

The rock is predicted to be quite **suitable also for use as a source of road base and sealing/asphaltic aggregate**.

Free Silica Content :

The free silica content is about 22% (in the form of crystalline quartz about 0.05 to 0.7 mm in grain size)

1% actinolite sample - GEOCHEMPET SERVICES, MALENY

MAY, 2005 Page 8 of 15

Sample Label : Reedy Creek DDH02 47.2 m

Work Requested : Petrographic analysis in relation to use as source rock for road base, concrete aggregate and sealing/asphaltic aggregate

Methods : Account taken of ASTM C 295 Standard Guide for *Petrographic Assessment of Aggregates for Concrete* and of the content of the 1996 joint publication of the Cement and Concrete Association of Australia and Standards Australia, entitled *Alkali Aggregate Reaction - Guidelines on Minimising the Risk of Damage to Concrete Structures in Australia*

Identification : Meta-greywacke

Description :

The sample consisted of a drill core specimen of unweathered, greenish medium grey, hard, robust meta-greywacke. It is cut by several healed joints or quite thin veins spaced about 30 to at least 80 mm apart; pyrite and calcite can be seen on one exposed fracture vein surface. The rock is very faintly foliated.

An approximate average mineralogical composition of the rock, expressed in volume percent and based on a brief count of 100 widely spaced points in the thin section, is:

Durable Minerals

40% feldspar (plagioclase and microcline)

22% quartz

18% epidote group minerals

1% calcite

1% actinolite

2% sphene/leucoxene

<1% opaque oxide

Weak &/or Deleterious Components

9% sericite

6% chlorite

1% carbonaceous matter

trace pyrite

In thin section the rock is seen to be meta-greywacke with remnant primary textures of moderately sorted, sandy style, now modified by very mild deformation, fine veining and partial, fine recrystallization of regional metamorphic style. Original clasts are mainly in the range 0.05 to 1 mm. Partial recrystallization has generated many new mineral grains as fine as 0.005 to 0.03 mm. No fracture veins are represented in the thin section. The meta-greywacke carries a thin bed of carbonaceous siltstone and it displays a faint metamorphic foliation transgressive to the bedding.

Quartz occurs as mildly to moderately strained residual sand grains. Microcline and plagioclase feldspars persist as slightly deformed sand grains. The plagioclase is now flecked with an epidote group mineral and sericite. Disseminated clasts of former

carbonaceous mudstone are deformed by the foliation. Clasts of detrital sphene, opaque oxide (partly altered to sphene/leucoxene) and epidote are present in low abundance. Other clasts (some recognizable as former volcanic lithic clasts) and matrix components have recrystallized variously to fine feldspar, chlorite, epidote group minerals, sericite, actinolite and sphene. Pyrite is present in trace amounts as very sparse small grains and small aggregates of fine grains and within the calcite veined observed in hand specimen..

Comments and Interpretations :

The sample from Reedy Creek DDH02 47.2 m represents faintly foliated metagreywacke which is considered to be a low grade regional **metamorphic rock** generated by quite mild deformation, veining and partial recrystallization of former moderately sorted, quartzofeldspathic, labile arenite.

For engineering purposes the rock may be summarised as

- meta-greywacke (a metamorphic rock type)
- faintly foliated
- crystalline
- non-porous
- cut by a thin vein of calcite
- unweathered
- hard
- strong
- carrying about 16% of weak, soft minerals (comprising 9% sericite, 6% chlorite and 1% carbonaceous matter)
- carrying a trace amount of pyrite

The meta-greywacke is predicted to be **durable**.

Because the meta-greywacke carries about 22% quartz (free silica) with degrees of strain ranging from negligible to moderately strained it seems prudent to regard the rock as having **potential for mild or slow deleterious alkali-silica reactivity in concrete**.

In short, meta-greywacke of the type represented by Reedy Creek DDH02 47.2 m is predicted to be **suitable for use as a source of concrete aggregate, provided that** appropriate precautions are taken in mix and engineering design to take account of its perceived potential for mild or slow deleterious alkali-silica reactivity.

The rock is predicted to be quite **suitable also for use as a source of road base and sealing/asphaltic aggregate**.

Free Silica Content :

The free silica content is about 22% (in the form of crystalline quartz about 0.05 to 0.7 mm in grainsize).

Council City Planning Committee Meeting 27 Nov 2013 from 3 Dec 2013 Council minutes

6 OTHER MATTERS

Occurrence of Mineral Actinolite

On 14 November 2013, petrographic reports of source rock samples for the proposed Gold Coast Quarry were submitted to Council by resident groups opposed to the quarry development. The results of the petrographic analysis indicate a presence of the mineral 'Actinolite' in the sample rock.

Council minutes page 11 - On 23 March 2012, Council's Implementation and Assessment Branch invited several external town planning consultants to respond to Council's Consultant Brief for the independent review of the environmental impact statement for the Gold Coast Quarry. On 12 June 2012, after a review of each of the external town planning consultant's responses, Council engaged the services of Buckley Vann Town Planning Consultants to undertake the independent review of the environmental impact statement for the Gold Coast Quarry once the EIS is prepared and provided to Council for comment.

These reports were provided to Buckley Vann Town Planning Consultants and their consultancy team to be included in their independent report

Council City Planning Committee Meeting 27 November 2013 from 3 December 2013 Council meeting minutes

http://www.goldcoast.qld.gov.au/documents/ma/planning-20131127-adopted_report_part_1.pdf

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City Planning Committee Meeting 27 November 2013 Adopted Report

ITEM 1 (Continued)

REVIEW OF ENVIRONMENTAL IMPACT STATEMENT FOR GOLD COAST QUARRY – LOT 105 ON SP144215 & LOT 901 ON RP907357 – OLD COACH ROAD, REEDY CREEK AND TALLEBUDGERA CREEK ROAD, TALLEBUDGERA VALLEY – DIVISION 13 PD97/621/02

RECOMMENDATION

That Council resolves as follows:

1 That Council adopt the contents of the independent report titled *"Independent Review of the Gold Coast Quarry (GCQ) Environmental Impact Statement (EIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate,"* prepared by Buckley Vann Town Planning Consultants, dated 28 May 2013.

2 That Council provide a submission to the Coordinator-General on the Gold Coast Quarry Environmental Impact Statement.

3 That Council's submission on the Gold Coast Quarry Environmental Impact Statement shall include the attached report titled *"Independent Review of the Gold Coast Quarry (GCQ) Environmental Impact Statement (EIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate,"* prepared by Buckley Vann Town Planning Consultants, dated 28 May 2013, in the submission to the Coordinator-General.

4 That Council request the Coordinator-General to require the proponent to prepare a Supplementary Environmental Impact Statement Report that addresses the issues raised in Council's Submission, including but not limited to the impacts on traffic, road network and the proposed site access location, conflicts with the Gold Coast Planning Scheme 2003, the impacts on ecological and environmental values, and clarification around end use details.

5 That Council request the Coordinator-General to provide Council with the opportunity to review the Supplementary Environmental Impact Statement Report and provide comments to the Coordinator-General prior to the Coordinator General finalising their Environmental Impact Statement Evaluation Report.

6 That Council request the Coordinator-General to publicly exhibit the Supplementary Environmental Impact Statement Report.

CARRIED

ADOPTED AT COUNCIL 11 JUNE 2013

RESOLUTION G13.0611.007 moved Cr McDonald seconded Cr Robbins

That Committee Recommendation CP13.0605.001 be adopted as printed.

CARRIED UNANIMOUSLY

6 OTHER MATTERS

Occurrence of Mineral Actinolite

On 14 November 2013, petrographic reports of source rock samples for the proposed Gold Coast Quarry were submitted to Council by resident groups opposed to the quarry development. The results of the petrographic analysis indicate a presence of the mineral 'Actinolite' in the sample rock.

These reports were provided to Buckley Vann Town Planning Consultants and their consultancy team to be included in their independent report. The results of the petrographic analysis have been reviewed by two consultant team members from ECOROC and ASK Consulting to determine the potential for human health risks as a result of the mineral being present in airborne dust generated from quarry activities over the life of the quarry. A more detailed summary of ECOROC and ASK Consulting's assessment of the occurrence of Actinolite can be found in Section 1.2 – Occurrence of Mineral Actinolite of Buckley Vann Town Planning Consultants independent report.

7 CONCLUSION

Council's Planning, Environment and Transport Directorate re-engaged the services of Buckley Vann Town Planning Consultants and several associated specialist consultants to undertake an independent review and detailed assessment of the Supplementary Report to the Gold Coast Quarry EIS.

A copy of Buckley Vann Town Planning Consultants report titled *"Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate,"* dated 20 November 2013, is attached to this report.

Buckley Vann Town Planning Consultants report raises several outstanding significant concerns with the proposed development that still require further consideration by the proponent, including the potential need to redesign some components of the proposal. The key recommendations of Buckley Vann Town Planning Consultants report is that:

- 1) Council makes the Coordinator-General aware that there is insufficient information to be satisfied that the impacts associated with the proposed development can be satisfactorily managed or that there is a substantive need for the proposed quarry. As a result, there is insufficient information to adequately condition an approval with any certainty based on the information provided; and
- 2) In the event that the Coordinator-General decides to approve the application despite 1) above, Council requests the Coordinator-General apply the conditions provided in Appendix B in the Coordinator General's Evaluation Report and Recommendation, which include requirements for the proponent to provide further information to allow an assessment of the proposal against the planning framework applicable to a future material change of use development application.

It is therefore recommended that Council provide a submission on the Supplementary Report to the EIS to the Coordinator-General including the recommendations contained within Buckley Vann Town Planning Consultants report. It is also recommended that Council request the Coordinator-General to require the proponent to address Council's outstanding concerns prior to the Coordinator-General finalising their Evaluation Report and Recommendation on the Gold Coast Quarry EIS.

However, as noted in the key recommendations of Buckley Vann Town Planning Consultants report, in the event that the Coordinator-General elects to approve the Gold Coast Quarry EIS despite Council's raised concerns, it is also recommended that Council provide conditions as set out in Appendix B of Buckley Vann Town Planning Consultants report in the submission to the Coordinator-General to be included in the Coordinator-General's Evaluation Report.

Changed Recommendation

COMMITTEE RECOMMENDATION CP13.1127.001

moved Cr Gates seconded Cr Caldwell

That Council resolves as follows:

1 That Council adopt the contents of the independent report titled "Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate," prepared by Buckley Vann Town Planning Consultants, dated 20 November 2013.

2 That Council provide a submission to the Coordinator-General on the Supplementary Report to the Gold Coast Quarry Environmental Impact Statement.

3 That Council's submission on the Supplementary Report to the Gold Coast Quarry Environmental Impact Statement shall include the attached report titled *"Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate,"* prepared by Buckley Vann Town Planning Consultants, dated 20 November 2013, in the submission to the Coordinator-General.

4 That Council's submission advise the Coordinator-General that Council does not support the Gold Coast Quarry EIS in its current form due to the outstanding issues raised in Council's submission, including but not limited to the impacts on traffic, road network and the proposed site access location, conflicts with the Gold Coast Planning Scheme 2003, and the impacts on ecological and environmental values.

5 That in the event the Coordinator-General approves the Gold Coast Quarry EIS despite Council's strong objection, the conditions as detailed in Appendix B of Buckley Vann Town Planning Consultants independent report be included with Council's submission in the interests of protecting the public from the impacts of quarrying.

6 That Council request the Coordinator-General to require the proponent to address the issues raised in Council's Submission prior to the Coordinator-General finalising their Evaluation Report and Recommendation on the Gold Coast Quarry Environmental Impact Statement.

7 That Council request the Coordinator-General to provide Council with the opportunity to review any further information prepared by the proponent that addresses Council's Submission and provide comments to the Coordinator-General prior to the Coordinator-General finalising their EIS Evaluation Report.

8 Condition 50 of Appendix B of Buckley Vann Town Planning Consultants independent report be amended as follows:

50a) Prior to commencement of the use, an assessment of the health risks to residents of exposure to quarry dusts arising from the occurrence of the mineral actinolite within the rock proposed to be quarried and processed, is to be prepared by a suitably qualified consultant.

The risk assessment is to address:-

1) Mode of occurrence and concentration of the mineral within the geology of the site

- 2) Whether the mineral actinolite occurs in an asbestos form ('asbestiform')
- 3) If the mineral actinolite is identified in an asbestos form, then further risk assessment is to include:-
- (i) Specific composition and structure of the mineral;
 - (ii) Potential for the mineral to be liberated and transmitted by quarrying activities;
 - (iii) Likelihood of the dust being inspired by site employees or the general public;
 - (iv) Adoption of a suitable medical model of toxicity to humans; and
 - (v) Preparation of a risk management plan setting out detailed control measures to ensure the health and safety of residents is not impacted by dusts generated from quarrying activities.
- 50b) The EMP must also require measurement of asbestos-form actinolite in samples of airborne particulates collected in conjunction with ongoing silica monitoring. Should this proportion be significantly higher than (double or more) the May 2005 Geochempet petrographic analysis result of 3%, then a health risk assessment of exposure of nearby residents to asbestos must be undertaken, and a management plan prepared that ensures the VicEPA asbestos and silica criteria are met at sensitive receptors.
- CARRIED

Boral actinolite GCCC planning-20131127-adopted_report_part_1.pdf

P27 Buckley Van review

P170 Buckley Van Actinolite review (pasted below)

5.7.9 Silica and Actinolite

Relevant Section of EIS	Appendix GG, Air Quality (Section 10, Respirable crystalline silica assessment)
Description of the Assessment	<p>The EIS adopts the appropriate criterion for crystalline silica, which is an annual average of $3 \mu\text{g}/\text{m}^3$ measured as the PM_{2.5} fraction. The methodology used follows the modelling methodology with specific, appropriate modifications for silica. This is based on the upper limit of the range of the proportion of silica measured in the rock. Therefore the predicted concentrations of silica are expected to be appropriate provided the modelling issues discussed in this review are resolved.</p> <p>Actinolite (a mineral that can exist in asbestos form) has also been found in two of the seven petrographic analysis samples, with the higher sample containing 3%. Based on the EIS modelling undertaken, this corresponds to an ambient concentration of 0.024 micrograms per cubic metre at the nearest residence, which is within the Vic EPA criterion for asbestos of 0.2 micrograms per cubic metre or 0.05 PCM fibres/ m^3.</p>
Recommendations	It is likely that the proponent will undertake monitoring of occupational exposure to silica. It is recommended that results from that monitoring be used to confirm that the proportion of silica in these airborne samples be compared to the proportion of silica measured in the rock to confirm similarity.
Proponent's Response	The response confirms that monitoring of exposure of the workforce will continue throughout the lifetime of the quarry.
Assessment of Proponent's Response	The response is adequate provided the proportion of silica is comparable to the 32% assumed in the EIS.
Recommended Condition for CG's Evaluation Report	Refer to condition 49 and 50 provided in Appendix B.

P209 CG Terms of Reference

P288 Recommended conditions for CG

P301 Buckley van actinolite recommendation to Co-ord General (revised by council)

SILICA AND ACTINOLITE

- 40) A revised EMP is to be prepared requiring that the proportion of silica (quartz) in dust measured for occupational exposure assessment must be compared to the proportion of silica assumed in the EIS. Should this proportion be significantly higher (double or more), then the assessment of environmental impacts must be updated.
- 50) The EMP must also require measurement of asbestos-form actinolite in samples of airborne particulates collected in conjunction with ongoing silica monitoring. Should this proportion be significantly higher than (double or more) the May 2005 Geochempel petrographic analysis result of 3%, then a health risk assessment of exposure of nearby residents to asbestos must be undertaken, and a management plan prepared that ensures the VicEPA asbestos and silica criteria are met at sensitive receptors.

P302

DUST MONITORING REQUIREMENT

- 52) A revised EMP is to be prepared requiring:
- a) replacement of "air emissions monitoring" with "ambient air monitoring";
 - b) specification of the following criteria:
 - i. 6th highest 24-hour PM10 average in the year not to exceed 50 µg/m3;
 - ii. annual average insoluble dust deposition rate not to exceed 120 mg/m2/day;
 - c) specification that at least seven dust deposition monitoring sites near the site boundary in the vicinity of receptor areas A, B, C, D, E, H & I;
 - d) amendment to the methods proposed to include AS/NZS3580.9.9:2006 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM10 low volume sampler - Gravimetric method as an alternative to AS3580.9.6-2003;
 - e) specification that monitoring of PM10 particulates must be undertaken every sixth day during the operation of the quarry. The instrument must be located in the vicinity of the northern or eastern ends of the site boundary. Monitoring must be undertaken according to the latest version of AS3580.9.6 or AS/NZS 3580.9.9.

P304 end of Boral in council minutes

670 Council Meeting 27 3 December 2013 Adopted Minutes

9 RECEPTION & CONSIDERATION OF COMMITTEE REPORTS (Continued)

9.3 CITY PLANNING Cr Caldwell, Chairperson of the City Planning Committee, presented the Report of the City Planning Committee held on Wednesday, 27 November 2013.

RESOLUTION G13.1203.015

Moved Cr Caldwell Seconded Cr Bell

That the Report of the City Planning Committee Meeting held on Wednesday, 27 November 2013, covered by Recommendations numbered CP13.1127.001 to CP13.1127.008 be received.

CARRIED

ITEM 1 REVIEW OF ENVIRONMENTAL IMPACT STATEMENT FOR GOLD COAST QUARRY – LOT 105 ON SP144215 & LOT 901 ON RP907357 – OLD COACH ROAD, REEDY CREEK AND TALLEBUDGERA CREEK ROAD, TALLEBUDGERA VALLEY – DIVISION 13 PD97/621/02

MOTION Moved Cr Tate Seconded Cr Bell

That Committee Recommendation CP13.1127.001 be adopted as printed which reads as follows:-

1 That Council adopt the contents of the independent report titled "Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate," prepared by Buckley Vann Town Planning Consultants, dated 20 November 2013.

2 That Council provide a submission to the Coordinator-General on the Supplementary Report to the Gold Coast Quarry Environmental Impact Statement.

3 That Council's submission on the Supplementary Report to the Gold Coast Quarry Environmental Impact Statement shall include the attached report titled "Independent Review of the Gold Coast Quarry (GCQ) Supplementary Environmental Impact Statement (SEIS) – Prepared for the Gold Coast City Council (GCCC) Planning, Environment and Transport (PET) Directorate," prepared by Buckley Vann Town Planning Consultants, dated 20 November 2013, in the submission to the Coordinator General.

4 That Council's submission advise the Coordinator-General that Council does not support the Gold Coast Quarry EIS in its current form due to the outstanding issues raised in Council's submission, including but not limited to the impacts on traffic, road network and the proposed site access location, conflicts with the Gold Coast Planning Scheme 2003, and the impacts on ecological and environmental values.

5 That in the event the Coordinator-General approves the Gold Coast Quarry EIS despite Council's strong objection, the conditions as detailed in Appendix B of Buckley Vann Town Planning Consultants independent report be included with Council's submission in the interests of protecting the public from the impacts of quarrying.

6 That Council request the Coordinator-General to require the proponent to address the issues raised in Council's Submission prior to the Coordinator-General finalising their Evaluation Report and Recommendation on the Gold Coast Quarry Environmental Impact Statement.

7 That Council request the Coordinator-General to provide Council with the opportunity to review any further information prepared by the proponent that addresses Council's Submission and provide comments to the Coordinator-General prior to the Coordinator-General finalising their EIS Evaluation Report.

8 Condition 50 of Appendix B of Buckley Vann Town Planning Consultants independent report be amended as follows:

50a) Prior to commencement of the use, an assessment of the health risks to residents of exposure to quarry dusts arising from the occurrence of the mineral actinolite within the rock proposed to be quarried and processed, is to be prepared by a suitably qualified consultant. The risk assessment is to address:-

1 Mode of occurrence and concentration of the mineral within the geology of the site

2 Whether the mineral actinolite occurs in an asbestos form ('asbestiform')

3 If the mineral actinolite is identified in an asbestos form, then further risk assessment is to include:-

i Specific composition and structure of the mineral;

ii Potential for the mineral to be liberated and transmitted by quarrying activities;

iii Likelihood of the dust being inspired by site employees or the general public;

iv Adoption of a suitable medical model of toxicity to humans; and

v Preparation of a risk management plan setting out detailed control measures to ensure the health and safety of residents is not impacted by dusts generated from quarrying activities.

50b) The EMP must also require measurement of asbestos-form actinolite in samples of airborne particulates collected in conjunction with ongoing silica monitoring. Should this proportion be significantly higher than (double or more) the May 2005 Geochempet petrographic analysis result of 3%, then a health risk assessment of exposure of nearby residents to asbestos must be undertaken, and a management plan prepared that ensures the VicEPA asbestos and silica criteria are met at sensitive receptors.

CLOSED SESSION LOCAL GOVERNMENT ACT 2009 AND SUPPORTING REGULATIONS

PROCEDURAL MOTION Moved Cr Tate Seconded Cr Gates That Council move into Closed Session pursuant to section 275 (1) of the Local Government Regulation 2012, for the consideration of the following item for the reason shown:- Item Subject Reason 1 Review of Environmental Impact Statement for Gold Coast Quarry – Lot 105 on Sp144215 & Lot 901 on RP907357 – Old Coach Road, Reedy Creek and Tallebudgera Creek Road, Tallebudgera Valley Prejudicial Matter CARRIED
PROCEDURAL MOTION Moved Cr Tozer Seconded Cr Betts

Gold Coast Quarry: Coordinator-General's evaluation report on the environmental impact statement

December 2013

Air quality

The background sources of dust emissions in the project area at present are from industrial activity to the north of the project, including the existing West Burleigh quarry, the Reedy Creek Landfill, the Elanora wastewater treatment plant, the Burleigh Heads Bakery and exhaust emissions from vehicles travelling along the Pacific Motorway.

Additional emissions of Total Suspended Particulates (TSP), Particulate Matter (PM)₁₀ and PM_{2.5} would be generated by quarrying activities, including: material excavation, handling, crushing, screening and haulage; wind erosion of exposed areas and stockpiles; and drilling and blasting.

The proponent has proposed a number of dust control measures and treatments to manage the project's dust emissions, including: plant enclosures; dust suppression of stockpiles and pads, internal roads, and blasting areas; sealing of selected internal roads; and the covering of loads and wheel washing of all trucks leaving the quarry.

The results of the predictive modelling presented in the EIS found that the maximum concentrations of nitrogen dioxide (resulting from explosives used in blasting) and particulate matter as TSP, PM₁₀ and PM_{2.5} would not exceed the relevant standard and guidelines set out in the Environmental Protection (Air) Policy 2008 (EPP (Air)) at all residential sensitive receptors, with the exception of two locations for PM₁₀. However, it is standard in the assessment of PM₁₀ concentrations to consider 5 exceedances per year as acceptable. The modelling results indicate the 6th highest per centile predicted maximum 24-hour average ground-level concentration of PM₁₀ which are below the EPP Air criteria. It is noted that the ground-level concentrations of TSP, PM₁₀ and PM_{2.5} could exceed the regulatory limits in limited areas of the buffer zone to the north and south of the quarry operating pit. However, these predicted exceedances are not considered large enough to adversely affect vegetation.

In addition to particulate matter TSP, PM₁₀ and PM_{2.5}, the EIS and further information provided to the Coordinator-General following the EIS process, specifically assessed respirable crystalline silica, and mineral actinolite and other fibrous minerals similar to asbestos (asbestiform). Crystalline silica and asbestiform minerals such as actinolite can be present in hard rock and can be released as a result of the cutting, drilling, blasting and processing of the hard rock.

Crystalline silica is controlled and monitored as part of PM_{2.5} and can generally be adequately managed through control measures. The EIS assessed the level of crystalline silica to be below the relevant regulatory limits at all residential sensitive receptors. In terms of risks to workers, the proponent has committed to conducting routine monitoring of its workforce to exposure to crystalline silica and will be required to comply with the relevant provisions of the *Mining and Quarrying Safety and Health Act 1999*.

The presence of actinolite and other asbestiform minerals in the Gold Coast quarry hard rock resource was considered as part of the geological and geotechnical assessment of the project. An analysis of rock drill core samples indicated that actinolite may form between 1 per cent and 3 per cent of the total mineralogical composition of the rock. Actinolite and other asbestiform minerals are commonly found in greenstone hard rock resources. The Gold Coast quarry is a meta-greywacke hard rock resource which does not exhibit the presence of greenstone and is not associated with asbestos mineralisation. Given the

preliminary core sample analysis findings, further drilling and analysis of rock drill core samples was undertaken post-EIS process, which did not detect the presence of any asbestiform minerals such as actinolite. The proponent will be required to comply with the relevant provisions of the *Mining and Quarrying Safety and Health Act 1999* which would protect workers from any risk of exposure. A condition has been stated to address the risk to human health of exposure to asbestiform minerals.

The dust control measures and treatments committed to by the proponent to manage the project's dust emissions, together with the site specific meteorology, terrain and land-use (i.e. vegetated buffer zone) demonstrate that the predicted dust emissions from project activities would not cause a risk to human health and would not cause a nuisance to the community.

Since the release of the additional information to the EIS, the proponent has provided further information to the Coordinator-General⁴ about the likely presence of actinolite and other asbestiform minerals in the Gold Coast Quarry hard rock resource. This information was provided in response to issues raised by the community with GCCC during the advisory agency comment period on the additional information to the EIS. GCCC raised this matter with the Coordinator-General as part of its submission on the additional information. I have considered this further information in my evaluation of the environmental effects of the project. Further details can be found in Section 5.4.

5.1.5. Topography, geology and soils

Topography

The project site is located within the intermediate area of the Gold Coast which is topographically defined by the Lamington Plateau of the Gold Coast hinterlands to the west and the urbanised coastal areas of the Gold Coast to the east. This intermediate area is constituted by a complex group of ridges and intervening gullies containing several sub-catchments draining to the east of the project site.

Three ridgelines, each of which contain secondary spurs and steep slopes, predominantly border the site's perimeter. Heights of the surrounding ridgelines vary from approximately 10 m in the east to 187 m in the west.

Geology

The geology of the site and surrounding areas is dominated by meta-greywacke rocks of the Neranleigh-Fernvale Beds. This geological unit hosts the majority of extractive industry resources in the area. The principal rock types on the site are meta-greywacke and argillite and both rock types are variably exposed in subcrop and sporadic outcrop across the site. By volume, greywacke accounts for approximately 85–90 per cent of the extractive resource on site.

On the basis of the geotechnical investigations that were completed, substantially more hard rock than the estimated 79 million tonnes could be extracted from the site. However, the extent of hard rock resource that can be extracted from the site is dictated by:

- the location of identified areas and species of ecological significance
- utilising the existing topography as much as possible to assist in minimising external views into the proposed quarry
- maintaining an extensive buffer area that will assist in achieving compliance with relevant state parameters in terms of acoustics and air quality.

The failure of a slope, namely a quarry bench (particularly through the use of explosives and rock durability) was identified as a potential risk to operations. A comprehensive geotechnical assessment was completed on the site pursuant to *AS1726 Geotechnical Site Investigation 1993*. This is described in detail in Appendix Q of the EIS.

The geotechnical assessment undertaken developed a series of limit equilibrium models for the main slopes. These models were then applied during various stages of quarry development to understand the minimum failure surface of each particular slope. From the mapping presented for each of the five phases of quarry development, landslide and/or slope failure was identified to present a low to moderate risk if no treatment was provided. This risk would be further reduced with slope treatment.

The risk of off-site landslides or slope failure occurring as a result of the quarry operations was assessed in the EIS. This assessment determined that the quarry operations were unlikely to cause vibration impacts which would destabilise any surrounding land. It was evaluated that separation distances provided in the buffer zone were more than adequate to almost fully attenuate vibration and any landslide response trigger.

Crystalline silica

Silica is a component of hard rock (namely quartz) and overburden and is present in varying levels in both crystalline and non-crystalline forms.

Given the potential health risk respirable (breathable) silica presents for both workers and sensitive receptors in close proximity to the project, core samples were studied to determine what percentage of free silica was contained in the quarry's resource area.

Petrographic analysis of seven rock core samples indicated that 16–32 per cent of the resource may contain free silica of which grainsizes of crystalline quartz ranged from 0.01 to 1.5 mm.

Actinolite and other asbestiform minerals

Actinolite is a member of the amphibole family of silicates that includes a wide-ranging group of minerals. It is common in greenstone (altered ocean-floor basalts and other mafic and ultramafic rocks) that can occur as part of the Neranleigh–Fernvale Beds and associated low-grade metamorphic ophiolites (including greywackes) in South East Queensland.

Although the Gold Coast Quarry is located within the Neranleigh–Fernvale Group, on a meta-greywacke hard rock resource, it does not exhibit the presence of greenstone and is not associated with asbestos mineralisation.

The Petrographic Reports attached to the Geological and Geotechnical Report at Appendix Q of the EIS, identified that actinolite constituted between approximately 1 per cent and 3 per cent of the total mineral composition of core samples assessed. These amounts were deemed as very low and it was determined that they did not pose a significant risk in regard to air quality.

I note advice from DEHP that asbestos containing rock would most likely be considered a hazardous contaminant under the EP Act and would be managed in accordance with the contaminated land provisions of the EP Act.

5.4.4. Crystalline silica

The likely presence of silica in the hard rock resource was discussed in Section 5.1.5 of this report.

Silica dust can be created at any point during cutting, drilling, blasting or processing of hard rock and overburden, and from wheel action on the haul roads.

Prolonged exposure to respirable crystalline silica at elevated levels may impact human health adversely. Crystalline silica must be in the form of very fine particles, generally with an aerodynamic diameter less than three or four micrometres (μm), for it to be drawn into the lungs (respirable).

Presently, there are no air quality objectives in Queensland specifically for respirable crystalline silica. Accordingly, objectives from the Victorian Environmental Protection Agency (VIC EPA) of 3 $\mu\text{g}/\text{m}^3$ (annual average) have been used to report respirable crystalline silica in $\text{PM}_{2.5}$.

If respirable crystalline silica is produced by the activities of the Gold Coast Quarry, concentrations would be greatest in close proximity to the source of emissions. Therefore, the risk of exposure to respirable crystalline silica will be greatest for those working in close proximity to dust producing activities. This exposure will be managed under the *Mining and Quarrying Safety and Health Act 1999*. In this regard, the proponent has committed to conducting routine monitoring of the exposure of its workforce to respirable crystalline silica throughout the lifetime of the quarry.

The assessment of respirable crystalline silica has used the maximum free silica content measured in the Petrographic analysis reported in Section 5.1.5 of this report and assumed that 32 per cent of respirable dust generated from the quarry would be in the form of crystalline silica.

Dispersion modelling of respirable crystalline silica dust in PM_{2.5} has been undertaken for the project operating at maximum capacity producing operation of the project at 2 Mtpa.

In Queensland, crystalline silica is controlled and monitored as part of PM_{2.5} and can generally be adequately managed through PM₁₀ control measures. The EIS assessed the level of crystalline silica to be below the relevant regulatory limits at all residential sensitive receptors. The maximum annual average GLCs of PM_{2.5} at each sensitive receptor predicted by the dispersion modelling, with a background concentration of 5.5 µg/m³ derived from measurements at Springwood EHP station, and reported against EPP Air criteria is Table 5.7.

The predicted annual average GLCs of respirable crystalline silica in PM_{2.5} at each sensitive receptor and reported against VIC EPA criteria is presented in Table 5.7.

Table 5.7 Predicted annual average ground-level concentrations

Receptor Area	Respirable crystalline silica (µg/m ³) Annual average		PM _{2.5} (µg/m ³) Annual average (cumulative)	
Predicted	VIC EPA objectives	Predicted	EPP Air objectives	
A	0.15	3.0	6.0	8.0
B	0.18	3.0	6.1	8.0
C	0.07	3.0	5.7	8.0
D	0.12	3.0	5.9	8.0
E	0.05	3.0	5.6	8.0
F	0.02	3.0	5.6	8.0
G	0.03	3.0	5.6	8.0
H	0.01	3.0	5.5	8.0
I	0.09	3.0	5.8	8.0
J	0.25	3.0	6.3	8.0
K	0.12	3.0	5.9	8.0
L	0.04	3.0	5.6	8.0

The predicted concentrations of respirable crystalline silica in PM_{2.5} from project operations are well below VIC EPA assessment criterion at all sensitive receptors.

The predicted maximum ground-level concentrations of TSP, PM₁₀ and PM_{2.5} resulting from the project activities are below the relevant Air EPP objectives at all sensitive receptors.

Based on the findings of this assessment, the emissions of respirable crystalline silica from the Gold Coast Quarry do not present a risk to human health to the residents who live in communities adjacent to the proposed quarry.

5.4.5. Asbestiform minerals

The likely presence of actinolite and other asbestiform minerals in the Gold Coast quarry hard rock resource was discussed as part of the geological and geotechnical assessment of the project in Section 5.1.5 of this report.

The risk to human health from asbestiform minerals in the Gold Coast Quarry hard rock resource was raised by the community with the Gold Coast City Council during the advisory

agency comment period on the additional information to the EIS. The Gold Coast City Council raised this matter with the Coordinator-General as part of its submission on the additional information. In response to these concerns the proponent provided the results of further analysis of rock drill core samples undertaken by the Queensland University of Technology (QUT).

Seven core samples of greywacke were analysed using Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM), X-Ray Diffraction (XRD) and Polarized Light Microscopy (PLM). The seven 50 mm diameter core samples represented a depth ranging from 28.7 metres to 101.0 metres.

The *Analysis of Quarry Core Samples for the Presence of Asbestos Fibre* report confirmed that no actinolite was discovered in any of the analysed core samples. X-ray diffraction analysis of the core samples determined the rock cores comprised predominantly quartz, albite, muscovite, chlorite and calcite. No amphibole minerals including actinolite and tremolite were detected and no serpentine minerals (precursors to chrysotile asbestos) were identified.

PLM analysis of the crushed rock samples did not detect the presence of any acicular amphibole minerals and no fibrous minerals similar to asbestos were detected in any of the core samples.

SEM and TEM analysis did not detect the presence of any asbestos minerals in the core samples. No prismatic tremolite or actinolite was observed in the additional study.

I note that should asbestiform minerals become airborne that concentrations would be greatest in close proximity to the source of emissions. Those working in close proximity to dust producing activities would be at greatest risk of exposure to asbestiform minerals. This exposure will be managed under the *Mining and Quarrying Safety and Health Act 1999*.

Based on the findings of this assessment, the emissions of asbestiform minerals do not present a risk to human health to the residents who live in communities adjacent to the proposed quarry.

5.4.6. Coordinator-General's conclusions

The results of the predictive modelling presented in the EIS found that the maximum concentrations of oxides of nitrogen (NO_x) (resulting from explosives used in blasting) and particulate matter as TSP, PM₁₀ and PM_{2.5} do not exceed the relevant standard and guidelines set out in EPP Air at all residential sensitive receptors, with the exception of two locations for PM₁₀.

The dust control measures and treatments committed to by the proponent to manage the project's dust emissions, together with the site specific meteorology, terrain and land-use (i.e. vegetated buffer zone), demonstrate that the predicted dust emissions from project activities would not cause a risk to human health and not cause nuisance to the community. It is noted that the ground-level concentrations of TSP, PM₁₀ and PM_{2.5} would exceed the regulatory limits in limited areas of the buffer zone to the north and south of the quarry operating pit. However, these exceedances are not considered large enough to adversely affect vegetation and related flora and fauna, and are not considered a threat to human health.

A number of conditions have been stated to ensure mitigation measures are implemented and air quality is protected at sensitive locations around the proposed quarry (refer to Appendix 1).

Part F. Hazard and risk

Condition 13. Actinolite and other fibrous minerals similar to asbestos

Prior to commencement of the use, an assessment of the health risks to residents at sensitive receptor locations surrounding the quarry residents of exposure to quarry dusts

arising from the occurrence of the mineral actinolite or other fibrous minerals similar to asbestos within the rock proposed to be quarried and processed, is to be prepared.

The risk assessment is to address:

- (a) The mode of occurrence and concentration of the mineral within the geology of the site
- (b) Whether the mineral actinolite occurs in an asbestos form ('asbestiform')
- (c) If the mineral actinolite is identified in an asbestos form, then further risk assessment is to include:
 - (i) Specific composition and structure of the mineral
 - (ii) Potential for the mineral to be liberated and transmitted by quarrying activities
 - (iii) Likelihood of the dust being inspired by site employees or the general public
 - (iv) Adoption of a suitable medical model of toxicity to humans
 - (v) Preparation of a risk management plan setting out detailed control measures to ensure the health and safety of residents is not impacted by dusts generated from quarrying activities.

City Planning Committee Meeting 8 July 2014

http://www.goldcoast.qld.gov.au/documents/ma/planning-20140708-adopted_report_P1%281%29.PDF

Boral actinolite GCCC planning-20140708-adopted_report_P1(1).PDF

683rd Council Meeting 11 July 2014 4
City Planning Committee Meeting 8 July 2014

P4 Council in receipt of development application from Boral

Then full history

P23 Discussion:

Air Quality. *The modelling provided has uncertainties associated with the method used for wind erosion, the topographic resolution, and the particle size parameters. Background air quality has also not been assessed using local measurements and the EMP does not include sufficient control measures. The assessment has identified that proposed dust suppression methods of water trucks wetting dust sources, vacuums/dust collectors on extraction machinery, enclosing crushing plant and including mist sprayers, fitting conveyors with wind covers and washing loads and vehicles before exiting the site will manage impacts when combined with a condition to comply with the requirements of the Environmental Protection (Air Quality) Policy. The impacts can therefore be suitably managed within the accepted limits.*

Officer conditions for development

P46

DUST MANAGEMENT

46 PM₁₀ particulates monitoring

Background monitoring of PM₁₀ particulates must be undertaken prior to commencement of site preparation every sixth day for a period of at least three months. The instrument must be located in the vicinity of the northern or eastern ends of the site boundary. Monitoring must be undertaken according to the latest version of AS3580.9.6 or AS/NZS 3580.9.9.

Timing

As indicated within the wording of the condition.

P47

47 Crystalline Silica

The applicant must monitor exposure of workers to crystalline silica and provide Council with a copy of the results on a 6 monthly basis. The data is to be accompanied by a report detailing the results, any risks to residents and proposed mitigation measures should readings indicate risk of Crystalline Silica.

Note: Measured concentrations shall be assessed against an annual average of 3 µg/m³ measured as the PM_{2.5} fraction.

Timing

As indicated within the wording of the condition.

48 Dust Management

a The release of dust and particulate matter from clearing, construction or operational activities must not cause 'environmental harm' or an 'environmental nuisance' (within the meaning of those terms set out in the *Environmental Protection Act 1994*) at any sensitive receptor as stated in schedule 1 of the *Environmental Protection (Air) Policy 2008*.

b A dust management plan must be submitted to, and approved by, Council prior to the issue of any development permit for the carrying out of clearing or building work.

c The environmental management plan must:

i Be prepared by a suitably qualified professional;

ii Provide details of sources of dust and particulate emissions;

iii Identify measures and work practices that will be implemented to ensure that the release of dust and particulate matter from construction activities does not cause an 'environmental nuisance' (within the meaning of that term set out in the *Environmental Protection Act 1994*) at any sensitive receptor as stated in Schedule 1 of the *Environmental Protection (Air) Policy 2008*;

iv Identify the procedures to be adopted for monitoring and reporting of air emissions;

v Provide details of complaint response procedures that will be adopted; and

vi Identify the procedures to be adopted for revision and review of the dust management plan.

d The approved environmental management plan must be complied with and kept on-site at all times.

Timing

At all times

P63

73 Actinolite risk management

As part of the quarry's ongoing risk management practices, if rocks or mineralisation containing the mineral actinolite in concentrations in excess of 3% are encountered, or actinolite is detected in dusts from quarrying activities in excess of the expected concentrations modelled in the EIS, then a report detailing the results of a risk assessment to determine the nature, form and distribution of the mineral actinolite within the rock to be quarried and its dusts, is to be prepared by a suitably qualified professional and a copy submitted to Council.

The risk assessment is to address:

- a Mode of occurrence and concentration of the mineral within the geology of the site;
- b Whether the mineral actinolite occurs in an asbestos form ('asbestiform');
- c If asbestiform minerals are identified, then further risk assessment is to include:
 - i Specific composition and structure of the mineral;
 - ii Potential for the mineral to be liberated and transmitted by quarrying activities;
 - iii Likelihood of the dust being inspired by site employees or the general public;
 - iv Adoption of a suitable medical model of toxicity to humans; and
 - v Preparation of a risk management plan setting out detailed control measures to ensure the health and safety of residents is not impacted by dusts generated from quarrying activities.

Timing

As indicated in the wording of the condition.

P77 councillors refuse

10. The proposed development does not adequately address impacts of air quality and Council does not have certainty that the development will manage and mitigate unacceptable levels of air quality (especially dust) in surrounding residential areas in accordance with Performance Criteria PC19 and PC20 of the Emerging Communities Domain Code.

OTHER

Groundwork Petrology (Wrote Hanson's Petrology report)

[http://www.groundwork.com.au/expertise Petrography](http://www.groundwork.com.au/expertise_Petrography)

Geochempet Services (used by Groundworks clients Boral Reedy Creek and Hanson)

<http://www.geochempet.com/about.html>

Boral Reedy Creek – Alternative Rock Resources – Explanation of 1974 resource survey in SEQ

<http://www.goldcoastquarry.com/assets/Documents/H%20-%20Alternative%20Rock%20Resources/Appendix%20H%20-%20Alternative%20Rock%20Resources.pdf>

Boral Reedy Creek – Clarification of identified air quality matters – Mostly a report reviewing effects of dust on vegetation for Boral Reedy Creek.

<http://eisdcs.dsdp.qld.gov.au/Completed%20Projects/Gold%20Coast%20Quarry/AEIS/3.%20Attachment%20A%20-%20Air%20Quality.pdf>

http://www.holcim.com.au/fileadmin/templates/AU/doc/MSDS/Holcim/Holcim_Premixed_Concrete_Actinolite.pdf

This Safety Data Sheet (SDS) is issued by the Supplier in accordance with National standards and guidelines from Safe Work Australia (SWA – formerly ASCC/NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its SDS by any other person or organization. The Supplier will issue a new SDS when there is a change in product specifications and/or Standards, Codes, Guidelines, or Regulations.

Dependent on quarry location the rock type can be described as meta-dolerite, amphibolite, granite with dolerite dykes or greenstone with varying concentrations of actinolite, epidote, feldspar, chlorite, calcite, sphenechlorite, pyroxene and limonite

Notes: Cement in concrete contains trace amounts (2-10 ppm) of Chromium VI (hexavalent chromium). Natural rock dolerite aggregates, may contain traces (<0.01% by weight) of fibrous actinolite. None of these trace materials are present to any significant extent.

Respiratory Protection:

In dusty environments where dust may be generated from cutting or drilling dry concrete, use a wet method of cutting and drilling as the preferred method. Where this is not possible, use a respirator (filter mask) such as a P2 particulate respirator (AS/NZS 1715 and AS/NZS 1716).

Dust control measures providing respiratory protection against crystalline silica dust will also minimise and control any exposure to fibrous actinolite and chromium dust.

Where concrete surfaces are being finished by grinding or polishing using power tools to obtain a very smooth or decorative surface, more respiratory protection and local exhaust ventilation is needed. The risk of dust levels exceeding exposure standards during these special operations on concrete surfaces should be assessed, and a higher level of dust control should be applied.

Long Term Effects:

The aggregate in this product may contain traces of fibrous actinolite material, which is a form of asbestos (asbestiform fibres). Excessive long term exposures to asbestiform fibres can lead to mesothelioma, lung cancer and asbestosis. However, according to a statement from VWA Government health authorities (14 November 2013):

"Exposure monitoring results gathered during air monitoring programs at quarries and mine sites show that the levels of exposure from airborne mineral fibres are below the national occupational exposure standard and therefore present a low health risk."

Long term occupational over-exposure or prolonged breathing-in (or inhalation) of crystalline silica dust at levels above the WES carries the risk of causing serious and irreversible lung disease, including bronchitis and silicosis (scarring of the lung). It may also increase the risk of other irreversible and serious disorders including scleroderma (a disease affecting the skin, joints, blood vessels and internal organs) and other auto-immune disorders. IARC have recently classified respirable crystalline silica dust as carcinogenic to humans (IARC Group 1). This means it may cause lung cancer. Exposure to respirable silica is negligible when handling wet concrete. In the case of dust from activities associated with dry concrete (e.g. cutting, drilling and finishing), the recommended controls outlined in Section 8 should be followed.

Following considerable research and consultation with Government authorities, Holcim considers low exposures to concrete or dust containing such traces are without risk to health.

SECTION 15: REGULATORY INFORMATION

Exposures by inhalation to high levels of dust may be regulated under the Hazardous Substances Regulations (State) as they are applicable to Respirable Crystalline Silica, requiring exposure assessment, controls and health surveillance (ASCC/NOHSC).

MECS

PRINT FILE COPY

(FINALISED)

CTS No: 19708/16 Currently Assigned To: GLOSKO DUE:
 Subject: Ormeau / 134 Peachey Road / Holcim Quarry / operation Material Safety Sheet / Actinolite

Campaign:
 Security Classification: EHP - Unrestricted

Templates:
 Ack Letter
 Template:

CLIENTS

Role	Name	Address	Client Type	Locality	Primary
Original Correspondent	sch4p4(6) Personal information		PUB - Member of the Public		Yes

GENERAL DETAILS

External Reference No: Thesaurus No: MS
 Classification: Providing Information Locality: 4851-4899 Far North

DATES

Created: 03/08/16 Dated: 02/08/16
 Received: 02/08/16
 Draft Due to EHP - Minister: Draft Received by EHP - Minister: 04/08/16
 Date Sent for Signoff:
 Due Signatory: Sent for Redraft:
 Signed: Finalised: 04/08/16
 YOUR DUE DATE: EC Officer Allocated: 03/08/16

DEPARTMENTAL DETAILS

Business Area: EHP - ESR IaDaSQC Business Unit: SQC - Gold Coast
 Business Sub Unit:

Action Type: For Appropriate Action (as re
 Further Details: Hard Copy Attachments:
 Redraft Reason: Transfer To:
 Executive Contact: Corro EHP ESR IaDaSQC Agency Author:
 Signing Officer:

INVOLVEMENT DETAILS

Role	Name	Due Date	Received	Response
Allocated Officer	Glosko Brett		04/08/16	
Allocated Officer	Morgan Yvette	04/08/16	03/08/16	
	Corro EHP ESR IaDaSQC		03/08/16	04/08/16

<i>Role</i>	<i>Name</i>	<i>Due Date</i>	<i>Received</i>	<i>Response</i>
Executive Contact				
EMG Officer	EHP - Minister		03/08/16	
Creator	BAKER-LOWE Andrew	03/08/16	03/08/16	

ACKNOWLEDGEMENT LETTER DETAILS

Reply to Name: _____ Position: _____
 Reply To Org: _____
 Reply to Address: _____
 Regarding: your environmental concerns in relation to the Holcim Quarry

COMMENTS

<i>Date Added</i>	<i>Added By</i>	<i>COMMENT HISTORY</i>
04/08/16 14:39	LANDS\gloskob	Information Accepted and Item Finalised by GLOSKO Brett (who was the CAP)
04/08/16 09:25	LANDS\hillju	Allocated to GLOSKO Brett by HILL Julie (who was acting for: MORGAN Yvette) for Information Only. Hi Brett, this item is additional information only in relation to CTS 19460/16 which is due by 3pm 8 August 2016. As Yvette is away today you may need to reallocate these two items to someone else. Thanks, Julie
03/08/16 15:26	LANDS\moffatw	Allocated to MORGAN Yvette by MOFFAT Wendy (who was acting for: Corro EHP ESR laDaSQC) for Information Only. Hi Yvette, this matter is captured under CTS19460/16 allocated to you already. It is further incoming correspondence (2 x emails) and once considered in the response for CTS19460/16 can be finalised with CTS19460/16 reply to progress. Hope that makes sense. Thanks, Wendy.
03/08/16 15:01	LANDS\HallA1	Allocated to Corro EHP ESR laDaSQC by HALL Ali (who was acting for: EHP - Minister) for Information Only. Please consider this further incoming (note two separate emails) in the reply progressing under CTS 19460/16. This can then be finalised.
03/08/16 12:38	LANDS\bakerla	Item created by BAKER-LOWE Andrew

frmprintfilecopy - 4.56.1127.0

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When the MECS item has been completed there may be a business need to save all the finalised attachments into eDOCS within the relevant business area file.

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ANICI Damian

From: Environment <Environment@ministerial.qld.gov.au>
Sent: Tuesday, 2 August 2016 7:52 AM
To: DLO EHP
Subject: FW: Information regarding Safety Data sheet regardin Holcim Aggregate Products containing Actinolite.

-----Original Message-----

From: sch4p4(6) Personal information
Sent: Tuesday, 2 August 2016 6:18 AM
To: Environment <Environment@ministerial.qld.gov.au>
Subject: Information regarding Safety Data sheet regardin Holcim Aggregate Products containing Actinolite.

2/08/2016

To Hon Dr Steven Miles M P .
Minister for Environment and Heritage Protection
And Minister for National Parks and the Barrier Reef

sch4p4(6) Personal information

I have forwarded a copy of Holcim Quarry operation Material Safety Sheet.

"The information is called Holcim Aggregate Products Containing Actinolite"

I have forwarded a link regarding the information supplied by Holcim.

https://linkprotect.cudasvc.com/url?a=http://www.holcim.com.au/uploads/AU/Holcim-AggregateProducts-SDS_01.pdf&c=E,1,3YaYQeV5Tvs04CoKbTdOMVFBO025oY_KXDWLbhtf6jiu42xlC8lwUzRBERQhOFsqIKAMkQdJbTeN3r9W_g_yC6ELibStoHUqEaR4uNHl_CCpMHMQeM,&typo=1

I will forward my comments regarding comments regarding the Uncontrolled Silica Dust into the Environment by Holcim Quarrying Operations at 134 Peachey Road Ormeau 4208.

Regards, sch4p4(6) Personal information

This email, together with any attachments, is intended for the named recipient(s) only; and may contain privileged and confidential information. If received in error, you are asked to inform the sender as quickly as possible and delete this email and any copies of this from your computer system network.

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EHP RTI DL Release

ANICI Damian

From: Environment <Environment@ministerial.qld.gov.au>
Sent: Tuesday, 2 August 2016 8:19 AM
To: DLO EHP
Subject: FW: Holcim Aggregate Products Containing Actinolite Comments by) Person
4(6) Personal info
Attachments: Holcim Aggregate Products Containing Actinolite.docx

From: sch4p4(6) Personal information
Sent: Tuesday, 2 August 2016 7:56 AM
To: Environment <Environment@ministerial.qld.gov.au>
Subject: Holcim Aggregate Products Containing Actinolite Comments by :h4p4(6) Personal inform

2/07/2016 .

To Hon D r Steven Miles MP
Minister for Environment and Heritage Protection
And Minister for National Parks and the Barrier Reef .

sch4p4(6) Personal information

I have forwarded my comments regarding " Holcim Aggregate Products Containing Actinolite " Safety Data sheet ' .

"My comments made show how serious the nature of this Uncontrolled Silica Dust Escaping Daily into the Environment" .

From Holcim Quarry operations at 134 Peachey Road , Ormeau Qld 4207 .

"I have underlined the important information , where Holcim is admitting how serious the Uncontrolled Silica Dust is allowed to Escape uncontrolled in to the Environment of South East Queensland " .

Please use this information to help the local Communities of South East Queensland , from the" Lawless Quarry Operations" .

" The Silica Dust is horrible when the locals have breath it in because the Quarry Operations will not control their Silica Dust"

"The Silica Dust also blows over their houses where they live and have no choice what is blowing over Them " .

"Please help us because we cannot stop what is happening to us by the bullies from the Quarrying Industries"

"The laws are there , for them operate by" .

"DEHP fail to control these lawless operations from destroying the local communities lives and health and well being "

"The Asbestos Dust is for real, not make believe and it is time the issue should be taken serious and the proper action taken to stop this.

“Uncontrolled Silica and Asbestos Dust into the environment over South East Queensland “.

“Please help the us “

Regards h4p4(6) Personal inform

This email, together with any attachments, is intended for the named recipient(s) only; and may contain privileged and confidential information. If received in error, you are asked to inform the sender as quickly as possible and delete this email and any copies of this from your computer system network.

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EHP RTI DL Release

Holcim Aggregate Products Containing Actinolite

Safety Data Sheet.

Comments regarding information supplied show the serious nature of this Uncontrolled. Silica Dust Escaping Daily into the Environment.

From Holcim Quarry operations at 134 Peachey Road, Ormeau Qld. 4207.

Contact Quarry Manager:

Phil Dukes, Holcim Quarry Manager

134 Peachey Road, Ormeau 4208 .

Ph 0755494403

Mobil 4(6) Personal in

Email phil.dukes@lafargeholcim.com

Section 2: Hazard Identification

Holcim Aggregate Products Containing Actinolite is classified as **Non- Dangerous** Good according to the Australian Code for the Transport of Dangerous Goods by Rail.

Dust of these products contains low concentrations low concentrations of crystalline silica, some of which may be irrespirable (particles small enough to go into the deep parts of the lung when breathed in) and which is Hazardous.

The Following risk and safety phrases refer ONLY to be dust of these products.

Risk Phrases	Safety Phrases
R48/20; <u>Danger of serious damage to health by prolonged</u>	S22: <u>Do not breathe dust.</u>

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Methods and materials for Containment and clean up:	<u>Dust is best cleaned by vacuum device to avoid making dust airborne . Wetting down before sweeping up may be useful control Measure. Recommendations on Exposure Controls / Personal Protection (see Section 8 below) should be followed during spill clean – up if conditions are dusty.</u>
--	--

SECTION 7: HANDLING AND STORAGE

Precautions for sale handling:	<u>Manual should be in accordance with Manual Handling Regulations and Codes.</u>
Conditions for safe storage:	<u>Avoid breathing dust. Respirable dust can be generated during processing handling and storage. When stockpiling and handling large quantities of products care should be taken to avoid having the faces of the stockpile steeper than the natural angle of repose of the material. Steep faces can fall without warning and trap persons resulting in injury and possibly suffocation.</u>

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION.

Exposure Standards; Workplace Exposure Standards for Airborne Contaminants, Safe Work Australia.

Crystalline silica (quartz): TWA – 0.1 mg/m³ irrespirable dust (< 7 microns particle equivalent aerodynamic diameter)

Total dust (of any type, or particle size): TWA - 10 mg/m³

Asbestos has a TWA of 0.1 fibres /ml of air (Fibrous Actinolite is a form of asbestos)

Notes on Exposure Standards: All occupational exposures to atmospheric contaminants should be kept to as low as reasonably practicable and in all cases to below the Workplace Exposure Standard (WES)

TWA (Time Weighted Average) : the time –weighted average airborne concentration over an eight hour working day ,for a five – day working week over an entire working life . According to current knowledge this concentration should neither impair the health of , nor cause undue discomfort to nearly all workers.

ENGINEERING CONTROLS.

Ventilation:

The product should be made damp before use to reduce dust generation.

Work in the open air where possible. Local mechanical ventilation or extraction may be required in areas where dust could escape into the working environment. Local dust extraction and collection may be used, if necessary to control airborne dust levels .If generated dust cannot be avoided, follow personal protection recommendations.

Special Consideration for Repair & or Maintenance Of Contaminated Equipment

Where possible vacuum or wash down all gear, equipment or For Mobile Plant prior to Maintenance and repair work . If compressed air cleaning cannot be avoided wear eye and respiratory protection , and clothing as listed below.

Recommendations on Exposure Control and Personal Protection should be followed.

PERSONAL PROTECTION

Personal Hygiene

Wash hands before eating, drinking, using the toilet, or smoking .Wash work clothes regularly.

Skin Protection

Wear loose comfortable clothing and gloves (standard duty leather or equivalent

Eye Protection

Safety glasses with side shields or safety goggles (AS/NZ 1336) or a face shield should be worn .

Respiratory Protection

None required if engineering and handling controls are adequate to minimize dust generation and dust exposure (e.g. product kept damp) Where engineering and handling controls are not enough to minimise exposure to dust personal respiratory protection may be required .

The type of respiratory protection required depends primarily on the concentration of the inhalable and irrespirable dust in the air ,and The frequency and length of time of exposure time . A suitable P2 particulate respirator chosen and used in accordance with AS/NZS 1715 and AS? NZS 1716 may be sufficient for many situations, but where high levels of Dust are uncounted more efficient for many situations ,but where high levels of dust are encountered ,more efficient cartridge –type or powered respirators or supplied –air helmets or suits may be necessary . Use only respirators that bear the Australian standards marked and fitted and maintained correctly.

Inhaled: Dust is mildly irritating to the nose , throat and respiratory tract and may cause coughing and sneezing . Pre- exciting upper respiratory and lung disease including asthma and bronchitis may be aggravated.

Health Effects: **Chronic (Long Term)**

Eyes: Dust may cause irritation and inflammation of the eyes and aggravate pre-existing Eye condition.

Skin: Repeated heavy contact may cause drying of the skin and result in skin rash (dermatitis) typically affecting the hands. Over time this may become chronic and can also become infected.

Inhaled: Repeated exposure to the fine dust may result in increased nasal and respiratory secretions and coughing. Inflammation of lining tissue of the respiratory system may follow repeated exposure to high levels of dust with increased risk of bronchitis may be aggravated.

Additional Notes

Long Term

Effects. The aggregated in this product may contain traces of fibrous Actinolite material, which is form asbestos (asbestiform fibres) Excess long term exposures to asbestiform fibres can lead to mesothelioma, lung cancer and asbestosis. However, according to a statement from the WA Government health authorities (14 November 2013)

“ Exposure monitoring results gathered during air monitoring programs at quarries and mine sites show that the levels of exposure from airborne mineral fibres and below the national occupational exposure standard and therefore present a low health risk”.

Long term occupational over –exposure or prolong breathing-in (or inhalation) of crystalline silica at levels above dust at levels above the WES carries the risk of causing serious and irreversible lung disease ,including bronchitis and silicosis (scaring of the lung). It may also increase the risk of other irreversible and serious disorders including scleroderma (a disease affecting the skin joints ,blood vessels and internal organs) and other auto- immune disorders. IARC have recently classified irrespirable crystalline silica dust as carcinogenic to humans (ARC Group 1) This means it may cause lung cancer .In the case of generated dust ,the recommended controls outlined in Section 8 should be followed . Following considerable research and consultation with Government authorities. Holcim considers low exposures to aggregate dust containing such traces are without rich to health.

Special Toxic Effects Inhalation of dust, including crystalline silica dust is considered by medical authorities to increase the risk of lung disease due to tobacco smoking.

SECTION 12: ECOLOGICAL INFORMATION

Eco – toxicity: Product as delivered is not biodegradable, have low ecotoxicity and are not regarded as posing any ecological risk. Crushed products and dust may form mildly Alkaline or neutral slurry when mixed with water.

Persistence and Degradability Product is persistent and has a low degradability

Mobility A low mobility would be expected in a land fill situation.

SECTION 13: DISPOSAL CONSIDERATIONS.

Disposal methods and containers These products can be treated as a common waste for disposal in accordance with local authority guidelines. Recycling into construction activities is usually a practicable alternative. Measures should be taken to prevent dust generation during disposal and exposure and personal precautions should be observed (See Above)

Special precautions For landfill or Incineration: These products can be dumped into landfill site in accordance with local Authority guidelines

SECTION 14 : TRANSPORT INFORMATION :

UN number: None allocated

Un Proper Shipping Name: None allocated

Class and Subsidiary Risk: None allocated

Packing Group: None allocated

Special Precautions for User: None

HAZCHEM code: None allocated

SECTION 15: REGULATORY INFORMATION:

Poisons Schedule: Not scheduled

Exposure by inhalation to high levels of dust may be regulated under the Hazardous Substance Regulations (state) as they are applicable to Respirable Crystalline Silica ,requiring exposure assessment ,controls and health surveillance (ASCC?NOHSC)

SECTION 16: OTHER INFORMATION:

Date of revision of this SDS: July 2014

Australian Standards Reference:

AS/NZS 1336 Recommended Practices for Occupational Eye Protection

AS/NZS 1715 Section, use and Maintance of Respiratory Protective Devices.

AS/ NZS 1716 Respiratory Protective Devices.

AS 2161 Industrial Safety Gloves and Mittens (excluding electrical and Medical gloves)

Other References:

NOHSC: 1008 (2004) Approval Criteria for Classifying Hazardous Substances

NOHSC: 10005 (1999)	List of Designated Hazardous Substance, April 1999, National Occupational Health and Safety Commission , Sydney.
NOHSC: 2007 (1994)	National Code of Practice for the Control of Workplace Hazardous Substances (Australian States have similar Codes of Practise in each state)
Model Code of Practice	Preparation of Safety Data Sheets for Hazardous Chemicals, December 2011, Australia.
Model Code of Practice	Labelling of Workplace Hazardous Chemicals, December 2011, Safe Work Australia.
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail 7 th edition National Transport Commission.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS) ,3 rd revised edition, United Nations , New York and Geneva ,2009.
WES	Workplace Exposure Standards for airborne Contaminants, April 2013 ,Safe Work Australia.
WES	Guidance on the Interpretation of Workplace Exposure Standards for Airborne Contaminants, April 2013, Safe Work Australia.

Whilst the information contained in this document is based on data which, for the best of our Knowledge, was acute and reliable at the time of preparation, no responsibly can be accepted by us for errors and emissions . The provisions of this information should not be construed as recommendations to use any of our products in violation of any patent rights or in breach of any statute or regulation .User are advised to make their own determinations as to the suitability of this information in relation to their particular purpose and specific circumstances . Since the information contained in this document may be applied under conditions beyond our control, no responsibility can be accepted by us for any loss or damage caused by any person acting or refraining from action as a result of this information.

END OF SDS

Page 7 of 7

The information supplied shows how serious the uncontrolled silica Dust is, that is allowed to escape into the Environment of South East Queensland.

sch4p4(6) Personal information

MECS

PRINT FILE COPY

(CANCELLED)

CTS No: 19711/16 Currently Assigned To: EHP - Mii DUE: 03/16

Subject: Ormeau / 134 Peachey Road / Holcim Aggregate Products / Actinolite / Safety Data Sheet / Silica Dust /

Campaign: _____

Security Classification: EHP - Unrestricted

Templates:

Ack Letter

Template: _____

CLIENTS

Role	Name	Address	Client Type	Locality	Primary
Original Correspondent	sch4p4(6) Personal information		PUB - Member of the Public		Yes

GENERAL DETAILS

Classification: _____ External Reference No: _____

Locality: _____ Thesaurus No: MS

Action Within: _____

DATES

Created: 03/08/16

Dated: 02/08/16

Received: 03/08/16

Draft Due to EHP - Minister: _____

Draft Received by EHP - Minister: _____

Date Sent for Signoff: _____

Due Signatory: _____

Sent for Redraft: _____

Signed: _____

Finalised: 03/08/16

YOUR DUE DATE: 03/08/16

EC Officer Allocated: _____

DEPARTMENTAL DETAILS

Business Area: _____ Business Unit: _____

Business Sub Unit: _____

Action Type: _____

Further Details: _____

Hard Copy Attachments: _____

Redraft Reason: _____

Transfer To: _____

Executive Contact: _____

Agency Author: _____

Signing Officer: _____

INVOLVEMENT DETAILS

Role	Name	Due Date	Received	Response
EMG Officer EHP - Minister		03/08/16	03/08/16	
Creator	BAKER-LOWE Andrew	03/08/16	03/08/16	

ACKNOWLEDGEMENT LETTER DETAILS

Reply to Name: _____ Position: _____
Reply To Org: _____
Reply to Address: _____
Regarding: your environmental concerns in relation to the Holcim Quarry

COMMENTS

Date Added	Added By	COMMENT HISTORY
03/08/16 14:57	LANDS\HallA1	Item cancelled by HALL Ali (who was acting for: EHP - Minister).
03/08/16 14:57	LANDS\HallA1	Item cancelled by HALL Ali (who was acting for: EHP - Minister). Merging with CTS 19708/16 as the correspondence was received from the same person on the same date. NFA
03/08/16 12:39	LANDS\bakerla	Item created by BAKER-LOWE Andrew

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ANICI Damian

From: Environment <Environment@ministerial.qld.gov.au>
Sent: Tuesday, 2 August 2016 8:19 AM
To: DLO EHP
Subject: FW: Holcim Aggregate Products Containing Actinolite Comments by Person
4(6) Personal in
Attachments: Holcim Aggregate Products Containing Actinolite.docx

From: sch4p4(6) Personal information
Sent: Tuesday, 2 August 2016 7:56 AM
To: Environment <Environment@ministerial.qld.gov.au>
Subject: Holcim Aggregate Products Containing Actinolite Comments by sch4p4(6) Personal inform

2/07/2016 .

To Hon D r Steven Miles MP
Minister for Environment and Heritage Protection
And Minister for National Parks and the Barrier Reef .

sch4p4(6) Personal information

I have forwarded my comments regarding “ Holcim Aggregate Products Containing Actinolite “ Safety Data sheet ‘ .

“My comments made show how serious the nature of this Uncontrolled Silica Dust Escaping Daily into the Environment” .

From Holcim Quarry operations at 134 Peachey Road , Ormeau Qld 4207 .

“I have underlined the important information , where Holcim is admitting how serious the Uncontrolled Silica Dust is allowed to Escape uncontrolled in to the Environment of South East Queensland “.

Please use this information to help the local Communities of South East Queensland , from the” Lawless Quarry Operations” .

“ The Silica Dust is horrible when the locals have breath it in because the Quarry Operations will not control their Silica Dust”

“The Silica Dust also blows over their houses where they live and have no choice what is blowing over Them “.

“Please help us because we cannot stop what is happening to us by the bullies from the Quarrying Industries”

“The laws are there , for them operate by” .

“DEHP fail to control these lawless operations from destroying the local communities lives and health and well being “

“The Asbestos Dust is for real, not make believe and it is time the issue should be taken serious and the proper action taken to stop this.

“Uncontrolled Silica and Asbestos Dust into the environment over South East Queensland “.

“Please help the us “

Regards [REDACTED] (6) Personal information

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EHP RTI DL Release

MECS

(CTS No. 21631/16)

FINALISED

(EHP - MINISTER)

CTS No: 21631/16

Currently Assigned To: GLOSKI DUE: 01/11

[Click to Manage Attachments](#)

Concerning: Yatala / air pollution / asbestos air sampling kits provided / requests feedback on fibrous amphibole actinolite detected in any of the petrology reports

- **View**
Incoming - CTS 18624 16 - Air Pollution in the

Templates: Campaign: Ack Letter Template:

Security Classification: EHP - Unrestricted

Organisational Entity: EHP

Related Correspondence (5 of 6)

- **15640/16** - Yatala Residents Alliance / air pollution / dust
- **16111/16** - Yatala Residents Alliance / air pollution / dust
- **18510/16** - Yatala Residents Alliance /Asbes dust / dust
- **19157/16** - Yatala Residents Alliance / air pollution / dust
- **29842/16** - Norfolk Village Estate Ormeau / Powe's Haulage

CLIENTS (1)

Role	Name	Client Type	Organisation/Company	Post code	Locality	Primary
Original Correspondent	Person	ORG - Organisation/Entity	Yatala Residents Alliance	4207		Yes

ACKNOWLEDGEMENT LETTER DETAILSReply to Name: Position: Reply To Org: Reply to Address:

Regarding: air pollution in the Yatala area

No related correspondence

DEPARTMENTAL DETAILS

Business Area: EHP - ESR laDaSQC Business Unit: SQC - Gold Coast

Business Sub Unit:

Action Type: Noting Only

Redraft Reason: Executive Contact: Corro EHP ESR laDaSQC Agency Author:

My Recently Opened Items

- **21631/16** - Yatala / air pollution / asbestos air sampling

INVOLVEMENT DETAILSCOMMENTS

73 irrelevant information

DATES

Created: 25/08/16 Dated: 25/08/16
 Received: 25/08/16
 Draft Due to EHP - 09/09/16 Draft Received by EHP - Minister: 05/09/16
 Minister:
 Date Sent for Signoff: _____
 Due Signatory: _____ Sent for Redraft: _____
 Signed: _____ Finalised: 05/09/16
 YOUR DUE DATE: 01/09/16 EC Officer Allocated: 26/08/16

3 irrelevant inform

GENERAL DETAILS

External Reference No: _____ Thesaurus No: MS
 Classification: Seeking Information Locality: 4000-4209 South East - I

SIGNATORIES

Select the next Signatory: _____ Due Date: _____
 Date Submitted: _____ Date Received: _____

Current Signatories

Signatory Due Date Date Completed Submitted To Received From

Default Signatories

Signatory Response Due

INPUT OFFICERSPending Input Officers

For Input Details

INFORMATION OFFICERSPending Information Officers

For Information Details

COMMENTS LIST

Date Added	Added By	COMMENT HISTORY
05/09/16 14:09	LANDS\gloskob	Information Accepted and Item Finalised by GLOSKO Brett (who was the CAP)
02/09/16 11:17	LANDS\CanavanM	Workflow was CCd to SPENCE Samantha;GLOSKO Brett for Information by CANAVAN Maria (who was acting for: GLOSKO Brett) with the following instructions:

<i>Date Added</i>	<i>Added By</i>	<i>COMMENT HISTORY</i>
		Hi Brett, just a reminder to 'Accept Information' to finalise the item. Thanks, Maria.
30/08/16 10:13	LANDS\CanavanM	Workflow was CCd to GLOSKO Brett for Information by CANAVAN Maria (who was acting for: GLOSKO Brett) with the following instructions: Hi Brett, action type changed to 'Noting Only'. Please 'Accept Information' to finalise the item. Thanks, Maria.
30/08/16 09:56	LANDS\UferC	Workflow was CCd to Corro EHP ESR laDaSQC for Information by UFER Cathy (who was acting for: GLOSKO Brett) with the following instructions: EHP advised that no reply necessary at this time - information requested will be identified by monitoring - Action Type updated to Noting Only, Cathy MECU
26/08/16 11:03	LANDS\CanavanM	Workflow was CCd to SPENCE Samantha;HERTSLET Bryce for Information by CANAVAN Maria (who was acting for: Corro EHP ESR laDaSQC) with the following instructions:
26/08/16 11:03	LANDS\CanavanM	Allocated to GLOSKO Brett by CANAVAN Maria (who was acting for: Corro EHP ESR laDaSQC) for Response for EHP - Minister. Hi Brett, please provide a response for CoS signature. Due to Corro EHP ESR laDaSCQ by 3pm 01/09/2016. Thanks, Maria.
26/08/16 10:21	LANDS\HallA1	Allocated to Corro EHP ESR laDaSQC by HALL Ali (who was acting for: EHP - Minister) for Response for EHP - Minister. Please prepare a reply letter for the Chief of Staff's signature, due to MECU by 9/09/16.
25/08/16 12:13	LANDS\bakerla	Item created by BAKER-LOWE Andrew

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ANICI Damian

From: Environment <Environment@ministerial.qld.gov.au>
Sent: Thursday, 25 August 2016 10:07 AM
To: DLO EHP
Subject: FW: CTS 18624/16 - Air Pollution in the Yatala Area

From: Corro EHP Minister [mailto:EHPMinister.Corro@ehp.qld.gov.au]
Sent: Thursday, 25 August 2016 9:18 AM
To: Environment <Environment@ministerial.qld.gov.au>
Subject: FW: CTS 18624/16 - Air Pollution in the Yatala Area

Office of the Honourable Dr Steven Miles MP
Minister for Environment and Heritage Protection and
Minister for National Parks and the Great Barrier Reef

P 07 3719 7330
Floor 13, 400 George Street Brisbane QLD 4000
GPO Box 2454 BRISBANE QLD 4001
Email: environment@ministerial.qld.gov.au

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From: sch4p4(6) Personal information
Sent: Thursday, 25 August 2016 9:13 AM
To: Corro EHP Minister <EHPMinister.Corro@ehp.qld.gov.au>
Cc: yra@yatala.info
Subject: RE: CTS 18624/16 - Air Pollution in the Yatala Area

Dear Minister Miles,

Thank you for your reply.

DEHP officers have yesterday (24th August 2016) provided asbestos air sampling kits to some of our volunteer residents (5 had been selected from various locations of Yatala and Ormeau). It may interest you to know that some 18 families have volunteered to do this monitoring and many more of our residents apologised for not being able to put their hand up due to work commitments.

We look forward to seeing the results of all the tests which we believe are currently underway by early 2017 and hope that none reveal any adverse effects to our communities. You can rest assured we will scrutinise the results to ensure we are being adequately protected. In support of the report and test results which will be made available to the public, we would also very much appreciate a written assurance from the DEHP and DSITI that there has not been any fibrous amphibole actinolite detected in any of the petrology reports submitted by any of the 4 quarries in our area "ever".

Best regards,

p4(6) Personal info - YRA Database Coordinator / Committee Member

For and on behalf of:



MISSION STATEMENT: “A Community voice surrounding topics which impact the lifestyle, health and environment of residents near commercial and industrial developments in the Yatala Enterprise Area”

Disclaimer:

No warranty is given as to the accuracy of this information, and persons who rely on it do so at their own risk. To the extent permitted by law, neither Yatala Residents Alliance (YRA) nor its members, employees and agents, is liable for any claim, loss, damage cost or expense sustained or incurred by any person directly or indirectly arising as a result of reliance on an opinion, advice, recommendation, representation of the information expressly or impliedly contained in this document notwithstanding any error or omission including negligence. If you require any further information in relation to this document or it's contents, please contact the YRA committee via email on yra@yatala.info

From: Corro EHP Minister [<mailto:EHPMinister.Corro@ehp.qld.gov.au>]

Sent: Tuesday, 23 August 2016 11:21 AM

To: ch4p4(6) Personal informa

Subject: CTS 18624/16 - Air Pollution in the Yatala Area

Thank you for taking the time to write to the Minister for Environment and Heritage Protection and Minister for National Parks and the Great Barrier Reef. A response to your correspondence is attached.

Please do not hesitate to contact the office if you require any further information.

Office of the Honourable Dr Steven Miles MP
Minister for Environment and Heritage Protection and
Minister for National Parks and the Great Barrier Reef

P 07 3719 7330

Floor 13, 400 George Street Brisbane QLD 4000

GPO Box 2454 BRISBANE QLD 4001

Email: environment@ministerial.qld.gov.au

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