



MT COOT-THA QUARRY

ENVIRONMENTAL MANAGEMENT PLAN

IMSAD-10017

OWNER	QQM2
SPONSOR	QMAO
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1 DESCRIPTION OF OPERATIONS

1.1 INTRODUCTION

This Environmental Management Plan has been prepared for Field Services, a Division of the Brisbane City Council, in respect of Mt Coot-tha Quarry (MCQ), situated on Mt Coot-tha Road, Toowong.

1.2 ENVIRONMENTAL POLICY

Field Services operates under the Brisbane City Council Environmental Policy, EM001, available on the site noticeboard, and on the Brisbane City Council Intranet. Key points include commitment to legal requirements, working with the Brisbane community, continual checking and improvement of environmental performance, awareness of environmental responsibilities and minimising our impacts on the environment.

1.3 OPERATION OVERVIEW

The MCQ is a Brisbane City Council owned and operated quarry that currently undertakes full-time extraction, crushing and screening activities, as well as the operation of a three-stage plant used for crushing and screening aggregates. The site has been used for quarrying processes since approximately 1930 and as a hard-rock quarry. The predominant rock source is hornfels, with approximately 410,000 tonnes of material produced per annum. The aggregates produced are used primarily for asphalt production at Council's two asphalt plants, with some material utilised in civil construction projects run by Field Services. The facility does not import materials or wastes external to Council operations or from third party sources.

The quarry operates from 7:00am to 5:00pm Monday to Friday. Upon cessation as a quarry, it is anticipated that the area will undergo rehabilitation to become a community open-space. Areas in upper benches which quarrying activities are no longer carried out will be progressively rehabilitated. The site is externally certified with regard to Environment, Quality and Safety, and undergoes biannual external auditing, as well as regular internal auditing and risk assessment.

1.4 MATERIALS ON-SITE

Materials generated in the crushing and screening process include:

(a) Raw Quarry Material

Rock material is obtained by blasting and excavating processes. The predominant composition of rock extracted is hornfels.

(b) Various Grades Rock Material

Raw materials are processed to certain grades, depending on the desired construction use. Common grades include 35mm, 25mm, 18mm, 14mm, 9mm, 7mm and crusher dust.

(c) Rockflour

A fine dust collected during the dust extraction process, rockflour is used in small quantities in the asphalt production process off-site.

1.5 MATERIALS HANDLING AND PROCESSING

A four-stage process exists at the MCQ, consisting of:

- Blasting and excavating;
- Primary crushing and screening;
- Secondary crushing and screening;
- Tertiary crushing and screening.

Following blasting and extraction, quarried materials are transported via haul road to the Crushing Plant and the beginning of the crushing and screening process. Materials are transferred between crushing and screening plants via a conveyor system and then to stockpiles by bin trucks operating on-site. Front-end loaders maintain stockpiles and load these materials to haulage trucks as required. The Weighbridge Operator registers materials leaving the site.

2 IMPLEMENTATION AND OPERATION

2.1 STRUCTURE AND RESPONSIBILITY

Field Services is a business unit of the Brisbane City Council. It has three major operational groups, Construction Group, Asset Maintenance and Asphalt & Aggregates Branch. The Asphalt & Aggregates Branch, of which this operation belongs, manages its asphalt production facilities, quarrying and road surfacing operations. All activities are certified to AS/NZS ISO Quality, Environmental, and AS/NZS Safety accreditations.

The responsibilities and authority of Asphalt & Aggregates personnel are defined in Workplace statements, copies of which are kept by the Field Services Human Resources Section. The following are general statements of quality, environmental and safety responsibilities for various positions in the Group, and are contiguous with the site operations.

(a) **Quarry Manager**

The Quarry Manager is directly responsible to the Asphalt & Aggregates Manager and is responsible for the day to day running of the Quarry.

Quality, environmental and safety responsibilities of the Quarry Manager include:

- (i) Liaising with Operational Coordinators, the Environmental Management Coordinator and the IMS Representative to further improve the quality, safety and environmental performance of work, products and services;
- (ii) Liaising with all Assistant Coordinators and Team Leaders to ensure that the quality assurance, environmental and safety procedures and work

instructions for their section are distributed, understood and are effective and being carried out;

- (iii) Ensuring that issued work instructions are kept up to date are implemented;
- (iv) Reviewing all statistical charts, customer feedback and non-conformance reports and ensure that improvement and/or preventative actions are implemented;
- (v) Ensuring that Improvement Actions arising from internal audits are verified and that improvement and/or preventative actions are implemented;
- (vi) Ensuring all monitoring and assessment provisions are undertaken as prescribed;
- (vii) Ensuring all records are held and stored correctly;
- (viii) Arranging and calling quality meetings and attending management review meetings;
- (ix) Ensuring that all staff is adequately trained, in all activities, and that their performance is monitored through the planning for Performance System (PFP).

(b) ***Assistant Coordinators / Team Leaders***

The Assistant Coordinators and Team Leaders are responsible to Quarry Manager and are to assist in the following areas:

- (i) Liaising with the Quarry Manager on all quality, environmental and safety related matters and all non-conformance issues and executing any improvement actions arising from Non-conformances or Improvement Actions;
- (ii) Ensuring that the (daily) scheduled inspection and test plans are carried out;
- (iii) Reviewing all quality testing results and non-conformance reports and attend quality meetings when requested;
- (iv) Arranging for the production of product quality control charts, and the calibration of testing equipment, weighbridges, belt weighers and equipment used for process control, measuring weight or distance;
- (v) Ensuring that all works are carried out to the customer's requirements and to the prescribed tolerances and specifications outlined in work instructions and documented procedures;
- (vi) Ensuring that plant operators, truck drivers and labourers are adequately trained and understand all quality, environmental and safety procedures and work instructions relating to them;

- (vii) Checking and verifying that all production records, project site returns, dockets and checklists are accurate and completed daily;
- (viii) Ensuring all records are held and stored correctly;
- (ix) Ensuring that requirements under the Workplace Health and Safety Act, Safety Manual, Risk Assessment Manual are adhered to.

(c) ***Environmental Management Coordinator***

The Environmental Management Coordinator is responsible to the Branch Manager in the following areas:

- (i) Providing high level support with regard to environmental practices within the organisation;
- (ii) Reviewing and auditing environmental performance of the operations and providing guidance for continual improvement;
- (iii) Attending management review and operational meetings;
- (iv) Working with the Field Services Risk Management Team to ensure the coordination of corporate quality, safety and environmental systems.

(d) ***Workplace Health & Safety Officer, Training & Environment Coordinator***

The Workplace Health & Safety Officer, Training & Environment Coordinator is responsible to the Quarry Manager in the following areas:

- (i) Providing high level support with regard to health, safety and environmental practices within FSG quarries;
- (ii) Reviewing and auditing environmental performance of the operations and providing guidance for continual improvement;
- (iii) Attending management review and operational meetings;
- (iv) Providing appropriate training to plant operators, truck drivers and labourers understand all environmental and safety procedures and work instructions relating to them.

2.2 TRAINING

All plant personnel are to be given a site-specific induction prior to commencement at the plant. This induction shall include policies, procedures and work instructions relating to quality, environmental and safety issues, and is covered by the FS Quarries Induction Manual.

The training needs of all supervisory staff and field employees are to be identified annually and reviewed at agreed times during the year as part of the Council's Planning for Performance (PFP) Scheme. Training needs of operational staff within each section have been specified and documented within the Division's document titled, 'Training Needs Analysis' for implementation by the respective Coordinators and by the Quarry Manager.

On the job training for operational field employees is supervised and administered by the respective Quarry Manager, Assistant Coordinator or Workplace Health & Safety Officer, Training and Environment Coordinator. The Coordinators keep records of all on the job or external training carried out and notifies the Human Resources Section, for collation onto the individual employees training database.

Recommendations for training are submitted to the Quarry Manager in accordance with divisional procedures annually and on an 'as needed' basis.

2.3 DOCUMENTATION AND COMMUNICATION

All documents and data used as part of the certified Quality, Environmental and Safety System are controlled by the processes set out in documented procedures. Computer data, which constitutes quality records for the system, shall also be controlled by the documented procedures.

This ensures that:

- (a) The relevant documents are always available to the people who need them;
- (b) Documents are regularly reviewed for content and processed by authorised staff;
- (c) All changes to documentation is reviewed and approved by the designated officers;
- (d) Documents required by statutory provisions are held on site.

Copies of standard forms can be found on the FS Integrated Management System (IMS). The IMS is an electronic management / database system that encompasses all activities within FSG, and is externally certified.

2.4 EMERGENCY PREPAREDNESS

In the event of an emergency, personnel safety is paramount, and work instructions have been developed to deal with such situations. IMSWI-02022 Emergency Procedures Quarries details actions to be taken in the case of emergency situations, such as a fire on-site or in the adjacent bushland area, or the spillage of a chemical or other potentially harmful substance. Cleanup procedures for a chemical or other substance spill are also further detailed in IMSWI-10018 On-site Spills Quarries.

3 LIASON WITH COMMUNITY

Quarry Manager to ensure near resident and other interested parties are advised of quarry activities that may effect the nearby residential surround e.g.; Quarry production blasting.

Quarry Manger to respond to any enquiries from residents on a case by case basis regarding quarry Operations.

4 CONTROLS AND MANAGEMENT STRATEGIES

Operating procedures, including site-specific inductions for all plant staff, and visitors have been implemented to minimise the impact the quarry has on the environment.

4.1 STORMWATER RUNOFF / RETENTION

The following is an outline of Stormwater Management at the MCQ, greater detail can be found in the IMSWI-10022 Stormwater Management Plan MCQ. Stormwater runoff discharges to the Botanic Gardens.

(a) ***Policy***

- The current Department of Environment and Science (DES) Environmental Authority for the site stipulates the capacity to retain the first 22mm rainfall over contaminated areas on-site, however it is current policy to retain all site runoff from rainfall events in the main quarry void for dust suppression activities on-site. This policy is anticipated to prevent release and therefore minimise the impact on stormwater quality due to quarrying operations, particularly in relation to:
 - Sediment originating from stockpiles, conveyor transfer, paved and un stabilised surfaces;
 - Minor plant or vehicle discharges;
 - Significant rainfall events;
 - Wash down activities on the site;
 - Potential ‘first flush’ run-off Botanical Gardens on adjacent property;
 - Providing a sustainable supply of alternate source water for quarry operations.

(b) ***Performance Criteria and Objectives***

- To comply with the IMSWI-10022 Stormwater Management Plan MC;
- To comply with the Schedule D – Stormwater, and also with the water quality limits outlined in Schedule C – Water, of the licence administered by the DES, for any water unable to be retained, and therefore released off-site;
- To prevent or minimise release of runoff generated on-site during rainfall events.

(c) ***Implementation Strategy***

Design Measures

- The site has been graded, contoured and banded to satisfy operating requirements and to separate the areas with possible contaminants, which discharge to stormwater retention ponds for reuse on-site. Water levels in these ponds are to be kept 500mm below design heights in order to maintain capacities necessary to contain runoff generated in extreme storm events;
- On-site retention capacities have been improved and water efficiency measures have been incorporated throughout site operations;

- Sealed roads have been constructed around the site, with maintenance carried out as necessary;
- Any bulk oils to be kept in the designated bunded area, located near the crushing plant, and any fuels or other chemicals to be kept in the flammable substances storage container near the maintenance shed.

Operational Measures

- Clean up any material spillages immediately and dispose of at an appropriate location on site, as per IMSWI-10018 On Site Spills Quarries;
- Perimeter swales and catch drains are operable and clear of obstructions;
- Water from settling ponds is used for dust suppression on roads and stockpiles, reducing the release of potential contaminants and improving the storage capacities of ponds;
- Hard surfaces are mechanically swept and trafficked areas are watered as required to preclude dust emissions released by traffic movements;
- Washing of wheels and under bodies of vehicles exiting the site to be undertaken in the truck wheel wash station, particularly when during wet weather;
- Sediment containment ponds are to be either pumped to the main containment pond following rain events for dust suppression use on-site, or pumped out directly by the water truck.

(d) **Monitoring**

- Inspections as described in section 5.4 of this plan shall be undertaken by the Quarry Manager or otherwise delegated officer;
- The water quality characteristics of stormwater discharge from the site is to be evaluated at intervals as per section 5.5 of this plan, or when there is a suspicion or visual observation of abnormal water quality characteristics;
- Monitoring of the following water quality parameters is to be undertaken at points WM1 and WM2 during no less than three release events annually. These locations are signposted in close proximity to the discharge point of the respective pond.

Quality Characteristic	Release Limit
Dissolved Oxygen	Min 6mg/L
Suspended Solids	Max 30mg/L
pH	6.5 – 8.5
Oil/Grease	Not Visible

Table 4.1.1

(e) **Reporting and Auditing**

- Any incident will be recorded, together with appropriate improvement action taken, on the daily check sheet and an incident report raised;
- Audits of environmental compliance will be undertaken in accordance with section 5.3 of this Plan;
- Water quality results exceeding prescribed set limits will be immediately investigated (including resampling) and reported to the DES, as prescribed by the site licence.

(f) **Corrective Action**

- Increase frequency of sweeping/watering of trafficked areas;
- Clean out / desilt / maintain all swales, bunded areas, containment ponds etc;
- Prompt, correct response to spills on-site as per IMSWI-10018 On Site Spills Quarries;
- Counsel / discipline employees or contractors responsible for non-compliance with this strategy, or have been negligent in causing the quality of stormwater to decline or become contaminated.

4.2 AIR EMISSIONS

As the site is located in the immediate vicinity of the residential community, extensive work has been carried out on-site to reduce the impact that the quarry has on air quality. While studies undertaken by external parties in recent years have suggested that a number of external sources in the area significantly influence the overall atmospheric quality, Asphalt Operations is committed to lowering emissions originating from the MCQ.

(a) **Policy**

To minimise the emission of dust from the quarry, particularly in relation to:

- Aggregate stockpiles and storage bins;
- Loading of materials by wheeled loader;
- Operation of fixed and mobile plant on site;
- Crushing& screening operations;
- Truck movements;
- Fugitive dust emissions attributed to unstabilised surfaces.

(b) **Performance Criteria and Objectives**

- To comply with the Schedule B – Air, of F site licence;
- Complaints regarding a particular source could indicate unacceptable disturbance. For those complaints deemed not of a frivolous / vexatious

nature nor mistaken belief, additional monitoring or corrective action should be undertaken.

(c) **Implementation Strategy**

Design Measures

- Sealed roads have been constructed around the site, with maintenance carried out as necessary;
- Plant has been enclosed where practicable to prevent wind-borne dust, including bin-loading facilities, particularly on the tertiary plant;
- Dust extraction & water spray measures are implemented on the tertiary plant to minimise dust emissions;
- Installation of efficient belt scrapers on conveyors;
- Material transfer points and conveyors are fitted with water sprays for dust suppression and / or enclosed where possible;
- Fine materials such as rock flour are stored in silos with enclosed loading mechanisms in place.

Operational Measures

- Ensure staff maintain a visual surveillance and react promptly to evidence of dust disturbances off traversed or worked surfaces;
- Control fugitive dust emissions from loading faces of stockpiles and ground bins by use of water truck;
- Mechanically sweep and/or water all trafficked areas regularly;
- Clean up any material spillages immediately; Activities are visually monitored and adjusted or shut down on excessively dry/windy days;
- Washing of wheels and under bodies of vehicles exiting the site to be undertaken in the truck wheel wash station, when required.

(d) **Monitoring**

- Inspections as described in section 5.4 of this plan shall be undertaken by the Quarry Manager or otherwise delegated officer;
- Dust emissions are to be checked on monthly basis as per section 5.5 of this plan;
- Monitoring of the following air quality parameters is to be undertaken at points DM1, DM2 and DM3 on a monthly basis;

Quality Characteristic	Release Limit	Target
Dust Deposition	120mg/m ² /day	85mg/m ² /day
Particulate Matter	120mg/m ² /day	70mg/m ² /day

Table 4.2.1

(e) **Reporting and Auditing**

- Quantitative monitoring of dust fallout is undertaken monthly by an external party, currently Symbio, and exceedences reported to the DES;
- Any incident will be recorded, together with appropriate improvement action taken, on the daily check sheet and an incident report raised;
- Any public complaint will be recorded on a complaints register form, investigated and actioned in accordance with the quarry complaints procedure;
- Audits of environmental compliance will be undertaken in accordance with section 5.3 of this Plan.

(f) **Corrective Action**

- Increase frequency of sweeping/watering of trafficked areas;
- Identify and undertake stabilisation of exposed ground surfaces;
- Increase watering intensity of stockpiles and ground bins;
- Counsel/discipline employees or contractors responsible for generation of excessive air emissions.

4.3 NOISE AND VIBRATION EMISSIONS

Operating procedures, including site-specific inductions for all site staff, have been implemented to minimise excessive noise and vibration generation.

(a) **Policy**

To minimise the emission of noise and vibration from the facility, particularly in relation to:

- Blasting and extraction processes;
- Operation of plant and equipment;
- Loading of large rock and aggregates by the wheeled loader;
- Truck movements, particularly reversing alarms and the impact noise attributed to tailgates;
- General servicing or maintenance of quarry infrastructure.

(b) ***Performance Criteria and Objectives***

- Complaints regarding a particular source could indicate unacceptable disturbance. For those complaints deemed not of a frivolous / vexatious nature nor mistaken belief, additional monitoring or corrective action should be undertaken;
- Maintain operational hours of 7:00am to 5:00pm weekdays.

(c) ***Implementation Strategy***

Design Measures

- Blasting is designed and controlled to suit the surrounding geological formations, and minimise disturbance to residences in the area. Sequential blasting is carried out to produce a ripple-effect, and reduce noise and vibration;
- Any new or replaced equipment installed is shall have specified maximum operational noise level criteria;
- Noise attenuation measures have been implemented in the crushing and screening plants where possible, ie. variable pitch fans;
- Plant is enclosed and sealed where practicable;
- Conveyor systems are enclosed where practicable;
- All plant and equipment is regularly serviced and is maintained within manufacturer's specification;
- Wheeled loaders and other vehicles to be fitted and maintained with efficient exhaust mufflers;
- Mobile crushers to have "residential" exhaust mufflers fitted
- Wheeled loader and trucks to be fitted with background sensitive reversing beepers;
- High-risk noise generating activities have a degree of separation from noise-sensitive areas, and are centrally located within the site;
- Location of truck parking at a lower level of the site;

Operational Measures

- Regular maintenance of all plant and equipment to manufacturers specifications, including exhaust mufflers;
- Blasting is carried out between the hours of 12:00pm and 2:00pm to minimise noise and vibration disturbance to nearby residences. Weather conditions are taken into account, including wind speed and direction, to minimise nuisance dust.
- Residents are notified of scheduled blasts by e-mail prior to the day of blasting;

- Normal operating hours are restricted to the period between 7:00am and 5:00pm weekdays.

(d) **Monitoring**

- Inspections as described in section 5.4 of this plan shall be undertaken by the Quarry Manager or otherwise delegated officer;
- Operational noise levels to be monitored following the receipt of a complaint, or upon written request by the DES to undertake monitoring;
- Monitoring will be carried out at the location at which the complaint originated and results should not exceed the prescribed levels below.

Noise Level dB(A) measured as	Noise Measured at a Noise Sensitive Place (Origin of Complaint)		
	7am-6pm	6pm-10pm	10pm-7am
LA MAX, adj, T	Background noise level plus 5 dB(A)	Background noise level plus 5 dB(A)	Background noise level plus 3 dB(A)

Table 4.3.1

- Blast monitoring should be carried out during every blast at the facility, and measurements for sound over-pressure and ground vibration undertaken at relevant sites external to the site, and should not exceed the prescribed levels below.
- Noise and overpressure monitoring is undertaken at three regular locations. Monitoring occurs at the Site Office and within the adjacent amenity at locations on Richer and Sussex Streets. In the event of public concern, additional monitoring at the location of the inquiry will be undertaken.

Parameter	Limit	Targets
Noise: Over-pressure level	Not to exceed 125 dB for more than 10% of total blasts	Not to exceed 115 dB
	Not to exceed 130 dB at any time	
Vibration	Not to exceed 10mm/sec for more than 10% of blasts	Not to exceed 7mm/sec

Table 4.3.2

(e) **Reporting and Auditing**

- Any incident will be recorded, together with appropriate corrective action taken, on the daily check sheet and an incident report raised;
- Noise monitoring results exceeding prescribed set limits will be immediately investigated (including resampling) and reported to the DES, as prescribed by the site licence.
- Any public complaint will be recorded on a complaints register form, investigated and actioned in accordance with the quarry complaints procedure;

- Audits of environmental compliance will be undertaken in accordance with section 5.3 of this Plan.

(f) ***Corrective Action***

- Machinery, plant and equipment generating excessive noise is isolated and repaired;
- Source replacement machinery, plant and equipment that has a specified maximum operational noise level;
- Counsel/discipline employees or contractors responsible for generation of excessive noise, including unruly behaviour on or about the site.

4.4 WASTE MINIMISATION

The following is an outline of Waste Minimisation at MCQ, greater detail can be found in the IMSAD-10030 Waste Management Plan MCQ.

(a) ***Policy***

To minimise the generation and disposal of waste generated from the quarry, particularly in relation to:

- Waste Oil;
- Scrap Steel;
- Waste Paper;
- General Refuse;
- Sediment from retention ponds and swales etc;
- Regulated wastes as prescribed by legislation.

(b) ***Performance Criteria and Objectives***

- To comply with the Qld Environmental Protection (Waste Management) Policy and Regulation;
- The volumes of waste types removed from the site should not be increased over time, and opportunities to reuse or substitute these materials should be investigated;
- All regulated wastes are removed from the quarry in accordance with prescribed procedures.

(c) ***Implementation Strategy***

Design Measures

- Scrap steel generated by maintenance of wear plates on the plant is minimised by a 'tile' system.

Operational Measures

- Waste oils and greases are to be removed from the site for recycling or disposed of at an appropriately licensed facility;
- Maintenance of plant and machinery is undertaken in the workshop area where practicable. In the event of major repairs, plant / machinery is removed from the site and vehicles on-site are serviced by licensed mobile units;
- Waste paper, empty cans and steel will be collected in separate bins for removal for recycling;
- Other solid wastes including general refuse are to be collected weekly for disposal at an appropriately licensed landfill;
- Sediments accumulated in settling ponds during rainfall events are removed in order to retain the capacity to hold water during a storm, and are used as a fill-material in areas undergoing rehabilitation.

(d) ***Monitoring***

- The Quarry Manager, or otherwise delegated officer, shall undertake inspections as per section 5.4 of this plan;
- Volumes of wastes are to be recorded at time of disposal on the relevant form;
- Canvass and identify additional waste streams and opportunities to minimise waste generation.

(e) ***Reporting and Auditing***

- Details of all Regulated Wastes shall be entered into the Regulated Waste Register; a copy of the Waste Transport Certificate or electronic W.T.C. reference number from appropriate waste removal contractors e.g. JJ Richards. Records to be kept on file. Waste tracking (transfer) documentation will be forwarded to the DES within the prescribed timeframes;
- Audits of environmental compliance will be undertaken in accordance with section 5.3 of this Plan. The Waste Management Plan shall be audited not less than every 5 years.

(f) ***Corrective Action***

- Counsel / discipline employees or contractors responsible for non-compliance with this strategy.

4.5 TRAFFIC

The following is an outline of traffic movement at the MCQ; greater detail can be found in IMSWI-11124 Quarry Vehicle Movement & Access.

(a) ***Policy***

To minimise the impact of trucks servicing the facility on local amenities and premises, particularly in relation to:

- Noise generated by trucks servicing the site;
- Dust from loaded trucks entering/leaving the site.

(b) ***Performance Criteria and Objectives***

- Complaints regarding a particular source could indicate unacceptable disturbance. For those complaints deemed not of a frivolous / vexatious nature nor mistaken belief, additional monitoring or corrective action should be undertaken.

(c) ***Implementation Strategy***

Design Measures

- The entry / exit point of the site has been located in order to minimise impacts on nearby amenities.

Operational Measures

- Truck drivers are inducted on first visit to the site on operating procedures and hours to adhere to while on-site;
- Cartage vehicles are only permitted on-site between the hours of 7:00am and 5:00pm to reduce disturbance to residents;
- No trucks shall park on Mt Coot-tha Rd prior to the quarry opening for operation;
- All vehicles to be fitted with efficient exhaust mufflers;
- All material loads shall be covered with tarpaulins fitted prior to leaving the site.

(d) ***Monitoring***

- Inspections as described in section 5.4 of this Plan shall be undertaken by the Quarry Manager or otherwise delegated officer.

(e) ***Reporting and Auditing***

- Any incident will be recorded, together with appropriate corrective action taken, on the daily check sheet and an incident report raised;
- Any public complaint will be recorded on a complaints register form and actioned in accordance with the asphalt plant complaint procedure;
- Audits of environmental compliance will be undertaken in accordance with section 5.3 of this Plan.

(f) ***Corrective Actions***

Counsel / discipline employees or contractors responsible for non-compliance with this strategy.

4.6 FLORA & FAUNA

(a) ***Policy***

To minimise the impact of quarry operations on local flora and fauna, particularly in relation to:

- Disturbance to habitat of flora and fauna;
- Injury and / or damage to flora and fauna;
- Management of pest flora and fauna species.

(b) ***Performance Criteria and Objectives***

- No damage / injury to flora and fauna on-site;
- Pest species controlled.

(c) ***Implementation Strategy***

Design Measures

- Natural conditions have been maintained adjacent to ponds and operational areas on-site to provide habitat for fauna and reduce likelihood of migration into quarrying zones;
- Quarry benches are rehabilitated upon completion of the extraction process, utilising endemic plant species to provide an ideal habitat for fauna;
- Trafficable areas on-site have been constructed and clearly identified to eliminate the need for further encroachment into undisturbed areas.

Operational Measures

- Landscaped, undisturbed and rehabilitated areas maintained to prevent propagation of weed species;
- Equipment / materials on-site, particularly in the workshop area stored appropriately to prevent inhabitation by vermin etc;
- Speed limits are enforced on-site;
- Vehicular movement is restricted to identified trafficable areas.

(d) ***Reporting and Auditing***

- As per the quarries induction manual, any instances of damage / injury to flora or fauna on-site is to be reported to the Quarry Manager;
- Vegetation management audits are undertaken to identify and resolve problems related to weed growth.

(e) **Corrective Actions**

Counsel / discipline employees or contractors responsible for non-compliance with this strategy.

4.7 RESOURCE USE

(a) **Policy**

To minimise the use of resources at the facility, particularly in relation to:

- Water use on-site;
- Electricity use on-site.

(b) **Performance Criteria and Objectives**

- Reduction of potable water use for dust suppression and amenity purposes;
- Reduction of electricity used in plant, ablution and office facilities.

(c) **Implementation Strategy**

Design Measures

- Water fittings on plant are selected to provide effective dust suppression while maintaining efficient water use;
- Ablution facilities undergo a continual improvement program to replace existing fixtures with water efficient devices, and ongoing maintenance.

Operational Measures

- Water for dust suppression activities undertaken on stockpile and paved areas is sourced from the main quarry pit, eliminating reliance on potable water supplies;
- Wastage of water or electricity is also controlled by education of staff, as in the induction manual for FSG Quarries;

(d) **Corrective Actions**

Counsel / discipline employees or contractors responsible for non-compliance with this strategy.

5 CHECKING AND CORRECTIVE ACTIONS

5.1 NON-CONFORMANCES, IMPROVEMENTS AND PREVENTIVE ACTION

Where potential environmental or safety incidents are identified or occur, corrective actions will be undertaken. Such will be recorded on the daily check sheet and raised at monthly quality meetings and management review meetings.

Any public complaint shall be recorded on a complaints register form and actioned in accordance with the quarry complaints procedure. Monitoring is undertaken in order to investigate complaints received directly from the public, or as requested by the DES, for

complaints deemed to be not of a frivolous or vexatious nature, nor based on mistaken belief.

Where any potential or actual environmental or safety incidents occur, the requisite notification, investigation, reporting and improvement actions will be undertaken immediately.

All instances of nonconforming products or incidents or non-conformance reports shall be reviewed at the section team/quality meeting and the possible causes of non-conformances investigated. When causes of non-conformances are identified, corrective actions aimed at preventing recurrence in the long term shall be initiated by the quality meeting.

The Quarry Manager shall ensure those improvement actions generated by internal audits or assessment audits are taken. The results of the improvement and preventive actions shall be assessed at the quality meeting and monitored if required.

Any issues (preventative actions) that may have an impact on the quality of a product or service, or environmental performance that staff feel needs to be improved and may not have been the source of a non-conformance shall be raised at the monthly quality meeting (improvement requests).

These issues (improvement requests) shall be actioned as for a non-conformance in accordance with documented procedures.

In line with Brisbane City Council's Environmental Policy, Asphalt Operations undertakes to continually improve its operations and embody the concepts of environmental best practice, ensuring that its operations substantially comply with the Environmental Protection Act and site-specific licence conditions

In particular, to illustrate the commitment as demonstrated in other parts of controlling 'environmentally relevant activity' or 'DES' licence, Asphalt Operations proposes to:

- Manage its risks associated with air, noise and stormwater in line with cost effective environmental best practice;
- Establish its processes for effectively managing its procedures in line with Brisbane Field Services' Integrated Environment, Quality and Safety Management System;
- Ensure staff are aware of and can meet the requirements of the Environmental Protection Act;
- Comply with the current Environmental Licence conditions;
- Encourage staff to actively provide and suggest improvements to the operational performance of the quarry.

5.2 RECORDS

All quality, environmental and safety records including complaint register forms, incident reports and registers, regulated waste records, daily check sheets and weekly, fortnightly and monthly inspection sheets, test reports, quality meeting minutes, management review minutes, non-conformance reports, internal audits, inspection and monitoring results, calibration records, daily production sheets, daily production run details (computer data), shall be filed and stored at the location for periods as specified in written procedures.

The control and disposal of these records shall be in accordance with documented procedures.

5.3 AUDITS

Internal quality, environmental and safety audits shall be carried out to verify whether quality, environmental and safety activities comply with the documented procedures. Internal audits are to be in accordance with documented procedures. These audits should be conducted by an independent work team selected by the IMS Representative or Field Services Risk Management Unit. Biannual compliance audits are undertaken on-site by the FS Environmental Management Coordinator.

The Quarry Manager shall review all internal audits. An improvement action if required, shall be initiated to rectify any system non-conformance. The results of internal audits shall be reviewed at the management review meeting.

Third Party Surveillance and Certification Audits will be undertaken according to the accredited management system, are independently conducted at not more than six monthly intervals.

5.4 INSPECTIONS

The Quarry Manager or nominated delegate is responsible for undertaking regular monitoring and inspections of the environmental performance of the plant. The following aspects (which are cross-referenced to relevant elements) are to be checked at the frequency stated and action taken to rectify any non-compliance.

ASPECT TO BE CHECKED	FREQUENCY	RECORDED	RELEVANT ELEMENT
<ul style="list-style-type: none"> Check water truck is effectively used to suppress dust and clean paved areas 	Daily	Weekly Check Sheet	Stormwater Runoff/ Air Emissions
<ul style="list-style-type: none"> Check water sprays on plant are operating correctly and effectively 	Weekly	Weekly Check Sheet	Air Emissions
<ul style="list-style-type: none"> Check stormwater retention pond system is clean and operational 	Daily	Weekly Check Sheet	Stormwater Runoff
<ul style="list-style-type: none"> Check for any signs of fuel, oil or chemical spills 	Daily	Weekly Check Sheet	Hazardous Substances
<ul style="list-style-type: none"> Check that wastes are being removed off site 	As Required	Regulated Waste Register	Waste Minimisation
<ul style="list-style-type: none"> Inspect condition of driveway on Mt Coot-tha Rd 	Daily	Weekly Check Sheet	Stormwater Runoff

Table 5.4.1

5.5 MONITORING

Field Services recognises that ongoing monitoring of air, noise and water quality is an essential tool in ensuring that it meets any defined targets and any licence conditions. It is also a key requirement to demonstrate due diligence and environmental best practice in its own operations.

Monitoring programs will be undertaken according to **Table 5.5.1** and defines the proposed minimum monitoring program to be undertaken at the site.

ELEMENT	STANDARD	MONITORING FREQUENCY	COMMENTS
Noise	Qld Environmental Protection (Noise) Policy	<ul style="list-style-type: none"> As directed by the DES to investigate any complaint with respect to a particular noise source, given the complaint has been deemed not of a frivolous / vexatious nature, nor based on mistaken belief. 	<ul style="list-style-type: none"> Use methods described in the “Noise Measurement Manual” DES (EPA) fourth edition 22 August 2013
Fugitive Emissions (dust)	Qld Environmental Protection (Air) Policy	<ul style="list-style-type: none"> Sampling required to be taken at Location DM1, DM2 and DM3 <p>NB. Monitoring is undertaken on an ongoing monthly basis.</p>	<ul style="list-style-type: none"> Generally sampling and testing on the site’s boundary to be undertaken in accordance with AS 3580.1.1 and AS 3580.10.1.
Stormwater Runoff	Stormwater Management Plan	<ul style="list-style-type: none"> Sampling required to be taken at Location WM1 and WM2 not less than 3 times p.a. during a release event 	<ul style="list-style-type: none"> An accredited laboratory (SAS) undertakes sampling.

Table 5.5.1

Additional monitoring may also be required as a result of repeat complaints or when ongoing incidents have been identified during daily inspections.

6 SITE REHABILITATION

It is anticipated that extraction activities will continue at the facility up to 2030.

A draft concept plan for the site following closure is to fill the quarry void with solid C & D waste.

Benches above the natural runoff level, created during the quarrying process are being progressively revegetated, and will be further rehabilitated following site closure. The cleared open space will be capped with a suitable medium and revegetated with grass and plantings, and appropriate access roads and stormwater drainage infrastructure will be constructed. Further development may then occur subject to a full community consultation process.

A detailed rehabilitation plan will be developed once the end use of the quarry site has been finalised, and will cover aspects including shaping / forming of land, vegetation management and erosion / sediment control. At this point in time, this plan has not yet been commissioned.

LABORATORY REPORT

Client: Robert Bell
FSG - Asphalt Operations
Mt Coot-tha Quarry
Mt Coot-tha Rd
Toowong

Job Name: Mt Coot-tha Quarry Stormwater

Sampled By: SAS Laboratory
Sampling Method: Grab
Sample Matrix: Aqueous
Batch Number: 18/05714
Registration Date: 29 June 2018
Date of Report: 11 July 2018

Authorised Signatories:

sch4p4(6) Personal information



ACCREDITED FOR
**TECHNICAL
COMPETENCE**
Accredited for compliance
with ISO/IEC 17025 - Testing

PLEASE NOTE:

1. The results refer only to the samples tested.
2. All sampling performed by SAS Laboratory is in accordance with In-house Method F.001.
3. This document shall not be reproduced except in full, without written approval from SAS Laboratory.
4. Method with * indicates NATA accreditation does not cover the performance of this service.

Client: FSG - Asphalt Operations
Job Name: Mt Coot-tha Quarry Stormwater

Batch Number: 18/05714
Report Date: 11/07/2018

	Test	Units	18/05714/1 W1 29/06/2018 14:00	18/05714/2 W2 29/06/2018 14:10
1.002	pH	pH Unit	7.9	8.0
1.007	Conductivity - Field	uS/cm	2,080	1,590
1.004	Dissolved O2 - Field	mg/L	9.5	8.3
F.005*	Temperature - Field	° C	14.7	13.6
5.101	Turbidity - Field	NTU	32	14
Misc. *	Visual - Oil and Grease		None	None
1.601	Suspended Solids	mg/L	35	7
1.607	Total Oil & Grease	mg/L	<10	<10

[ND] - Not Detected [NR] - Not Required [NT] - Not Tested

PLEASE NOTE:

1. The results refer only to the samples tested.
2. All sampling performed by SAS Laboratory is in accordance with In-house Method F.001.
3. This document shall not be reproduced except in full, without written approval from SAS Laboratory.
4. Method with * indicates NATA accreditation does not cover the performance of this service.



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Brookside Centre, QLD 4053

Telephone: (7) 3355 9707
Facsimile: (7) 3355 7210
E-mail: info@noisemeasurement.com.au
ABN:70 084 643 023

31 August 2015

Brisbane City Council
Mt Coot-Tha Quarry
Toowong QLD 4066

FAO: Robert Bell

3225 Release

Dear Sir

Re: June-July 2015 Noise Survey Summary

Mt Coot-Tha Quarry commissioned a noise survey of local residential areas to determine if the quarry was operating within licence conditions in the Department of Environment and Heritage (DEHP) permit (IPDE00920708). Attended monitoring was carried out in selected BCC controlled areas (Figure 1) as representative locations for noise receptors in accordance with the Queensland's Noise Measurement Manual (DEHP, 2013). Attended noise monitoring was carried out over 12 days from 25 June to 19 July, 2015, with focus on the periods when residential properties are likely to be affected from noise. It was determined that likely impacts would occur from morning start-up operations due to potential tonal influences and localised weather conditions. Unattended monitoring was undertaken from 14 July to 17 July to determine ambient noise conditions.

The survey determined that the noise emissions from quarry operations were less than the day time levels (7am-6pm) required in DEHP permit during normal atmospheric conditions. It was observed during attended monitoring that abnormal atmospheric conditions increase the background ambient noise levels by approximately 5 dB(A).

Site activities during the monitoring period included:

- Crushing and screening plant operating
- Excavators, front end loader and dump trucks
- light vehicle movements
- haul truck movements on site, with movements various during the monitoring period with peak movements shortly after quarry opening.

No blasting activities occurred during the time of measurement.

In all monitoring periods that the maximum noise levels in each 15 minute period was attributed to local traffic, aircraft or local bird life. Noise from the quarry was generally observed 1-2dB above background levels and was operating within the licence criteria for $L_{A_{MAX,Adj,T}}$.

It is concluded that the Mount Coot-Tha Quarry currently meets the Environmental Authority licence conditions during the investigation period.

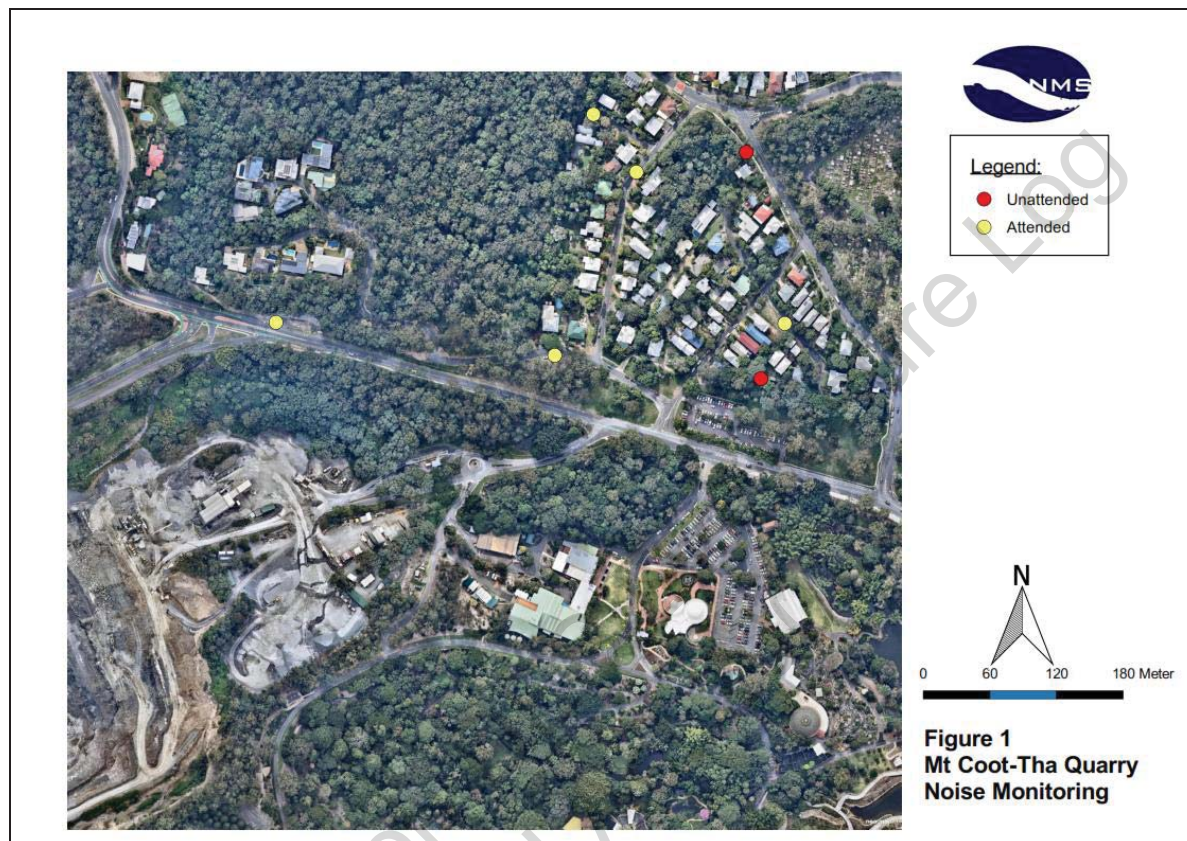
It is considered that the quarry noise may have the potential to breach the maximum 55dB(A) $L_{PA,T}$ during abnormal atmospheric conditions in which the L_{A90} levels had significantly increased due to inversion conditions. It is recommended to delay the start of the mobile crusher during these conditions to minimize the risk of an exceedance.

Best regards,


sch4p4(6) Personal information
Director

DISCLAIMER

This Report by Noise Measurement Services Pty Ltd is prepared for a particular Client and is based on the agreed objective, scope, conditions and limitations as may be stated in the Report. The Report presents only the information that Noise Measurement Services Pty Ltd believes, in its professional opinion, is relevant and necessary to describe the issues involved. The Report should not be used for anything other than the intended purpose and should not be reproduced, presented or reviewed except in full. The intellectual property of this Report remains with Noise Measurement Services Pty Ltd. The Client is authorised, upon payment to Noise Measurement Services Pty Ltd of the agreed Report preparation fee, to provide this Report in full to any third party.





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E-mail: info@noisemeasurement.com.au
ABN:70 084 643 023

Brisbane City Council
Mt Coot-Tha Quarry,
Toowong QLD 4066

13 August 2018

Attention: Robert Bell

Dear Sir,

Re: Noise monitoring report for Mt Coot-Tha Quarry

Mt Coot-Tha Quarry has commissioned a noise survey of its local residential area to determine if noise generation from works at the quarry are within licence conditions of the Department of Environment and Heritage (DEHP) permit (IPDE00920708).

In May and August 2018 attended monitoring was carried out in a free field location on Walter Street and adjacent to Scenic Drive and Mt Coot-Tha Road. This is considered to be a representative location for residential monitoring in accordance with the Queensland's *Noise Measurement Manual* (DEHP, 2013). A survey was attempted in Horrocks Street, however there were two dwellings undergoing external renovations that prevented attended surveys on this occasion.

The survey (**Table 1**) determined that the noise emissions from quarry operations were less than the day time levels (7am-6pm) required in the DEHP permit during normal atmospheric conditions. The duration of each survey was 15 minutes in a free field location.

Table 1: Attended noise monitoring (15 minute samples) of operations.

Date	Location	Start Time	dB LA _{MAX} From quarry	LA ₉₀
24-May-18	Walter Street, Toowong (opposite Walter and Purkiss Street intersection)	1:32pm	47-48	46.9
10-Aug-18	Walter Street, Toowong (opposite Walter and Purkiss Street intersection)	12:17pm	Not audible	42.3
10-Aug-18	Scenic Dr/Mt Coot-Tha Rd (grassed section of car park east of Scenic Drive intersection)	1:00pm	46-48	47.8

Observations Walter Street on the 24th of May 2018 – no wind at time of survey, plant noise from quarry just audible during quiet times observed and measured around 47 to 48 dB(A) including ambient noise contributions. Clatter from site was audible on two occasions, ambient sound levels were 48 to 50 dB(A) at the time. Dominant source of noise at measurement location observed to be from distant vehicles, bird calls and local traffic.

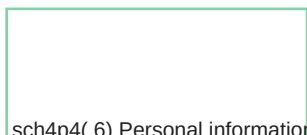
Observations Walter Street on the 10th August 2018 – no wind at time of survey, 22°C, plant noise was not audible at this time. Dominant source of noise from distant vehicles, bird calls and local traffic.

Observations Mt Coot-Tha Road on the 10th August 2018 – slight westerly breeze, 22°C, plant noise just audible during quiet times measured around 46 to 48 dB(A) including ambient noise contributions. Audible sounds such as clatter from plant assumed to be at the quarry were below ambient level of 48 dB(A). Frequent vehicle passes-by at this location observed to be the dominant source of noise.

In all monitoring periods that the L_{A10} and ambient maximum noise levels in each 15 minute period was attributed to local traffic. Quarry works were audible at the monitoring locations, however noise from the quarry was generally observed to be less than 3dB(A) above background levels, and operating within the licence criteria for $L_{A_{MAX,Adj,T}}$.

It is therefore concluded that the works at Mount Coot-Tha Quarry were within the Environmental Authority licence conditions during the investigation period.

Best regards,



Director

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Blast Monitoring Data - MCQ					NB: Quarry Office not required for Licence Reporting		NB: 3 SSGD and Sussex Street required for Licence Reporting	
Key		Red Value - Exceedence			Peak Vibration (mm/sec) Limit: 10mm/sec		Air Overpressure (dB) Limit: 125dB	
Blast Date		Monitoring Location			Peak Vibration (mm/sec) Limit: 10mm/sec		Air Overpressure (dB) Limit: 125dB	
Blast Number	762	16-Aug-18	Quarry Office		7.945	112	RL48	
	762	16-Aug-18	Mt. Coot-tha monitoring point (outside #3 SSGD)		3.072	111.5	RL48	
	762	16-Aug-18	Sussex Street		1.149	103.5	RL48	
	762	16-Aug-18	Botanical Gardens, back of Herbarium		4.28	113.1	RL48	
	763	23-Aug-18	Quarry Office		2.673	115.6	RL60	
	763	23-Aug-18	Mt. Coot-tha monitoring point (outside #3 SSGD)		1.848	107	RL60	
	763	23-Aug-18	Sussex Street		0	0	RL60	no trigger < 0.8 mm/s
	763	23-Aug-18	Botanical Gardens, back of Herbarium		1.37	115.6	RL60	

DUST ASSESSMENT

BRISBANE CITY COUNCIL-QUARRIES

3/9/18



Symbio
LABORATORIES



NATIONAL LEADER

IN FOOD, AGRICULTURAL & ENVIRONMENTAL TESTING



18-418



File B



31 of 233

Released

Introduction

Symbio Laboratories was contracted by Brisbane City Council (BCC) to undertake dust deposition monitoring on a monthly basis at Mt Coot-tha Quarry located off of Mt Coot-tha Road, Toowong and Pine Mt Quarry located at Pine Mountain Road, Mount Gravatt, QLD.

The dust deposition sampling is part of the regular environmental monitoring conducted by BCC. Samples were collected between the 4th of July and 6th of August 2018. The scope of work included the following:

- Collection and reinstallation of dust deposition gauges at three sampling locations (DM1, DM2 and DM3) for each site including an additional sampling location (DM4) at Mt Coot-tha Quarry;
- Analysis of the collected samples at Symbiolabs Laboratories; and
- Preparation of summary results report.

Methodology

The monitoring has been und in accordance to Australian Standards As 3580.1.1:2007 and AS 3580.10.1:2003.

The limit of 120 mg/m²/day for insoluble solids at sensitive places has been used as the assessment trigger value in this report. The limit of 120 mg/m²/day is commonly used within Queensland as benchmark for amenity impacts and in the assessment for reasonable environmental nuisance.

Laboratory analysis results

Table 1 Laboratory analysis results for the dust deposition samples collected at Mt Coot-tha Quarry.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM1 Site Office	30	47	33	13
DM2 Scenic Drive	30	43	23	20
DM3 Weighbridge	30	43	33	10
Limit of reporting	3.3			

Table 2 Laboratory analysis results for the dust deposition samples collected at Mt Coot-tha Quarry.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM4 Scenic Drive Gate	30	37	23	13
Limit of reporting	3.3			

Table 3 laboratory analysis results for the dust deposition samples collected at Pine Mountain Quarry.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM1 Pine Mountain Road	30	40	20	20
DM2 Hill Top	30	17	10	6.7
DM3 Perimeter fence	30	27	10	17
Limit of reporting	3.3			

Should you require any additional information, please call at any time to discuss further.
Kind Regards,

sch404(6) Personal info

Principal Environmental Scientist -Terra Sana Consultants

Published on DES Disclosure Log
RTI Act 2009

SYMBIO LABORATORIES

52 Brandl Street
Eight Mile Plains QLD 4113

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symbioalliance.com.au

DUST ASSESSMENT

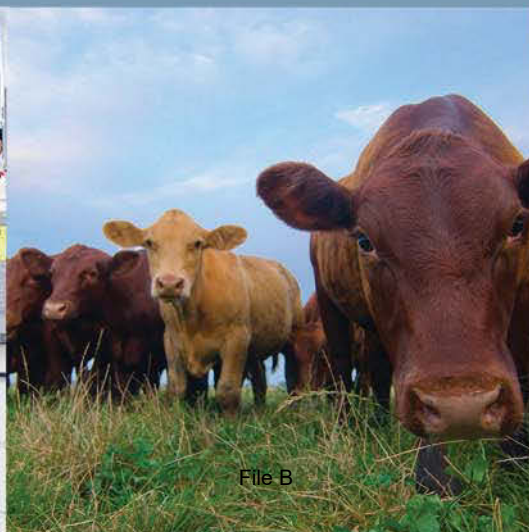
BRISBANE CITY COUNCIL-QUARRIES

26/7/18



NATIONAL LEADER

IN FOOD, AGRICULTURAL & ENVIRONMENTAL TESTING



Introduction

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Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM1 Site Office	30	83	50	33
DM2 Scenic Drive	30	43	23	20
DM3 Weighbridge	30	83	60	23
Limit of reporting	3.3			

Table 2 Laboratory analysis results for the dust deposition samples collected at Mt Coot-tha Quarry.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM4 Scenic Drive Gate	30	50	27	23
Limit of reporting	3.3			

Table 3 laboratory analysis results for the dust deposition samples collected at Pine Mountain Quarry.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM1 Pine Mountain Road	30	37	17	13
DM2 Hill Top	30	30	13	6.7
DM3 Perimeter fence	30	20	17	20
Limit of reporting	3.3			

Should you require any additional information, please call at any time to discuss further.
Kind Regards,

sch4b4(6) Personal info

Account Manager – Environmental

Symbio ALLIANCE

SYMBIO LABORATORIES

52 Brandl Street
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symbioalliance.com.au

3136208

Customer Name:

Brisbane City Council
14/09/2018
Mt Cootha Quarry

Customer No: 1461273

Date: 14/09/2018

Received from:

J.J. Richards
& Sons Pty Ltd
ABN 40 000 805 425

Please Tick Service	Mrs/Qty	Bin Size/Ltrs	Description
☒ Wheeltie Bin		4x240L	Rag Bus
☐ Co-mingle			
☐ General Waste		14x205L	Empty Drums
☐ Recycle			
☒ Reg Waste		15x20L	Empty Drums
☐ Scrap Metal			
☐ Liquid Waste			
☐ Compactor			
☐ Skip			
☐ Other			

Skip Number:

Dump Docket:

Waste Track Certificate: 049273

Run Number: 1690/13FR

Print Driver Name:
Driver Signature:Print Customer Name:
Customer Signature:

sch4p4(6)

FORM-501v 102-01 Customer Docket - Issues & Issues Date: 10/11/15

3026719

Customer Name:

B.C.C.
MT COOTHA QUARRY

Customer No: 1461273

Date: 27/3/18

Received from:

J.J. Richards
& Sons Pty Ltd
ABN 40 000 805 425

Please Tick Service	Mrs/Qty	Bin Size/Ltrs	Description
☐ Wheeltie Bin			
☐ Co-mingle			
☐ General Waste			
☐ Recycle			
☐ Reg Waste			
☐ Scrap Metal			
☐ Liquid Waste			
☐ Compactor			
☐ Skip	10	2050L	Empty Drums
☒ Other			

Skip Number:

Dump Docket:

Waste Track Certificate: 50961

Run Number: 1690 13FR

Print Driver Name:
Driver Signature:Print Customer Name:
Customer Signature:

sch4p4(6)

FORM-501v 102-01 Customer Docket - Issues & Issues Date: 10/11/15

IMSWI-10032

WEEKLY Environmental Check List



BUILDING FLOOR AREAS - Check for oil/grease on floor areas - Check outside for oil stains/leaks etc - Containers correctly sealed /stored	
HOUSEKEEPING - 205L oil drums stored in bunded areas - Signage in place - Car/truck park areas free of oil stains, grease - Spill kits available onsite & well stocked - General waste disposed of appropriately - Appropriate waste containers onsite, site tidy	
DUST CONTROLS - Dust suppression adequate – crushing, roads .. - water cart functioning efficiently, effectively	
NOISE - Hours of operations within permitted times - Noise controlled – out of hours maintenance	
FLORA & FAUNA - Green waste disposed of appropriately - weeds sprayed & under control	
HAZARDOUS SUBSTANCES - Stored correctly in Haz.Subs yellow Container - bund has ample capacity for spills/leaks	
OIL BUNDS - Inspected for leaks/damage. No spills outside - Clean & tidy – waste drums in position. Full? - bund has ample capacity. Needs Pumpout? - waste oil tank full. Needs pumpout?	
STOCKPILES - Check for Oil / Diesel spillage on floor - Signs of contamination in material	
PONDS - Visual assessment of water quality. Normal? - Oil floating on water surface? - level 500mm below top capacity level	
WEIGHBRIDGE - Check for oil / diesel spills on weighbridge - Oil / diesel spills on roadway - Sediment bags in place in gully trap MC Rd	
FIRE PROTECTION AND PREVENTION - Extinguishers in place + test in date - Signs in place	
OTHER NON-SPECIFIED OBSERVNS. -waste tracking register/docs. Sighted & update	

Signed

Print Name

Date

LOCATION	Tick	Mt Coot	circle	LOCATION	Tick
Weighbridge areas		Pine Mt		Mobile Crushers/Stacker	
Roadway-front, MC rd				Stockpile & General	
Tertiary A crush& scrn				Workshop	

Notes:

Hand back form to Supervisor. Use reverse side for more comments if required. Record recommended actions that are required with priority noted. Contaminated soil to be taken off site to licensed dump with WTC documented.

IMSWI-10032 Environmental Check List

Owner: QQM2

Sponsor: QMAO

HARD COPY IMS DOCUMENTS ARE UNCONTROLLED

Security Label: FOR OFFICAL USE ONLY

Issue Date: 09/03/2018

Rev: 1A

Page 1 of 1



ENVIRONMENTAL MONITORING & REPORTING

IMSWI-10010

OWNER	QQM2
SPONSOR	QAOPM
ISSUE DATE	CHANGE DETAILS
05/03/2014	Revision 1D: PMRMRF Environmental Licence change & document review
11/03/2016	Revision 1E: Exclusion of Bracalba Quarry. Changes to 4.4.2, 4.5
21/08/2018	Revision 1F: Changes made to reflect current requirements.

Security Label: FOR OFFICIAL USE ONLY

1.0 SCOPE

The purpose of this Instruction is to define how we monitor the Environment and report to Authorities to meet the requirements of the relative Queensland Department of Environment and Resource Management Environmental Licences.

This Instruction covers monitoring processes (including land-fill rehabilitation) at Brisbane City Council Field Services' Mt Coot-tha Quarry and Pine Mountain Road Material Recycling Facility.

2.0 DEFINITIONS

- 2.1 BCC - Brisbane City Council
- 2.2 FS – Field Services
- 2.3 ENV - Environmental
- 2.4 IMS – Integrated Management System
- 2.5 OHS – Occupational Health & Safety
- 2.6 MCQ – Mt Coot-tha Quarry
- 2.7 PMRMRF – Pine Mountain Road Material Recycling Facility
- 2.8 DES – Department of Environment and Heritage Protection

3.0 ASSOCIATED DOCUMENTS

- 3.1 [Mining and Quarrying Safety and Health Regulation 2017](#)
- 3.2 Mining and Quarrying Safety and Health Act 1999
- 3.3 AS/NZS/ISO 9001: Quality Management Systems
- 3.4 AS/NZS/ISO 14001: Environmental Management Systems
- 3.5 AS/NZS4801: Occupational Health and Safety Management Systems
- 3.6 MCQ Environmental Licence: IPDE00628507 + IPDE00920708
- 3.7 PMRMRF Environmental Licence: EPPR00952413
- 3.8 [IMSF-01001 Improvement Action Form](#)
- 3.9 [BCC EP005 Reporting Environmental Incidents and Complaints](#)
- 3.10 AS3580:10.1-2003
- 3.11 Banned Substances Register
- 3.12 [DES Noise Measurement Manual Version 4](#)
- 3.13 [DES Monitoring and Sampling Manual 2009 V2.](#)

- 3.14 [IMSAD-10017 Environmental Management Plan MCQ](#)
- 3.15 [IMSAD-10015 Environmental Management Plan PM](#)

4.0 DOCUMENT AMENDMENT

Changes to this work instruction shall only be made after consulting with and obtaining agreement of Mt Coot-tha Quarry SSE. Quarry Safety Adviser should then notify the Asphalt Operations IMS Rep to load reviewed / amended documents to IMS Online. A SIR/IA may be used to action the above document changes

4.1 REVIEW GUIDELINES

- 4.1.1 Continuous Improvement – Amendments to be noted on change details form on cover page of procedure. Procedures are updated and re-issued by the Quarry Manager or designate.
- 4.1.1 Improvement Actions – SIR (form [IMSF-01001](#)) are to be raised for any non-conformance and/or amendments in procedures or associated functions.
- 4.1.2 All relevant personnel must be notified of any significant changes to this document.

4.2 Monitoring

The Quarry Manager shall arrange environmental monitoring for noise, dust, stormwater and blasting at the following intervals as directed by DES.

4.3 Environmental – Blast Noise

4.3.1 The Quarry Manager shall arrange noise monitoring during blasting at Mt Coot-tha in terms of the guidelines specified by the DES in the [DES Noise Measurement Manual Version 4](#)

4.3.2 A suitably qualified person or organisation shall undertake the blast monitoring according to Aust. Standards plus industry practice plus DES guidelines.

4.3.3 Activities must be carried out in such a manner that if blasting noise should propagate to a noise-sensitive place, then the limits specified in the site's Environmental Licence are not to be exceeded. See Appendices for a summary of these limits at each site.

- Additional Noise monitoring may be directed to be undertaken by DES following a complaint deemed not to be of a frivolous or vexatious nature.

4.3.4 Records

- Records/ results must be retained on site for a period of 5 years.
- Results of all noise monitoring for the past 12 months may be required following submission of the Annual Return to DES.

4.4 Environment – Stormwater.

- 4.4.1 The Quarry Operations Coordinators shall ensure that the operations do not alter or adversely affect the monitoring or containment of stormwater run-off as described in the Stormwater Management Plan for each site.
- 4.4.2 Mt Coot-tha Quarry - The Quarry Operations Coordinator shall arrange for sampling and testing of water quality 3 per year under licence conditions, when discharging off site. Testing will be conducted at points specified in Schedule C4 of License No. IPDE00920708 for Mt Coot-tha. Test points are marked in ponds to obtain consistent samples.
- 4.4.3 Pine Mt Road Material Recycling Facility - The site specific Licence has been reviewed to incorporate retention of stormwater for dust suppression measures, rather than release. Therefore any stormwater monitoring undertaken will be voluntary, at intervals deemed necessary to determine quality of water resources maintained onsite. Test points are marked in ponds to obtain consistent samples.
- 4.4.4 Records
- Records/ results must be retained on site for a period of 5 years.
 - Results for the 12 months period may be required following submission of the Annual Return to DES.

4.5 Environment – Dust

- 4.5.1 The Quarry Operations Coordinator for Mt Coot-tha and Pine Mt shall ensure that sampling of dust levels is conducted at each site on a monthly basis by a suitably qualified person or organisation.

4.5.2 Sampling will be undertaken for a period of approximately 30 days and analysis given:

1. Insoluble solids in mg/m²/day
2. Ash in mg/m²/day

4.5.3 All sampling and analysis will be conducted in accordance with 3.10 AS3580:10.1-2003 Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method

4.5.4 Records

- Records of results are to be retained on site for a period of 5 years
- Results of dust monitoring for the previous 12 months may be required following submission of the Annual Return to DES

4.6 Exception Reporting

The Quarry Manager or delegate must notify the Environmental Risk Manager (QEMC) for FS upon the receipt of any non-compliant result.

The written notification required by the condition above shall be compiled after thorough reference to Schedules **H17-18** of License No.

IPDE00920708 for Mt Coot-tha & Schedules **H8-9** of License No.

EPPR00952413 for PMRMRF, 'IMSMAN-10001 FSG Environmental Management Manual; Section 12, 13 & 14 and IMSWI-02002 Accident Investigating & Reporting Quarries.

The Quarry Manager shall notify DES within 28 days of any results in excess of the above. The written notification shall include:-

- The full analysis results.
- Details of investigation and any corrective action.
- Any subsequent analysis.
- The Environmental Risk Manager (QEMC) shall also be advised.

A re-test should be arranged immediately following any significant non-compliance with licence limits.

4.7 Incident Reporting

In addition to the reporting requirements above, the Quarry Manager is obliged to report “incidents” which results in the release or escape of contaminants not authorised in the Licence.

Which causes harm to, or has the potential to cause harm to, the environment.

The Quarry Manager shall notify the Environmental Risk Manager (QEMC) as soon as possible after the incident is discovered and advise DES within 14 days of:

- Proposed actions to prevent a re-occurrence of the incident.
- Outcomes of actions taken at the time to prevent or minimise environmental harm or nuisance ; and
- The results of any environmental monitoring performed in association with the incident.

See the BCC Corporate Procedure, [EP005 Reporting Environmental Incidents and Complaints](#) for an incident reporting form.

4.8 Spill Kits

- Environmental spill kit must be contained within a weather resistant container.
- Environmental spill kits are located at:

Mt Coot-tha

- Tertiary Crushing Plant Area
- Workshop Area

- Site Office Area – in store room
- Mobile crushing area

Pine Mt

- Weighbridge - near entrance
- Crushing plant – near operator booth
- Crushing plant – in electrical building

4.9 Environmental Complaints

All complaints regarding environmental aspect (noise, dust, vibration etc.), whether verbal or written shall be recorded in the site's complaint register showing:

- Time & date of complaint.
- Type of communication.
- Name/address/contact no. of complainant.
- Response & investigation undertaken as a result of the complaint.
- Name of investigator.
- Action taken as a result of the complaint.
- Signature of responsible person.

A record of all complaints received shall be kept at the Quarry for a period of 5 years and complaints received in the previous 12 months shall be made available to DES following submission of the site's Annual Return.

See the BCC Corporate Procedure, [EP005 Reporting Environmental Incidents and Complaints](#) for a complaint reporting form, found as Appendix 3.

4.10 Environmental Audits

Audits shall be conducted as part of the internal audit program to include environmental issues. The purpose of the audit shall be to ensure compliance

to planned arrangements, the site's Environmental Licences and environmental management plan and this procedure.

A copy of all audits shall be retained on site for a period of 5 years.

5.0 ROLES AND RESPONSIBILITIES

5.1 Quarry Manager

- Submit Annual report to DES as per section 4.1.
- Arrange monitoring of environmental aspects as per section 4.1.
- Notify DES of any results which exceed specifications as per the site's Environmental Licence.
- Keep test results on file for a period of five years.

5.2 Supervisors

- Ensure waste is disposed of correctly and all relevant documents are forwarded to DES
- Remind operators of their obligation to work in a manner consistent with the quarry's environmental goals.
- Report immediately to manager any breaches of the Quarry's Environmental Licence.

5.3 Operational Staff

- Be aware of conditions that could cause problems with the Quarry's neighbours e.g. Dust / Noise / Oil spills.
- Report to supervisor any suspicions that environmental controls are ineffective.
- Work behaviour should include proper housekeeping and the correct disposal of all waste products including oils / greases.

6.0 PERFORMANCE INDICATORS AND IMPROVEMENT

6.1 Performance Indicators

- Test results remain consistently within limits specified by the site's DES issued Environmental Licence.
- No complaints received from neighbours.
- Records kept and up to date.

6.2 Improvement

- If any employee believes this procedure could be improved they should discuss the matter with their supervisor. A recommendation may then be made to the Quarry Manager.

7.0 ATTACHMENTS

1. Licence Limit Summary – Mt Coot-tha Quarry
2. Licence Limit Summary – Pine Mt Road Material Recycling Facility

Attachment 1

TABLE: LICENCE LIMITS - Mt Coot-tha Quarry

QUALITY CHARACTERISTICS	RELEASE LIMIT	LIMIT TYPE
DUST: Sampling locations 1, 2 & 3.		
Insoluble Solids	120 mg/m ² /day	Maximum
Ash	120 mg/m ² /day	Maximum
NOISE:		
Monday to Sunday 7am to 10pm at a noise sensitive place (residential complaints).	Background + 5 dB (A)	Maximum
Monday to Sunday 10pm to 7am at a noise sensitive place (residential complaints).	Background + 3 dB (A)	Maximum
Instantaneous sound pressure level.	Max L _{pA T} of 55 dB (A)	Maximum
WATER: at W 1 and W 2.		
Dissolved Oxygen (mg/L) 3+ /year	6 mg/L	Minimum
Suspended Solids. (mg/L) 3+ /year	30 mg/L	Maximum
pH (3+ / year)	Not less than 6.5 or greater than 8.5	Range
<i>Turbidity (NTU) 3+ /year.</i>	<i>Record only</i>	<i>Range</i>
Oil and Grease check 3+ /year	Visible	Not Visible
Water released must not contain any harmful contaminants or organisms and must not produce any slick or evidence of oil or grease or contain scum, litter or objectionable matter.		
BLASTING:		
dB (linear peak) Over pressure	Blast greater than 125dB	Must not exceed 10 % of total number blasts.
dB (linear peak) Over pressure	130dB	Maximum
Ground Vibration within 1 m of any Residential Boundary	Blast greater than 10mm/sec	Must not exceed 10 % of total number of blasts over 12 month period.

Note: Limits in *ITALICS* are Quarry Targets & not specified in licence conditions.

Attachment 2

TABLE: LICENCE LIMITS – Pine Mt RMRF

QUALITY CHARACTERISTICS	RELEASE LIMIT	LIMIT TYPE
DUST: DM 1 or DM 2.		
Insoluble Solids (3 monthly)	120 mg/m ² /day	Maximum
Ash (3 monthly)	120 mg/m ² /day	Maximum
NOISE:		
Monday to Saturday 7am – 6pm	LA10, adj 10mt 55 or LA 1, adj 10mt 60	Maximum
Monday to Saturday 6pm – 10pm	LA10, adj 10mt 50 or LA 1, adj 10mt 55	Maximum
Monday to Saturday 10pm - 7am	LA10, adj 10mt 40 or LA 1, adj 10mt 45	Maximum
Sundays or Public Holidays 9am – 6pm	LA10, adj 10mt 55 or LA 1, adj 10mt 60	Maximum
Sundays or Public Holidays 6pm – 10pm	LA10, adj 10mt 50 or LA 1, adj 10mt 55	Maximum
Sundays or Public Holidays 10pm – 7am	LA10, adj 10mt 40 or LA 1, adj 10mt 45	Maximum
WATER: WM 1/ exit 1, WM 2 & 3.	NB: Licence does not stipulate water quality objectives	
Dissolved Oxygen (mg/L) 3+ /year	6 mg/L (Target)	Minimum
Suspended Solids. (mg/L) 3+ /year	50 mg/L (Target)	Maximum
pH (not less than 3 times / year)	NOT < 6.5 PH or > 8.5 PH (Target)	Range
Turbidity (NTU) Measured at the sampling points WS1, WS2, WS3 and WS4 (not less than 3 times / year)	The turbidity must not exceed by more than 10% that of the Salvin Creek as measured on the same sampling day. (Target)	Range
Oil and Grease check 3+ /year	Visible (Target)	Nil
Water released must not contain any harmful contaminants or organisms and must not produce any slick or evidence of oil or grease or contain scum, litter or objectionable matter.		



QUARRIES

ON SITE SPILLS

IMSWI-10018

OWNER	QQM2
SPONSOR	QMAO
ISSUE DATE	CHANGE DETAILS
20/09/10	Revision 1C: No changes required
07/01/11	Revision 1D: Inclusion of Bracalba (BQ 420)
19/07/13	Revision 1E: Full document review & associated docs added.
24/07/2015	Revision 1F: No changes required at this time.
01/02/2018	Revision 1G: 3.0 inclusion of ChemAlert.

1.0 PURPOSE

The purpose of this instruction is to document the method of containing, clean up, and disposal of on site spills of substance such as oil and fuel at Mt. Coot-tha, Bracalba Quarries and at the Pine Mountain Road Material Recycling Facility.

2.0 SCOPE

This instruction refers to all on site spills of any substance that may enter waterways in or around the quarry environment.

3.0 SAFETY

The consequences of a spill can be significant. Care must be taken to follow all precautions recommended by the SDS before handling the spilled substance. SDS's are managed in ChemAlert. At Mt Coot-tha Quarry SDS's are printed off when required. Manuals are held in at Supervisor's office at Pine Mountain Road and at the Main Office, Workshop, Laboratory, Storeroom and Safety Advisor's Fire Proof Cabinet at the Main Office at Bracalba.

4.0 ASSOCIATED DOCUMENTS

- 4.1 [IMSWI-02022 Emergency Procedures Mt.Coot-tha](#)
- 4.2 [IMSWI-10010 Environmental Monitoring & Reporting](#)
- 4.3 [IMSWI-02002 Accident Investigating & Reporting Quarries](#)
- 4.4 [IMSWI-10028 Waste Management Plan PM](#)
- 4.5 [IMSWI-10030 Waste Management Plan MC](#)
- 4.6 [IMSWI-10001 Environmental Reporting Complaints & Incidents](#)
- 4.7 [IMSF-01006 Incident Investigation Worksheet](#)
- 4.8 [IMSWI-11269 Re-Fuelling Vehicles](#)
- 4.9 [IMSWI-11274 Waste Management & Tracking](#)
- 4.10 [IMSWI-02160 Emergency Response Bracalba Procedures](#)

5.0 DOCUMENT GUIDELINES

- 5.1 Continuous improvement – Amendments to be noted on change details form on cover page of work instruction.

6.0 DOCUMENTATION

- 6.1 Ensure all incidents are appropriately and accurately investigated and documented for management review in accordance with [IMSWI-10010 Environmental Monitoring & Reporting](#).

7.0 MAJOR EMERGENCY SPILL PROCEDURE

TANK / BUND CONTAINMENT FAILURE/

- 7.1 The following procedure shall be followed in the event of the above incident or emergency on the site
- 7.2 The first staff member who becomes aware of the emergency shall :
- a) Immediately notify the Quarry Foreman, Maintenance Supervisor and/or the appointed Health and Safety / Environmental Controls advisor.
 - b) See whether any person is in need of emergency medical attention or is at risk of injury. Get help for person(s) in need of medical attention and/or warn any person(s) of the impending risk by the quickest way possible. If you are unable to provide assistance, request assistance by calling (Fire, Ambulance, Police Rescue), **DIAL (0) 000 on council's internal phone lines.**
 - c) If it is safe to do so, quickly take steps to stop or minimise the problem. If the spill is contained:
 - Isolate and remove all sources of ignition
 - Maintain a watch on the bund or plant to make sure there are no leaks
 - d) Use mobile plant to create a bund wall of crusher dust between the spill and any stormwater inlets or waterways.
 - e) Isolate the area in case there is any risk of fire. Shut down or remove all equipment that may contribute to the chance of fire.
 - f) In the event of fire follow the site emergency procedure.([IMSWI-02022 Emergency Procedures Mt.Coot-tha](#), [IMSWI-02182 Pine Mt Emergency Procedure](#) or [IMSWI-02160 Emergency Response Bracalba Procedures](#))
 - g) Investigate whether the spill has entered any waterways or drains. Note: the imminent onset of rain could wash the spill into a drain etc.
 - h) Contact the quarry supervisor and follow the procedure for reporting incidents.([IMSWI-02002 Accident Investigating & Reporting Quarries](#))
- 7.3 Location of absorbent materials
- a) Crusher can be moved by mobile plant.
 - b) Spill kits (bin and bag types) – see attachments for site-specific locations can be used to remediate minor spills.

- 7.4 All materials used to contain and clean up the spill shall be deemed to be contaminated and shall be disposed of as per the appropriate waste management plan. ([IMSWI-10030 Waste Management Plan MC](#), [IMSWI-10028 Waste Management Plan PM](#) or [IMSWI-11274 Waste Management & Tracking Bracalba](#))

8.0 SPILL KIT LOCATIONS

Bracalba

(Large red bag, large red wheelie bin) - located:

- Inside the stores main doors.
- Inside the green container at the bottom workshop.
- In the red bag near the crib room at the Sth Quarry.
- Inside the small shed beside the main power room, at the main crusher on the Nth Side.
- Inside the fuel truck.
- Safety officers light vehicle.

Mt Coot-tha

Large red wheelie bin - located:

- In between old unused huts near Tertiary A
- Outside unused laboratory

Pine Mountain

Large red wheelie bin - located:

- In the shipping container
- At the main crushing plant

9.0 MINOR EMERGENCY SPILL PROCEDURE

UNCONTROLLED RELEASE OF:

- **HYDRAULIC OIL FROM BROKEN HOSE**
- **FUEL FROM MOBILE TANKS / JERRY CANS**
- **OIL FROM TRUCKS / LOADERS**

9.1 In the event of an uncontrolled spill of any product in the quarry the procedure listed below shall be followed.

9.2 The first staff member who becomes aware of the spill shall immediately:

- a) Seek assistance or start to control and clean up contaminants themselves. This shall only be done if it is safe to do so and appropriate PPE is available
 - b) Control the contaminants by minimising the leak by:
 - Shut off any valves
 - Upright any containers or roll opening onto high side
 - Seal the leak using whatever is available (rag, stick)
 - Place a container under the leak to capture contaminants
 - c) Prevent spill from entering drains or waterways by:
 - Block any entry points with suitable materials directly downhill of the spill
 - d) Clean up spill using:
 - Spill kit
 - Crusher dust
 - e) Dispose of the clean up material as “Regulated Waste”. Refer to ([IMSWI-10030 Waste Management Plan MC](#), [IMSWI-10028 Waste Management Plan PM](#) or [IMSWI-11274 Waste Management & Tracking Bracalba](#))
- 9.3 Undertake remedial action to make safe and ensure the incident does not happen again. Update relevant risk assessments to include any new control measures. Inform interested parties of the new control measures.

10.0 RELEASE OF SPILL ONTO SEDIMENT PONDS OR WATERWAYS

- 10.1 Petroleum products disperse quickly across the surface of water and it is important that spilt material is contained within the sediment pond behind a bund wall.
- 10.2 Place absorbent booms to skim product downstream from the spill to control any further advancement and dispersal of the spill.
- 10.3 Refer to Appendix A / B / C for site-specific clean up procedures.

11.0 ROLES AND RESPONSIBILITIES

MANAGEMENT

- Insure that all Environmental Incidents are reported to the proper authorities as per Environmental Monitoring and Reporting.
- Conduct proper investigations of any Incident/accident that may occur within the quarry.
- Provide the proper resources (Persons & equipment) so that any Incident/accident can be dealt with quickly and efficiently.
- Ensure the spill kits are regularly checked and upgraded.

SUPERVISORS

- Respond immediately to any Incident/accident that may occur.
- Secure the scene and deal with casualties if necessary.
- Oversee any clean up of spills.
- Report spill kit requirements if used at incident/accident.

STAFF

- Remain observant for any spill of chemicals, fuels etc.
- Report immediately any incident/accidents that occur.
- Help with casualties as instructed by supervisor or first aid officer.
- Conduct clean up of spills as per this work instruction section 5.0.

11 PERFORMANCE INDICATORS AND IMPROVEMENT

PERFORMANCE INDICATORS

- Spill kits on site and checked.
- Any spills cleaned up quickly and effectively.
- Reports to authorities done on time.
- All staff aware of their environmental responsibilities.

Appendix A

HOW TO USE THE SPILL KIT

MT. COOT-THA QUARRY

1.0 WHERE IS THE SPILL KIT

Spill kits are located:

- Crushing Plant Area – wooden hut near Secondary Plant
- Workshop Area – near compressor
- Site Office Area – in store room

The WHSO/Environmental Controls officer can be contacted by 2-way radio or otherwise contact the Quarry Foreman.

2.0 CONTENTS AND THEIR USES

- **ABSORBENT PADS** – These are for use on wet areas, by placing on the spilt liquid.
- **BOOMS/SOCKS** – These are used to contain the oil/fuel so it can be removed with ABSORBENT PADS. BOOMS/SOCKS can be tied together, a rope put on each end and dragged by two people along the dam. BOOMS/SOCKS can also be laid across the ground to prevent the spill from spreading.
- **BIOACTIVE ABSORBENT** – This can be put straight onto oil/fuel that is spilt on the ground.
- **DISPOSAL BAGS** – Place any used absorbent products in a bag and seal with the cable ties provided, and dispose of as a Regulated Waste.

Note: There is no significant risk to health from using any of these products (re SDS)

3.0 RETURN SPILL KIT TO WHERE IT CAME FROM AND REPORT TO SUPERVISOR SO THE KIT CAN BE RE-STOCKED

4.0 MORE SPILL KITS IF NEEDED

More and larger spill kits are available from the Environmental Coordinator at Lennon St, Stafford. Simply phone x37005 (or sch4p4(6) Person) and they will send more kits immediately.

Appendix B

HOW TO USE THE SPILL KIT

PINE MOUNTAIN ROAD MATERIAL RECYCLING FACILITY

1.0 WHERE IS THE SPILL KIT

Spill kits are located:

- Weighbridge - near entrance
- Crushing plant – near operator booth
- Crushing plant – in electrical building

2.0 CONTENTS AND THEIR USES

- **ABSORBENT PADS** – These are for use on wet areas, by placing on the spilt liquid.
- **BOOMS/SOCKS** – These are used to contain the oil/fuel so it can be removed with **ABSORBENT PADS**. **BOOMS/SOCKS** can be tied together, a rope put on each end and dragged by two people along the dam. **BOOMS/SOCKS** can also be laid across the ground to prevent the spill from spreading.
- **BIOACTIVE ABSORBENT** – This can be put straight onto oil/fuel that is spilt on the ground.
- **DISPOSAL BAGS** – Place any used absorbent products in a bag and seal with the cable ties provided, and dispose of as a Regulated Waste.

Note: There is no significant risk to health from using any of these products (re SDS)

3.0 RETURN SPILL KIT TO WHERE IT CAME FROM AND REPORT TO SUPERVISOR SO THE KIT CAN BE RE-STOCKED

4.0 MORE SPILL KITS IF NEEDED

More and larger spill kits are available from the Environmental Coordinator at Lennon St Stafford. Simply phone x37005 (or sch4p4(6) Person) and they will send more kits immediately.

Appendix C

HOW TO USE THE SPILL KIT

BRACALBA

5.0 WHERE IS THE SPILL KIT

Spill kits are located:

(Large red bag, large red wheelie bin)

- Inside the stores main doors.
- Inside the green container at the bottom workshop.
- In the red bag near the crib room at the Sth Quarry.
- Inside the small shed beside the main power room, at the main crusher on the Nth Side.
- Inside the fuel truck.
- Safety officers light vehicle.

The WHSA/Environmental Controls Advisor can be contacted by 2-way radio or otherwise contact the Quarry Foreman.

6.0 CONTENTS AND THEIR USES

- **ABSORBENT PADS** – These are for use on wet areas, by placing on the spilt liquid.
- **BOOMS/SOCKS** – These are used to contain the oil/fuel so it can be removed with **ABSORBENT PADS**. **BOOMS/SOCKS** can be tied together, a rope put on each end and dragged by two people along the dam. **BOOMS/SOCKS** can also be laid across the ground to prevent the spill from spreading.
- **BIOACTIVE ABSORBENT** – This can be put straight onto oil/fuel that is spilt on the ground.
- **DISPOSAL BAGS** – Place any used absorbent products in a bag and seal with the cable ties provided, and dispose of as a Regulated Waste.

Note: There is no significant risk to health from using any of these products (re MSDS)

7.0 RETURN SPILL KIT TO WHERE IT CAME FROM AND REPORT TO SUPERVISOR SO THE KIT CAN BE RE-STOCKED

8.0 MORE SPILL KITS IF NEEDED

More and larger spill kits are available from the Environmental Coordinator at Lennon St, Stafford. Simply phone x37005 (or [Sch4p4\(6\) Person](#)) and they will send more kits immediately.



MT COOT-THA QUARRY

STORMWATER MANAGEMENT PLAN

IMSWI-10022

OWNER	QRMA1
SPONSOR	QQM2
ISSUE DATE	CHANGE DETAILS
12/12/2013	Revision 1D: No changes required at this time
15/04/2016	Revision 1E: Minor change in section 8.
13/02/2018	Revision 1F: Minor change
14/06/2018	Revision 1G: Name change to DES

Security Label: FOR OFFICIAL USE ONLY

1.0 PURPOSE

The purpose of this plan is to document how we meet the requirements of D.E.S. with regard to the management of stormwater at Mt Coot-tha Quarry.

2.0 SCOPE

The scope of these instructions covers all stormwater issues at Mt Coot-tha Quarry.

3.0 INTRODUCTION

The stormwater management plan described within this report was prepared as part of the Council's submission to D.E.S. for renewal of its operation licence with regard to the quarry's stormwater discharge.

The Mt Coot-tha rock excavation quarry and crushing plant is located at the junction of Mount Coot-tha Road and Scenic Drive, Mt Coot-tha, Brisbane. The exposed Quarry area of 23.4 ha represents 88% of the total catchment area measured to the final stormwater discharge point located at the main quarry entry, Mt Coot-tha Road. Current policy however, due to drought conditions is to capture all site runoff from rainfall events for reuse in dust suppression activities on-site.

4.0 DESCRIPTION OF EXTERNAL CATCHMENT SURFACE DRAINAGE

The external catchment includes Scenic Drive and a portion of Sir Samuel Griffith Drive along the western boundary of the quarry. The catchment area of 3.2 ha discharges into the quarry from unstable table drains on Mount Coot-tha Road just east of its intersection with Scenic Drive.

High velocity stormwater from the external catchment currently deposits eroded coarse sediments and fine silt material into the second of a series of sediment traps, as seen in Appendix C, located along the main watercourse prior to the quarry's downstream property boundary.

5.0 DESCRIPTION OF SURFACE DRAINAGE WITHIN THE QUARRY

Stormwater runoff within the quarry generally consists of sheet flow and open channels. Some minor piping exists on the site, but only over short distances.

Identification of exit points and their catchments

Appendix C shows the two existing sub-catchments and the site's discharge point into the Mt Coot-tha Botanical Gardens pond system. It should be noted that, as it is current policy to retain all runoff on-site for dust suppression

measures, discharge at this point is only expected to occur during extreme rain events.

Potential sources of stormwater pollution

The majority of the site is disturbed with some revegetation on the upper escarpment and grassing and gardens around the main entrance roadway. The most significant pollutant in stormwater runoff is sediment. Sediment runoff consists of rock particles with sizes ranging from coarse sand to fine dust.

Given the relatively flat nature of the quarry, the exposed rock face, the non-existence of dispersive soils and the near absence of exposed topsoils or subsoils, the annual quantity of sediment runoff is expected to be small in relation to the sizes of the catchment.

Turbid runoff generated from the wheel wash discharges into the third sediment pond after travel through sediment trap.

Turbid runoff generated from the dust control sprays located on the discharges down the main exit road and into a gully pit which discharges into the final treatment pond (Appendix C).

Oil and fuel is kept in a purpose built, bunded storage facility thus limiting the chance of stormwater contamination. Spill procedures are detailed in IMSWI-10018 On Site Spills Quarries, with instructions specific to the Mt Coot-tha site included as Appendix B.

Existing stormwater management system

The existing stormwater management system consists of six sediment ponds operating in series along the main watercourse as shown in Appendix C. The first pond has approximate dimensions of 30m x 5m x 1m depth. Following this pond is a series of four ponds separated by sediment filter dams. These ponds have dimensions of (10m x 4m x 2m depth), (8m x 4m x 3m), (8m x 3m x 2m) and (10m x 3m x 2m).

Stormwater then flows through 3 sediment filter dams.

The final treatment system consists of an irregularly shaped settlement pond with approximate dimensions of 22m length, width varying from 4m to 12m and unknown depth (probably around 3 metres). This final 'wetland' pond contains some minor aquatic vegetation and resident aquatic bird life.

6.0 DESCRIPTION OF RECEIVING WATERS

In the event of extreme rainfall over the site's catchment, it is expected that surface runoff from the quarry site would flow into the ponds in the Botanical Gardens.

7.0 EFFECTIVENESS OF EXISTING STORMWATER MANAGEMENT

The absence of coarse sediment in the dredged material of the Botanical Gardens lakes and the apparent efficiency of the series of small sediment ponds indicates that the current stormwater treatment system effectively removes coarse sediments.

All other exposed areas are still active work sites and revegetation is not considered appropriate at this stage. All stormwater over exposed faces drains to the site storage dam @ RL0.0 which has a minimum storage capacity of 25 Megalitres.

8.0 Stormwater Monitoring Program

The monitoring program is summarised as follows:

1. Sampling is to be conducted by Urban Utilities Laboratory when there are significant rain events resulting in the release of stormwater off-site, no less than 3 times per annum;
2. The sampling points are marked to ensure consistency and comparison of tests;
3. Sediment ponds to be de-silted regularly to maintain the first flush capacity.

APPENDIX A - Support calculations for sediment basin

Three sizing methods were considered. These methods are detailed in the draft Institution of Engineers, Australia, *Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites* (1994).

These three methods will be referred to as:

1. Department of Housing (NSW)
2. CaLM Method (NSW Dept of Conservation and Land Management)
3. Sediment Pond method (based on 150 m³/ha)

For the existing catchment area of 8.6 hectares feeding to the top basin area, the sediment basin dimensions determined by the three methods have been determined and are summarised in Tables 1 and 2 below.

Table 1

Sediment basin dimensions based on catchment area of 8.6 ha					
	NSW Department of Housing Method	CaLM Method			Sediment Pond (150m²/ha)
		Based on selected critical grain size			
		0.02 mm	0.05mm	0.10mm	
Surface Area (m²)	840	1440	223	60	1290
Maximum Width (m)	16.7	22	8.6	4.5	21
Minimum Length (m)	50	66	26	13.4	62
Settlement Depth (m)	1.0	0.6	0.6	0.6	1.0
Settlement Volume (m³)	840	864	134	36	1290

APPENDIX B – Excerpt from IMSWI-10018 On Site Spills Quarries

a. HOW TO USE THE SPILL KIT – Mt Coot-tha

1.0 WHERE IS THE SPILL KIT

Spill kits are located:

- Crushing Plant Area – wooden hut near Secondary Plant
- Workshop Area – near compressor
- Site Office Area – in store room

The WHSO/Environmental Controls officer can be contacted by 2-way radio or otherwise contact the Quarry Foreman.

2.0 CONTENTS AND THEIR USES

- **ABSORBENT PADS** – These are for use on wet areas, by placing on the spilt liquid.
- **BOOMS/SOCKS** – These are used to contain the oil/fuel so it can be removed with ABSORBENT PADS. BOOMS/SOCKS can be tied together, a rope put on each end and dragged by two people along the dam. BOOMS/SOCKS can also be laid across the ground to prevent the spill from spreading.
- **BIOACTIVE ABSORBENT** – This can be put straight onto oil/fuel that is spilt on the ground.
- **DISPOSAL BAGS** – Place any used absorbent products in a bag and seal with the cable ties provided, and dispose of as a Regulated Waste.

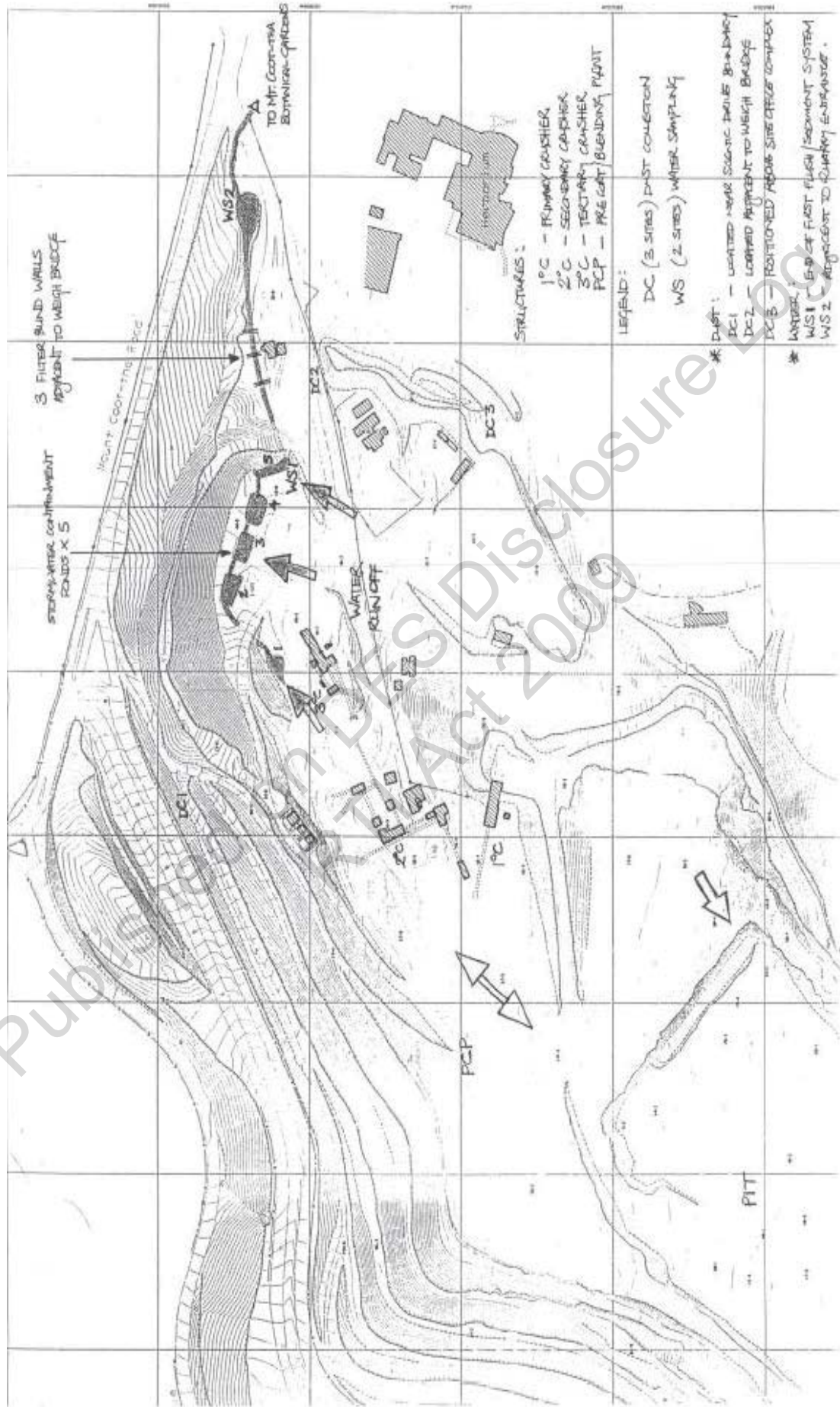
Note : There is no significant risk to health from using any of these products (re MSDS)

3.0 RETURN SPILL KIT TO WHERE IT CAME FROM AND REPORT TO SUPERVISOR SO THE KIT CAN BE RE-STOCKED

4.0 MORE SPILL KITS IF NEEDED

More and larger spill kits are available from the Environmental Coordinator at Lennon St, Stafford. Simply phone x37005 (or [sch4d4\(6\) Person](#)) and they will send more kits immediately.

APPENDIX C – Stormwater Layout Plan MCQ – Plan 6





MT COOT-THA QUARRY

WASTE MANAGEMENT PLAN

IMSWI-10030

OWNER	QQM2
SPONSOR	QAOPM
ISSUE DATE	CHANGE DETAILS
20/09/2010	Revision 2B: Supplier name changes in 6 & 7
04/02/2014	Revision 2C: General update. No changes required
11/03/2016	Revision 2D: General update with some changes
15/03/2018	Revision 2E: No changes required
15/06/2018	Revision 2F: List of regulated wastes updated

1.0 PURPOSE

The purpose of this plan is to document how we meet the requirements of the Environmental Authority with regard to the disposal of waste from Mt Coot-tha Quarry.

2.0 SCOPE

The scope of these instructions covers all waste material from Mt Coot-tha Quarry.

3.0 DEFINITIONS

3.1 BCC – Brisbane City Council

3.2 FSG – Field Services Group

3.3 ENV - Environmental

3.4 IMS – Integrated Management System

3.5 OHS – Occupational Health & Safety

3.6 MSDS – Material Safety Data Sheet.

3.7 Regulated Wastes –

means non-domestic waste mentioned in schedule 7 (whether or not it has been treated or immobilised) and includes-

- a) for an element – any chemical compound containing the element and
- b) anything that has contained the waste.

as defined in Schedule 7 of the Environmental Protection Regulations 1998 – Extract is attached for information

4.0 ASSOCIATED DOCUMENTS

4.1 Mining and Quarrying Safety and Health Regulation 2001

4.2 Mining and Quarrying Safety and Health Act 1999

4.3 AS/NZS/ISO:9001

4.4 AS/NZS/ISO:14001

4.5 AS/NZS 4801

4.6 IMSWI-21005 “Hazardous Substances”

4.7 IMSWI-21015 Risk Assessment

5.0 PROCEDURE REVIEW GUIDELINES

- 5.1 Continuous Improvement – Amendments to be noted on change details form on cover page of procedure. Procedures are updated and re-issued by the Quarry Manager or designate.
- 5.2 Improvement Actions – Improvement Actions (form IMSF-01001) are to be raised for any non-conformance and/or amendments in procedures or associated functions.

All relevant personnel must be notified of any significant changes to this document.

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6 TYPES OF WASTE

	Types of waste	Source	Quantity produced	Current method of disposal
1	Waste oil, oil rags, oil drums, empty grease cartridges (All are regulated)	Fixed and mobile plant oil changes	3000 litre per year	Collected by licensed recycler
2	Used degreaser (regulated)	Workshop area	200 litre per year	Collected by licensed recycler
3	Unusable scrap steel	Plant maintenance and modifications	48 tonne per year	Collected by Scrap Metal company for recycling
4	Acid batteries (regulated)	Vehicles, generators	4 per year (max)	Removed by contractor on replacement
5	General refuse (foodstuffs, empty packaging, papers, plastics, cable, broken parts	Lunchroom, Offices, Workshops, Site operations	20 tonne per year	Collected by City Waste to landfill
6	Scrap paper / cardboard	Offices, Weighbridge, Workshop area	500 kg per year	Collected by Recall / City Waste for recycling
7	Fine sediment	Dredging of settling ponds	250 tonne per year	Remains on-site, used for rehabilitation purposes or taken to Pine Mt

7 WASTE MINIMISATION OBJECTIVES

7.1 Waste Oil

Oil is changed as per manufacturer specifications for fixed plant. Current plant utilises grease rather than oil when possible to reduce waste generation. Servicing of mobile plant is carried out externally by contractors waste oil removed to the on site oil storage facility to await collection by licensed recyclers.

Target: 99% of waste oil to be taken from site for the purpose of recycling (Allowing for 1% left in filters)

7.2 Scrap Steel

Maintenance supervisor has implemented a 'tile' system for wear plates to enable small sections only to be replaced thus reducing the amount of scrap wear plate. During plant modifications any steel that may be reused is salvaged and stored in the maintenance compound.

Target: 100% of unusable scrap steel to be collected by 'commercial recyclers' for recycling

7.3 Waste Paper / Cardboard

Only recycled paper is used in computer printers and photocopiers as per BCC Policy. Some used paper from computer printers and photocopiers is kept and used as note paper or re used in fax machine. The remainder of waste paper is placed in a document destruction bin for regular removal.

Cardboard packaging is placed in recycling bins and removed for recycling.

7.4 Used Toner Cartridges

Depleted printer cartridges are returned to BCC Strategic Procurement for recycling.

Target: 100% of waste paper / cardboard from offices, weighbridge, stores and maintenance compound to be put into 'Recall' bins and removed from site for recycling

7.5 General Refuse

Due to the nature of the operation it is not believed that general refuse quantities can be reduced significantly, however, purchasing officers minimise in areas where they are able, such as packaging.

Target: 100% of general refuse to be put into 'City Waste' bins provided and serviced monthly or sooner if required.

7.6 Fine Sediment

Due to the nature of the operation it is not believed that sediment quantities can be reduced significantly, however, by retaining sediment entrained in stormwater, the potential release of sediment off-site is reduced.

Target: 100% of sediment contained in settling ponds extracted and used in rehabilitation areas on completed benches.

8 PROCEDURE

8.1 Responsibilities

The Quarry Manager shall ensure that regulated waste is not released to the environment, stored, transferred or disposed of contrary to the conditions of DES.

This responsibility is transferred to all persons (including contractors) engaged at the quarry. This responsibility is conveyed to staff and visitors through the site induction and formal induction process.

8.2 Waste Management Plan.

The Quarry Manager shall aim to reduce wastes from the Quarry. This Plan shall be reviewed annually.

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**9 LIST OF REGULATED WASTES (Relevant to the process of Quarrying)
(Extract from Schedule 7 of the Environmental Protection Regs 1998)**

- 1 acidic solutions and acids in solid form
- 2 animal effluent and residues, including abattoir effluent and poultry and fish processing wastes
- 3 antimony and antimony compounds
- 4 arsenic and arsenic compounds
- 5 asbestos
- 6 barium compounds, other than barium sulfate
- 7 basic (alkaline) solutions and bases (alkalis) in solid form
- 8 beryllium and beryllium compounds
- 9 boron compounds
- 10 cadmium and cadmium compounds
- 11 chemical waste arising from a research and development or teaching activity, including new or unidentified material and material whose effects on human health or the environment are not known
- 12 chlorates
- 13 chromium compounds (hexavalent and trivalent)
- 14 clinical and related waste
- 15 containers contaminated with a regulated waste
- 16 copper compounds
- 17 cyanides (inorganic)
- 18 cyanides (organic)
- 19 encapsulated, chemically-fixed, solidified or polymerised wastes
- 20 ethers
- 21 filter cake, other than filter cake waste generated from the treatment of raw water for the supply of drinking water
- 22 fly ash
- 23 food processing waste
- 24 grease trap waste
- 25 halogenated organic solvents
- 26 highly odorous organic chemicals, including mercaptans and acrylates
- 27 hydrocarbons and water mixtures or emulsions, including oil and water mixtures or emulsions
- 28 inorganic fluorine compounds, other than calcium fluoride
- 29 inorganic sulfides
- 30 isocyanate compounds
- 31 lead and lead compounds including lead-acid batteries
- 32 material containing polychlorinated biphenyls (PCBs), polychlorinated naphthalenes (PCNs), polychlorinated terphenyls (PCTs) or polybrominated biphenyls (PBBs)
- 33 mercury and mercury compounds
- 34 metal carbonyls
- 35 mineral oils
- 36 nickel compounds
- 37 non-toxic salts including, for example, saline effluent
- 38 organic phosphorous compounds
- 39 organic solvents, other than halogenated solvents, including, for example, ethanol
- 40 organohalogen compounds, other than another substance stated in this schedule
- 41 oxidising agents
- 42 perchlorates
- 43 pesticides, including organochlorine
- 44 pharmaceuticals, drugs and medicines
- 45 phenols and phenol compounds, including chlorophenols
- 46 phosphorus compounds, other than mineral phosphates
- 47 polychlorinated dibenzo-furan (any congener)

- 48 polychlorinated dibenzo-p-dioxin (any congener)
- 49 reactive chemicals
- 50 reducing agents
- 51 residues from industrial waste treatment or disposal operations
- 52 selenium and selenium compounds
- 53 sewage sludge and residues, including nightsoil and septic tank sludge
- 54 surface active agents (surfactants) containing principally organic constituents, whether or not also containing metals and other inorganic materials
- 55 tallow
- 56 tannery wastes, including leather dust, ash, sludges and flours
- 57 tarry residues arising from refining, distillation or any pyrolytic treatment
- 58 tellurium and tellurium compounds
- 59 thallium and thallium compounds
- 60 triethylamine catalysts for setting foundry sands
- 61 tyres
- 62 vanadium compounds
- 63 vegetable oils
- 64 waste containing peroxides other than hydrogen peroxide
- 65 waste from a heat treatment or tempering operation that uses cyanides
- 66 waste from surface treatment of metals or plastics
- 67 waste from the manufacture, formulation or use of the following—
 - biocides or phytopharmaceuticals
 - inks, dyes, pigments, paints, lacquers or varnish
 - organic solvents
 - photographic chemicals or processing materials
 - resins, latex, plasticisers, glues or other adhesives
 - wood-preserving chemicals
- 68 waste from the manufacture or preparation of pharmaceutical products
- 69 waste of an explosive nature, other than an explosive within the meaning of the [Explosives Act 1999](#)
- 70 wool scouring wastes
- 71 zinc compounds



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ABN:70 084 643 023

Brisbane City Council
Mt Coot-Tha Quarry, Toowong QLD 4066

23rd December 2016

Attention: Robert Bell

Noise assessment Mt Coot-Tha Quarry – Drilling Works

Mt Coot-Tha Quarry commissioned a noise survey of local residential area to determine if noise generation from works at the quarry were within licence conditions of the Department of Environment and Heritage (DEHP) permit (IPDE00920708). Attended monitoring was carried out in a free field location adjacent to Scenic Drive and Mt Coot-tha Road. This is deemed to be a representative location for residential monitoring in accordance with the Queensland's *Noise Measurement Manual* (DEHP, 2013).

The survey (Table 1) determined that the noise emissions from quarry operations were less than the day time levels (7am-6pm) required in DEHP permit during normal atmospheric conditions.

Table 1: Attended noise monitoring (15 minute samples) of operations – Scenic Drive/ Mt Coot-tha Road.

Date	Location	End Time	LA _{MAX} (Quarry)	LA _{MAX} (ambient)	LA _{EQ}	LA ₁₀	LA ₉₀
28-Nov-16	Scenic Dr/Mt Coot-tha Rd	07:30	54.7	83.9	63.0	66.0	51.8
28-Nov-16	Scenic Dr/Mt Coot-tha Rd	08:48	53.2	77.2	61.3	65.5	48.7
28-Nov-16	Horrocks Street	12:00	50.6	77.2	60.0	63.3	45.8
28-Nov-16	Horrocks Street	12:15	50.3	78.1	60.3	63.6	46.7

*max levels from quarry operations

It was observed during attended monitoring that wind speed was generally from the west at 2-4km/hr. No influence from wind direction was observed.

Site activities during the monitoring period included:

- Drilling activities were offering in preparation for blasting
- front end loader and dump trucks;
- light vehicle movements; and
- haul truck movements on site, with movements various during the monitoring period with peak movements shortly after quarry opening.

No blasting or crushing activities were observed during the time of measurement.

In all monitoring periods that the LA10 and ambient maximum noise levels in each 15 minute period was attributed to local traffic and local bird life (cockatoo). Noise from the quarry was generally observed 3dB above background levels. Quarry works were audible at the monitoring locations and operating within the licence criteria for LA_{MAX,Adj,T}.

It is concluded that the works at Mount Coot-Tha Quarry were within the Environmental Authority licence conditions during the investigation period.

Best regards,



sch4p4(6) Personal informati
Director

DISCLAIMER

This Report by Noise Measurement Services Pty Ltd is prepared for a particular Client and is based on the agreed objective, scope, conditions and limitations as may be stated in the Report. The Report presents only the information that Noise Measurement Services Pty Ltd believes, in its professional opinion, is relevant and necessary to describe the issues involved. The Report should not be used for anything other than the intended purpose and should not be reproduced, presented or reviewed except in full. The intellectual property of this Report remains with Noise Measurement Services Pty Ltd. The Client is authorised, upon payment to Noise Measurement Services Pty Ltd of the agreed Report preparation fee, to provide this Report in full to any third party.



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Brisbane City Council
Mt Coot-Tha Quarry, Toowong QLD 4066

23rd December 2016

Attention: Robert Bell

Noise assessment Mt Coot-Tha Quarry – Excavator Works

Mt Coot-Tha Quarry commissioned a noise survey of local residential area to determine if noise generation from works at the quarry were within licence conditions of the Department of Environment and Heritage (DEHP) permit (IPDE00920708). Attended monitoring was carried out in a free field location adjacent to Scenic Drive and Mt Coot-tha Road. This is deemed to be a representative location for residential monitoring in accordance with the Queensland's *Noise Measurement Manual* (DEHP, 2013).

The survey (Table 1) determined that the noise emissions from quarry operations were less than the day time levels (7am-6pm) required in DEHP permit during normal atmospheric conditions.

Table 1: Attended noise monitoring (15 minute samples) of operations – Scenic Drive/ Mt Coot-tha Road.

Date	End Time	LA _{MAX} *	LA _{EQ}	LA ₁₀	LA ₉₀
05-Dec-16	13:15	52.9	60.2	63.5	50.7
05-Dec-16	13:40	51.2	62.7	65.0	49.9

*max levels from quarry operations

It was observed during attended monitoring that wind speed was generally from the north at 4-6km/hr. No influence from wind direction was observed.

Site activities during the monitoring period included:

- 60t excavator working on a bench adjacent to Scenic Drive;
- jaw crusher was operational;
- front end loader and dump trucks;
- light vehicle movements; and
- haul truck movements on site, with movements various during the monitoring period with peak movements shortly after quarry opening.

No blasting activities occurred during the time of measurement.

In all monitoring periods that the LA10 and maximum noise levels (80.4 and 83.0 dB respectfully) in each 15 minute period was attributed to local traffic and local bird life (crows). Noise from the quarry was generally observed 1-2dB above background levels. Quarry works were audible at the monitoring location and were operating within the licence criteria for L_{AMAX,Adj,T}.

It is concluded that the works at Mount Coot-Tha Quarry were within the Environmental Authority licence conditions during the investigation period.

Best regards,

sch4p4(6) Personal informati
Director

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LABORATORY REPORT

Client: Robert Bell
FSG - Asphalt Operations
Mt Coot-tha Quarry
Mt Coot-tha Rd
Toowong

Job Name: Mt Coot-tha Quarry Stormwater

Sampled By: SAS Laboratory
Sampling Method: Grab
Sample Matrix: Aqueous
Batch Number: 18/00533
Registration Date: 27 February 2018
Date of Report: 6 March 2018

Published on DES Disclosure Log
RTI Act 2009



ACCREDITED FOR
**TECHNICAL
COMPETENCE**
Accredited for compliance
with ISO/IEC 17025 - Testing

sch4n4(6) Personal

sch4n4(6) Personal information

Authorised Signatory Authorised Signatory

PLEASE NOTE:

1. The results refer only to the samples tested.
2. All sampling performed by SAS Laboratory is in accordance with In-house Method F.001.
3. This document shall not be reproduced except in full, without written approval from SAS Laboratory.
4. Method with ~~indicates~~ NATA accreditation does not cover the performance of this service.

Client: FSG - Asphalt Operations
Job Name: Mt Coot-tha Quarry Stormwater

Batch Number: 18/00533
Report Date: 6/03/2018

	Test	Units	18/00533/1 W1 27/02/2018 15:28	18/00533/2 W2 27/02/2018 15:34
1.002	pH	pH Unit	7.9	7.7
1.007	Conductivity - Field	uS/cm	1,430	1,430
1.004	Dissolved O2 - Field	mg/L	7.7	7.6
F.005*	Temperature - Field	° C	26.2	26.0
5.101	Turbidity - Field	NTU	4.9	8.2
Misc. *	Visual - Oil and Grease		None	None
1.601	Suspended Solids	mg/L	11	8
1.607	Total Oil & Grease	mg/L	12	<10

[ND] - Not Detected [NR] - Not Required [NT] - Not Tested

PLEASE NOTE:

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2. All sampling performed by SAS Laboratory is in accordance with In-house Method F.001.
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4. Method with * indicates NATA accreditation does not cover the performance of this service.



Dedicated to a better Brisbane

Brisbane City Council ABN 72 002 765 795

Brisbane Infrastructure/Field Services Group
Asphalt And Aggregates Branch
Mt Coot-tha Quarry
200 Mt Coot-tha Rd
Toowong
4066
Phone 340 32569
www.brisbane.qld.gov.au

11 October 2018

Department of Environment and Science,
GPO Box 2454,
Brisbane, QLD 4001 cc: ESComplianceBrisbaneMoreton@des.qld.gov.au

Attention: Simon Vanderduys

Dear Mr Vanderduys

**RE: Your letter dated 27 September, Mt Coot-tha Quarry, EPPR00447313-
Alleged Non-Compliances. Document CA52106 – Pre-enforcement letter**

I refer to your letter dated 27 September 2018 about a compliance inspection at the Mt Coot-tha Quarry located at Mt Coot-tha Road, Toowong which operates under environmental authority EPPR00447313. The Department is concerned that Council exceeded the permitted release limit of suspended solids on 29 June 2018 and then failed to notify the Department of the exceedance within the required 28 day period.

The relevant conditions provide:

(C5) *The release of contaminants to waters must comply, at the sampling and in-situ measurement point/s specified in Schedule H, with each of the limits specified in Table 1 for each quality characteristic: [our emphasis]*

SCHEDULE C TABLE 1 – RELEASE QUALITY CHARACTERISTIC LIMITS

Quality characteristics	Release Point Number	Release Limit	Limit Type
Dissolved Oxygen (mg/L)	W1 and W2	6 mg/L	Minimum
Suspended solids (mg/L)	W1 and W2	30mg/L	Maximum
pH	W1 and W2	Not less than 6.5 or greater than 8.5	Range

(H17) *The registered operator of this development approval must notify the administering authority in writing of any monitoring result which indicates an exceedance of any development approval limit within twenty-eight (28) days of completion of analysis.*

Council does not accept that condition C5 has been contravened, firstly, given that there has been no release to *waters* and, secondly, given the clear intent of the condition –

namely, to ensure contaminants do not make their way into an external natural Queensland water environment – logically implying that Council should not be considered culpable where a monitoring point exceeds a parameter but the actual release does not.

The circumstances giving rise to this matter are unique. Accordingly, the following facts may be relevant to your decision about taking enforcement action:

1. There was no environmental harm, or potential environmental harm, caused by the supply of water as the release was within the release point limit.
2. The Mt Coot-tha Botanical Gardens (**Botanical Gardens**) requested the quarry to provide the retained and impounded water to them as they were operating with critically low water reserves due to the prolonged period without rain.
3. The Botanical Gardens is not “waters” for the purposes of the environmental authority or *Environmental Protection Act 1994*.
4. In any event, Council engaged Queensland Urban Utilities (QUU) to carry out water testing on Friday 29 June 2018.
5. On 29 June 2018, QUU provided verbal field testing results of the parameters in locations, W1 and W2. The correlation between the turbidity reading and the anticipated suspended solids analysis (laboratory derived) provided an expectation that the suspended solids water quality characteristic should be below the release limits of 30mg/L as specified by condition C5 and Schedule C Table 1.
6. Water from the quarry was provided to the Botanical Gardens during 2-7 July 2018.
7. There is up to a two week interval for the receipt of the confirmed laboratory results from QUU (the generated report from QUU was issued on 11 July 2018). W1 is an upstream water monitoring point but is not actually a release point. In this respect the environmental authority does not accurately reflect the on the ground situation. The water from this pond travels via 3 additional large sedimentation traps over 150m to the “Duck Pond” where the W2 water monitoring point is located. The water from this pond outfalls to the Botanical Gardens in an open rock lined drain then underground pipes to their ornamental ponds.
8. The turbidity field test result for W2 was 14 NTU at the time of the test and 7mg/L, for suspended solids in laboratory results received on the 11 July. All other results for W2 were within the parameters specified by the environmental authority.
9. Additional in-field water quality tests (with equipment that is similarly utilised by QUU ‘field samplers’) were conducted by Council’s environmental staff at W1 and W2 on the 5 July 2018 during the transfer of impounded water to the Botanical Gardens.
10. The turbidity measurements were 2.3NTU (W1) and 3.4NTU (W2).
11. These results were promptly provided to the quarry personnel.
12. All equipment was correctly calibrated (a register is kept of buffer calibrations for that day).
13. These results would place the suspended solid parameters within specification.
14. The Quarry Manager was on leave from the 22 June to the 23 July 2018 when the events in question took place. However, the acting manager was trained to handle the operations of the quarry including the reference of sensitive/ important issues to appropriate Council officers.

Conclusions

Following the Department’s letter, our investigations have revealed that any release from W2 on the 29 July 2018 was not to *waters* as defined in the *Environmental Protection Act 1994*. Accordingly, Council does not accept that C5 and, subsequently, H17 were contravened.

If the Department does not agree with Council on this legal point, then Council submits:

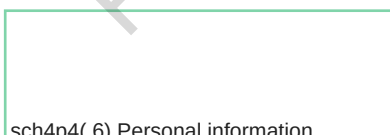
- a) that the non-reporting of the water test at W1 was a simple administration error;
- b) advice had been sought by Council, and verbal advice was given by QUU, that sampling was likely to show the suspended solids would be under the allowable release constraints;
- c) subsequent in-house field testing produced an ordinarily compliant result
- d) any exceedance at monitoring point W1 was minimal;
- e) there was no exceedance of the release limits at the actual release point;
- f) there was no environmental harm, nor was there potential for environmental harm, as a result of providing water to the Botanical Gardens;
- g) the water was released at the request of the Botanical Gardens for public interest purposes, namely, to ensure plants were watered and so did not die;
- h) there has been no public concern expressed about the W1 sample exceeding the release limit (noting that there was no actual release from W1) but rather from W2;
- i) it did not take any commercial benefit from releasing the water to the Botanical Gardens;
- j) there are no known or deliberate prior non-compliances in respect of reporting monitoring exceedances. In fact, Council refers to our track-record for correctly reporting monitoring exceedances in the past 12 months viz. 30/5/18 and 10/11/17 where we reported exceedances of our dust deposition monitors to the Department. Over a long period of time (at least 13 years), there has also been a record of reporting licence parameter exceedances. Council prides itself on its cooperative and transparent relationship with the Department.

Moving forward

Given the unique and special circumstances of this matter whereby the Botanical Gardens requested water to maintain its gardens in an especially dry period and there is no evidence of environmental harm or potential environmental harm Council submits that no enforcement action should be taken against it.

Council appreciates the opportunity to provide reasons why enforcement action is inappropriate given the circumstances. Should the Department not be persuaded that condition C5 has not been contravened, Council requests a further opportunity to provide additional information and make further submissions.

Yours sincerely,



sch4p4(6) Personal information

Jamie Hall

Acting Manager, Asphalt & Aggregates Branch
Field Services



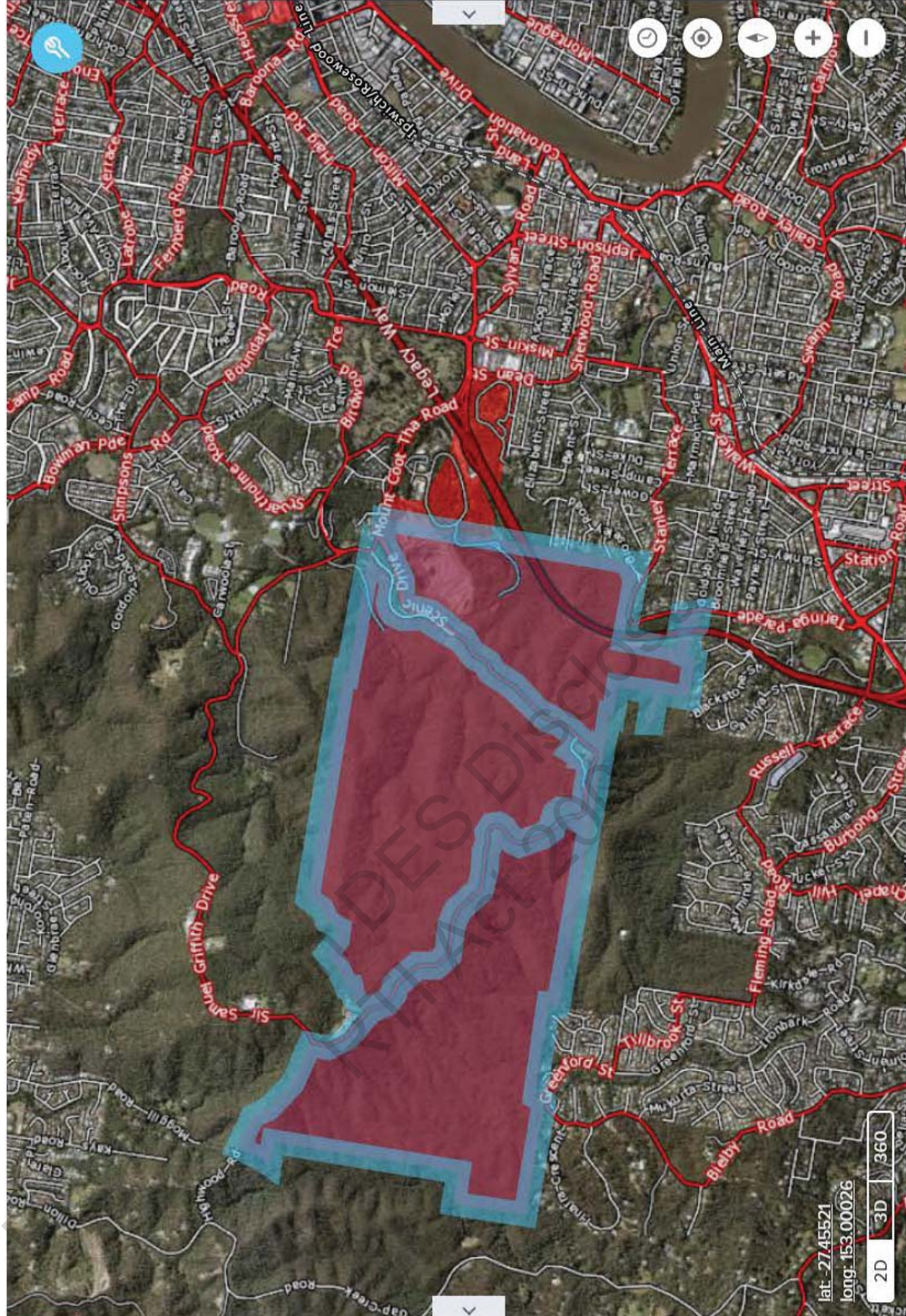
Attributes

Environmental authority locations 1 of 2



EPPR00447313

Permit reference number	EPPR00447313
Permit version	1
Permit type	Prescribed ERA
Status	Granted
Grant date	15 July 2009
Effective date	15 July 2009
Primary holder	BRISBANE CITY COUNCIL
Site (as displayed on EA register)	Lot 2/SP241566
Site (modified for join)	2SP241566
Location	radactra



Daily Rainfall (millimetres)

BRISBANE BOTANIC GARDENS MT COOT-THA

Station Number: 040976 · State: QLD · Opened: 2005 · Status: Open · Latitude: 27.48°S · Longitude: 152.98°E · Elevation: 65 m

2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	2.0	0	0	0	0	0	0	0	0			
2nd	0	21.0	0	0	0	0	0.2	0	0			
3rd	6.6	8.2	0	0.6	0	0	0	0	0			
4th	0	7.5	0	8.6	0	0	0.2	0	0			
5th	0	1.0	4.0	1.8	0	0	0	0	5.6			
6th	0	0	61.8	0	0	0	10.0	0	0.6			
7th	0	0	10.0	4.4	0	13.0	3.0	2.2	0			
8th	0	0	8.0	2.0	8.8	4.2	0	0	0			
9th	0	0	6.0	0	11.0	1.2	0	0	2.6			
10th	0	0	2.5	0	0	0	0	0				
11th	0	2.0	2.0	1.6	0	0	0	0				
12th	0	4.2	3.4	0	0	0	6.8	0				
13th	0	0	0	0	0	0	0	0				
14th	2.4	15.4	15.4	0	0	0.6	0	0				
15th	0	0	0	0	0	0	0	0				
16th	0	0	0	0	0	0	0	0				
17th	0	9.4	0	0	0	0	0	0				
18th	0	0	0	0.9	0	0	0	0				
19th	0	0	0	0	0	0	0	0				
20th	0	0	0	0	0	0	0	0				
21st	0	0	9.0	6.5	0	0	0	0				
22nd	0	1.8	21.8	0	0	0	0	0				
23rd	0	66.2	6.0	0	0	0	0	0				
24th	0	138.0	0	0	0	0	0	0				
25th	2.6	8.0	0	1.0	0	0	0	0				
26th	0	0	0	0	0	0	1.0	4.1				
27th	0	26.0	0	0	5.0	0	0	7.4				
28th	1.8		0	0	1.2	7.4	0	0				
29th	23.4		9.0	0	0	0	0	0				
30th	1.4		3.0	0	0	0	3.6	0				
31st			1.0		0			0				
Highest daily	23.4	138.0	61.8	8.6	11.0	13.0	10.0	7.4	5.6			
Monthly Total	40.2	308.7	162.9	27.4	26.0	26.4	24.8	13.7				

↓ This day is part of an accumulated total

Quality control: 12.3 Done & acceptable, 12.3 Not completed or unknown

Product code: IDCJAC0009 reference: 41207485

Daily Rainfall (millimetres)

BRISBANE BOTANIC GARDENS MT COOT-THA

Station Number: 040976 · State: QLD · Opened: 2005 · Status: Open · Latitude: 27.48°S · Longitude: 152.98°E · Elevation: 65 m

Statistics for this station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Highest daily	280.1	138.0	175.0	73.6	194.0	178.4	24.2	80.8	44.4	112.4	107.4	67.0
Date of highest daily	28th 2013	24th 2018	31st 2017	1st 2015	21st 2009	20th 2016	13th 2012	11th 2010	5th 2008	11th 2010	20th 2008	26th 2017

1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 20 years of data available.

2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

3) Further information

<http://www.bom.gov.au/climate/cdo/about/about-rain-data.shtml>.

Product code: IDCJAC0009 reference: 41207485 Created on Tue 25 Sep 2018 09:41:39 AM EST

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Contact us using details on <http://www.bom.gov.au/climate/how/contacts.shtml>.

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Ref CA52106 / 101/0005158

Department of
Environment and Science

27 September 2018

Brisbane City Council
GPO Box 1434
Brisbane QLD 4001

cc: Robert.Bell@brisbane.qld.gov.au

Attention: Robert Bell

Dear Mr Bell

Compliance inspection – Mt Coot-tha Quarry, EPPR00447313, 17 September 2018

I refer to the compliance inspection of Brisbane City Council (BCC) operations under environmental authority (EA) EPPR00447313, conducted at Mt Coot-tha Quarry, Mt Coot-tha Rd, Mt Coot-tha (the site) on 17 September 2018 by departmental officers Justin Wilson and Ashley Matheson of the Department of Environment and Science (the department). The site inspection was conducted in the presence of yourself, representing BCC.

The site was inspected as part of the department's proactive compliance inspection program. The purpose of the inspection was to evaluate compliance of environmentally relevant activities (ERA) 16 Extractive and screening activities 2(b) extracting, other than by dredging, in a year, more than 100,000t but not more than 1,000,000t of material, and ERA 16 Extractive and screening activities 3(b) screening, in a year, more than 100,000t but not more than 1,000,000t of material, with the conditions of EA EPPR00447313. It is important to note that the inspection does not relieve BCC of other obligations under the *Environmental Protection Act 1994* (the Act).

Alleged non-compliances

The department has finalised the inspection and is investigating the following alleged non-compliances of the conditions prescribed in EA EPPR00447313. Based on a desktop review of departmental records and the documentation provided by BCC, the department has determined:

1. On 29 June 2018, BCC exceeded the permitted release limit of suspended solids. BCC document titled "Results for registration 29 June 2018.docx" indicates that a release containing 35mg/L suspended solids occurred on 29 June 2018 from release point W1. Condition C5 of EA EPPR00447313 specifies in Schedule C Table 1 that a release limit of 30mg/L applies to suspended solids. Bureau of Meteorology data indicates that this was not associated with a high rainfall event.
2. BCC failed to notify the department of the above exceedance. A search of departmental file and email records indicates that the department does not have a record of a notification of the 29 June 2018 release. Condition H17 of the EA states that "The registered operator of this development approval must notify the administering authority in writing of any monitoring result which indicates an exceedance of any development approval limit within twenty-eight (28) days of completion of analysis". Section 430 of the Act states that a person must not contravene a condition of the (environmental) authority.

This is also contrary to BCC's own Environmental Monitoring & Reporting plan "IMSWI-10010" which states:

- a) "The Quarry Manager shall notify DES within 28 days of any results in excess".
- b) "A re-test should be arranged immediately following any significant non-compliance with licence limits".

Contravention

Under section 430 of the Act it is an offence to contravene a condition of an EA.

Requirement

BCC is invited to make representation on why BCC should not be subject to enforcement action, including prosecution or a penalty infringement notice (PIN). BCC's response may present information relevant to the matter including any mitigating or aggravating circumstances that may exist. BCC are offered the opportunity to include in the response details of measures that will be implemented, including timeframes, to ensure compliance with the EA. BCC may make submissions to the department as follows:

- Submissions must be made in writing;
- Submissions must be sent to GPO Box 2454, Brisbane Queensland 4001 or to ESComplianceBrisbaneMoreton@des.qld.gov.au; and
- Submissions must be made by **12 October 2018**.

Penalties

It is an offence to contravene a condition of an environmental authority under section 430 of the Act. For each activity carried out:

- The maximum penalty for an individual is 4,500 penalty units, totalling \$587,475.
- The maximum penalty for a corporation is 22,500 penalty units, totalling \$2,937,375.

The department has a responsibility to respond to any non-compliance with the legislative requirements. In the event of a non-compliance with the legislation and environmental performance standards, the department has the ability to use a number of enforcement tools in accordance with its enforcement guidelines. A copy of the enforcement guidelines is available on the department's website www.des.qld.gov.au.

The department would like to thank you for your time and assistance with the compliance inspection. Should you have any queries in relation to this letter, please contact Justin Wilson, Environmental Officer of the department on 07 3330 5054.

Yours sincerely


sch4p4(6) Personal information

Simon Vanderduys

A/Compliance Delivery Manager

Southeast Queensland Compliance – Brisbane Moreton Bay
Environmental Services and Regulation
Department of Environment and Science

19 November 2018

Brisbane City Council
GPO Box 1434
Brisbane QLD 4001

cc: Robert.Bell@brisbane.qld.gov.au

Attention: Robert Bell

Dear Mr Bell

Matter of Concern – Mt Coot-tha Quarry, EPPR00447313, 17 September 2018

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The inspection was not a full audit of BCC's activities at the site. It is important to note that the inspection does not relieve BCC of other obligations under the *Environmental Protection Act 1994* (the Act).

Matters of concern

During the post-inspection document review, departmental officers noted a matter of concern which is outlined in the Table 1 below.

Table 1. Matters of concern

Mt Coot-tha Quarry – Matters of concern		
Issue	Relevant Conditions	Summary
Exception Reporting	Condition H17: <i>The registered operator of this development approval must notify the administering authority in writing of any monitoring result which indicates an exceedance of any development approval limit within twenty-eight (28) days of completion of analysis.</i>	BCC document titled "Results for registration 29 June 2018.docx" indicates that an exceedance of suspended solids occurred on 29 June 2018 at release point W1. Condition C5 of EA EPPR00447313 specifies in Schedule C Table 1 that a release limit of 30mg/L applies to suspended solids. The department accepts that a release to waters did not actually occur at the time of the exceedance. BCC failed to notify the department of the above exceedance. The analysis was completed on 11 July 2018. A search of departmental file and email records on 26 September 2018 indicated that the department did not receive a notification of the 29 June 2018 release within twenty-eight (28) days of completion of the analysis.

		The exceedance is an indicator of water quality at that time, and at 16.6% above the stated threshold is considered by the department to be significant. The fact that the water was not released does not negate the requirement to notify. BCC could have notified the department and explained the non-release as a mitigating factor.
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Obligations

You are reminded of your obligations pursuant to section 319 of the Act, which sets out the general environmental duty, and requires anyone who carries out an activity that causes or is likely to cause environmental harm to take all reasonable and practical measures to prevent or minimise the harm. In that regard, you are encouraged to actively identify all environmental risk factors with the activities conducted on the site on an ongoing basis, and to implement strategies and processes to effectively manage them.

The department would like to thank you for your time and assistance with the compliance inspection. Should you have any queries in relation to this letter, please contact Justin Wilson, Environmental Officer of the department on 07 3330 5054.

Yours sincerely



sch4p4(6)
Ben McKenzie

Team Leader - Compliance

Southeast Queensland Compliance – Brisbane Moreton Bay
Environmental Services and Regulation
Department of Environment and Science

19 November 2018

Brisbane City Council
GPO Box 1434
Brisbane QLD 4001

cc: Robert.Bell@brisbane.qld.gov.au

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The department would like to thank you for your time and assistance with the compliance inspection. Should you have any queries in relation to this letter, please contact Justin Wilson, Environmental Officer of the department on 07 3330 5054.

Yours sincerely

Ben McKenzie

Team Leader - Compliance

Southeast Queensland Compliance – Brisbane Moreton Bay

Environmental Services and Regulation

Department of Environment and Science

Matters of Concern

Condition C5 of EA EPPR00447313 specifies in Schedule C Table 1 that a release limit of 30mg/L applies to suspended solids.

Environmental Protection Act 1994

waters means Queensland waters.

Acts Interpretation Act 1954

Queensland waters means all waters that are—

- (a) within the limits of the State; or
- (b) coastal waters of the State.

Qld Globe shows that the waters of the Mt Coot-tha Botanical Gardens is NOT connected to other local creeks and river tributaries. Mt Coot-tha Quarry is sufficiently separated from downstream waters by the treatment train and in-drain filters in roadside stormwater drains.

- Until the EA is amended this condition remains in force. To amend the EA...

BCC failed to notify the department of the above exceedance. A search of departmental file and email records indicates that the department does not have a record of a notification of the 29 June 2018 release. Condition H17 of the EA states that “The registered operator of this development approval must notify the administering authority in writing of any monitoring result which indicates an exceedance of any development approval limit within twenty-eight (28) days of completion of analysis”.

- Notification has occurred for previous exceedance events in 2016 and 2017 relating to dust deposition.
- Notification of the exceedance should have been provided to the department. It is appropriate for an explanation to be provided at the time of the notification.

Registration certificate

Environmental Protection Act 1994

Registration certificate

No: ENRE00761408

This registration certificate is issued by the administering authority and takes effect from: 5 September 2012.

The anniversary day for the purposes of the Annual Return remains: 25 February.

This registration certificate is a requirement of section 73F of the *Environmental Protection Act 1994* and authorises the registered operator to undertake the activities listed below at the following places; subject to the conditions set out in a development approval attached to the premises, or the relevant code of environmental compliance.

Registered Operator:-

Brisbane City Council
41 Lennon Street
STAFFORD QLD 4053

Development Approval:

IPDE00920708 (formerly SR0041)

Place:-

Lot 1 Plan RP18899, Lot 2 Plan SP241566, Lot 6 Plan RP18899

Located at:-

Sir Samuel Griffith Drive, 152-170 Mount Coot-tha Road, MOUNT COOT-THA QLD 4066

Registered Activities:-

ERA 16 Extractive and screening activities Threshold 2(c) - extracting, other than by dredging, in a year, more than 100000t to 1000000t of material

ERA 16 Extractive and screening activities Threshold 3(b) - screening, in a year, more than 100000t to 1000000t of material

sch4p4(6) Personal information

Paul Butcher

Delegate

Chief Executive administering the *Environmental Protection Act 1994*

Department of Environment and Heritage Protection

05-SEP-2012

Development Permit

EPA Permit¹ number:	IPDE00920708
Application (Converted Development Approval) No.	SR0041
Relevant Laws and Policies:	<i>Environmental Protection Act 1994</i> and any subordinate legislation

Development Description

Property/Location

Lot 1 on RP 99072, Volume 3581, Folio 51, County of Stanley, Parish of Enoggera.

located at: Mt. Coot-tha Road,
TOOWONG QLD 4066

Carrying out of Environmentally Relevant Activity (ERA)

16 (2c) Extractive and screening activities - extracting, other than by dredging, in a year, more than 100000t to 1000000t of material

16 (3b) Extractive and screening activities - screening, in a year, more than 100000t to 1000000t of material

Additional information for applicants

This approval pursuant to the *Environmental Protection Act 1994* does not remove the need to obtain any further approval for this development which might be required by other State and / or Commonwealth Legislation. Applicants are advised to check with all relevant statutory authorities. Applicants also should comply with all relevant legislation.

It is a requirement of the *Environmental Protection Act 1994* that if the owner or occupier of this site becomes aware a notifiable activity (as defined under schedule 2 of the *Environmental Protection Act 1994*) is being carried out on this land or that the land has been affected by a hazardous contaminant, they must, within thirty (30) days after becoming so aware, give notice to the Environmental Protection Agency.

Environmentally Relevant Activities

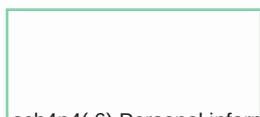
The aforementioned description of any environmentally relevant activity (ERA) for which this permit is issued is simply a restatement of the ERA as prescribed in the legislation at the time of issuing this permit. Where there is any conflict between the abovementioned description of the ERA for which this permit is issued and the conditions specified herein as to the scale, intensity or manner of carrying out of the ERA, then such conditions prevail to the extent of the inconsistency.

¹ Permit includes development approvals, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service



This permit authorises the ERA. It does not authorise environmental harm unless a condition within this permit explicitly authorises that harm. Where there is no such condition, or the permit is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.

In addition to this permit, the person to carry out the ERA must be a registered operator under the *Environmental Protection Act 1994*. For the person to become a registered operator, they must apply for a registration certificate under section 73F of the *Environmental Protection Act 1994*.



sch4p4(6) Personal inform

Damon Cheyne

Delegate of Administering Authority

Environmental Protection Act 1994

Date: 8 December 2010

Published on DES Disclosure Log
RTI Act 2009

¹ Permit includes development approvals, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service
Environmental Protection Agency



Conditions of the Development Approval

This development approval consists of the following schedules of conditions relevant to various issues:

The aforementioned description of the environmentally relevant activity (ERA) for which this development approval is issued is simply a restatement of the activity as prescribed in the legislation at the time of issuing the approval. Where there is any conflict between the above description of the ERA for which this development approval is issued and the conditions as specified in this development approval as to the scale, intensity or manner of carrying out of the ERA, then such conditions prevail to the extent of the inconsistency.

This development approval consists of the following schedules-

Schedule A - General Conditions

Schedule B - Air

Schedule C - Water

Schedule D - Stormwater Management

Schedule E - Land Application

Schedule F - Noise

Schedule G - Waste Management

Schedule H - Self Monitoring and Reporting

Schedule I - Approved Documents

Schedule J - Definitions

SCHEDULE A - GENERAL CONDITIONS

Compliance with Development Approval

- (A1) Contaminants must not be released to the environment other than in accordance with this development approval.
- (A2) The registered operator of this development approval must:
- (a) install and operate all works and control equipment, and
 - (b) take all measures, perform all acts and do all things,

necessary to ensure compliance with the conditions of this development approval.

Display of Development Approval

- (A3) A copy of this development approval must be kept in a location readily accessible to personnel carrying out the activity.

Records

- (A4) Any record required to be kept by a condition of this development approval must be kept at the approved place and be available for examination by an authorised person.
- (A5) Copies of any record required to be kept by a condition of this development approval must be provided to any authorised person or the administering authority on request.

Alterations

- (A6) No change, replacement or operation of any plant or equipment is permitted if the change, alteration or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm or environmental nuisance.

Calibration

- (A7) All instruments and measurement devices used for the measurement or monitoring of any parameter under any condition of this development approval must be calibrated, and appropriately operated and maintained. The calibration, operation and maintenance of such instruments and measurement devices in accordance with a protocol, which has been approved in writing by the administering authority, is deemed to demonstrate compliance with this condition.

Nuisance

- (A8) Notwithstanding any other condition of this development approval, this development approval does not authorise any release of contaminants which causes or is likely to cause an environmental nuisance beyond the boundaries of the approved place.

Integrated Environmental Management System (IEMS)

- (A9) The Integrated Environmental Management System submitted with the application must be implemented by the registered operator of this development approval following its approval in writing by the administering authority.
- (A10) The registered operator of this development approval must submit details of any amendment to the approved IEMS to the administering authority with the Annual Return which immediately follows the enactment of any such amendment.

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Environmental Protection Agency



- (A11) By 30 September 1996 the registered operator of this development approval must develop and submit to the administering authority environmental monitoring procedures and record keeping for air, noise, water emissions, waste, erosion and sediment control.

Inspections by Authorised Persons

- (A12) At all reasonable times, and to the satisfaction of an authorised person, the following must be provided to enable an authorised person to check compliance with the conditions of this development approval:
- (i) monitoring facilities, and
 - (ii) access to such facilities, and
 - (iii) any reasonable assistance which the authorised person deems necessary.

End of Conditions for Schedule A

¹ Permit includes development approvals, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service
Environmental Protection Agency
www.epa.qld.gov.au ABN 87 221 156 786



SCHEDULE B- AIR

- (B1) Except as otherwise provided by the conditions of the air schedule of this development approval the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the release or likelihood of release of contaminants to the atmosphere.

Dust Control

- (B2) Water sprays are to be installed and operated on the material as necessary to minimise the release of dust and particulate matter to the atmosphere.
- (B3) All sealed traffic areas must be cleaned as necessary to minimise the release of dust and particulate matter to the atmosphere.

End of Conditions for Schedule B

Published on DES Disclosure Log
RTI Act 2009

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Environmental Protection Agency



SCHEDULE C - WATER**Release of Contaminants to Waters**

- (C1) Except as otherwise provided by the conditions of the water schedule of this development approval the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the release or likelihood of release of contaminants to waters.
- (C2) Contaminants must not be directly or indirectly released from the approved place to any waters or the bed and banks of any waters except as permitted under the water schedule or the stormwater management schedule or to a sewer under a trade waste agreement as approved from time to time by the relevant Local Government.

Release Points

- (C3) Contaminants must not be directly or indirectly released from the approved place to any waters at any location other than the contaminants and sources at the locations listed below:

Release Point No **W1** and **W2** as per Plan No 6 entitled "Discharge and Emission Plan" contained in the Mt Coot-tha Quarry - Application for Development approval Section 41 document dated October 1995 for Contaminated Stormwater runoff from hardrock quarry area to Botanical Garden's natural drainage system then to waters described as the Toowong Creek

Sampling Point Details

- (C4) The determinations of the quality of contaminants released to check conformity with condition number C5 shall be undertaken at the sampling point described as:

Sampling Point Nos. **W1** and **W2** - as marked on Plan 6 contained in the Mt Coot-tha Quarry - Application for Development approval Section 41 document dated October 1995.

Quality Characteristics of Release to Waters

- (C5) The release of contaminants to waters must comply, at the sampling and in-situ measurement point/s specified in Schedule H, with each of the limits specified in schedule Table 1 for each quality characteristic:

SCHEDULE C TABLE 1 - RELEASE QUALITY CHARACTERISTIC LIMITS

QUALITY CHARACTERISTICS	RELEASE POINT NUMBER	RELEASE LIMIT	Limit Type
Dissolved Oxygen (mg/L).	W1 and W2	6 mg/L	Minimum
Suspended Solids. (mg/L)	W1 and W2	30 mg/L	Maximum
pH.	W1 and W2	Not less than 6.5 or greater than 8.5	Range

- (C6) Notwithstanding the quality characteristic limits specified in Schedule C Table 1, the release of contaminants to waters must comply with the following qualitative characteristics:
- The release must not have properties nor contain any organisms or other contaminants which, in the opinion of the administering authority, are capable of causing environmental harm or environmental nuisance.
 - The release must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter.

¹ Permit includes development approvals, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation administered by the Environmental Protection Agency and the Queensland Parks and Wildlife Service
 Environmental Protection Agency
 File B



End of Conditions for Schedule C

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Environmental Protection Agency
www.epa.qld.gov.au ABN 87 221 158 788



SCHEDULE D - STORMWATER MANAGEMENT

Contaminant Releases Caused by Rainfall

- (D1) Except as otherwise provided by the conditions of the stormwater management schedule and the water schedule of this development approval, the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the contact of incident rainfall and stormwater runoff with wastes or other contaminants, and prevent or minimise the release or likelihood of release of any such contaminated runoff from the approved place.

Stormwater Management Plan

- (D2) By 30 September 1996 the registered operator of this development approval must prepare and submit a Stormwater Management Plan for the approved place which is acceptable to the administering authority.
- (D3) The Stormwater Management Plan must provide detail on the works to be implemented and the timetable proposed to address at least the following issues:
- prevention of incident stormwater and stormwater runoff from contacting wastes or contaminants, and
 - diversion of upstream runoff away from areas containing wastes or contaminants, and
 - minimisation of the size of contaminated areas, and
 - cleaning of contaminated areas without water, and
 - installation of oil separators, silt and rubbish traps, and stormwater diversion systems, and
 - paving and roofing of contaminated areas, and
 - minimisation of the amount of soil to be exposed or disturbed by staging works, and
 - revegetation of exposed or disturbed areas, and
 - installation of sediment control measures such as settling basins, and
 - diversion of upstream runoff from exposed or disturbed areas.
- (D4) The Stormwater Management Plan must be implemented by the registered operator of this development approval following its approval in writing by the administering authority.
- (D5) The registered operator of this development approval must submit details of any amendment to the approved Stormwater Management Plan to the administering authority with the Annual Return which immediately follows the enactment of any such amendment.
- (D6) The maintenance and cleaning of vehicles and any other equipment or plant must be carried out in areas from where contaminants cannot be released into any waters, roadside gutter or stormwater drainage system.
- (D7) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any stormwater drainage system, roadside gutter or waters.

Oil and Grease Conditions

- (D8) All spilled materials on roadways or in bunded areas on the site must be cleaned-up immediately. The first-flush collection system **must** not be used for product recovery.

First Flush Stormwater Containment System

- (D9) A first flush collection system must be installed and maintained to prevent or minimise the release of wastes or contaminants to any waters or the stormwater drainage system.

- (D10) Except as otherwise provided by this development approval, stormwater runoff from all contaminated areas must be directed to the first flush collection system.
- (D11) The first flush collection system must operate to effectively collect and contain the first flush of stormwater runoff from contaminated areas and then bypass any continuing storm runoff to the stormwater drainage system or waters.
- (D12) Contaminated areas must include all areas in which rainfall and stormwater runoff may contact wastes or contaminants, including but not limited to such areas as the vehicular areas, washbays, unroofed storage areas, weighbridge, etc.
- (D13) The first flush collection system must have the capacity to collect and contain at least a volume equivalent to rainfall of 22 millimetres over the contaminated areas.
- (D14) A means of readily identifying the available first flush storage capacity at any time, such as a calibrated marker, must be installed and maintained to indicate such capacity to operational staff and authorised persons.
- (D15) When the first flush collection system is filled with water, any continuing stormwater runoff from contaminated areas must be effectively discharged via a stormwater bypass outlet to the stormwater drainage system or waters. The stormwater bypass outlet must be designed such that continuing stormwater runoff does not flush any previously collected contents to any stormwater drain or waters.
- (D16) Within five (5) days of the collection system being filled, the prescribed minimum capacity of the collection system must again be made available in readiness for the next rainfall event.
- (D17) As often as is necessary to maintain the required capacity, settleable solids must be removed from the collection system of the first flush system.
- (D18) Contaminants collected in the first flush system must be reused on the premises in a manner which does not harm the environment or disposed of in a manner in which the contaminants or wastes are unlikely to be released to any stormwater drain, roadside gutter or any waters.

Pond conditions

- (D19) All ponds used for the storage or treatment of contaminants or wastes must be installed and maintained to prevent any discharge through the bed or banks of the pond from causing environmental harm or environmental nuisance in any waters (including groundwater).
- (D20) All ponds used for the storage or treatment of contaminants or wastes must be lined with an impervious liner.
- (D21) All ponds used for the storage or treatment of contaminants or wastes must be installed and maintained so that a freeboard of not less than 0.5 metre is maintained at all times.
- (D22) All ponds used for the storage or treatment of contaminants or wastes must be installed and maintained to ensure the stability of the ponds construction.
- (D23) Ponds or other structures used for the storage or treatment of contaminants or wastes, including any associated pumps and control equipment, must not be located in any area below the one in ten year flood level.
- (D24) Clean uncontaminated stormwater must not be allowed to enter the sedimentation pond(s).
- (D25) All practical measures must be taken to prevent short-circuiting in the first flush sedimentation pond(s) system.

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Environmental Protection Agency



End of Conditions for Schedule D

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SCHEDULE E- LAND APPLICATION

Release of Contaminants to Land

- (E1) Except as otherwise provided by the conditions of the land application schedule of this development approval the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the release or likelihood of release of contaminants to land.

End of Conditions for Schedule E

Published on DES Disclosure Log
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SCHEDULE F - NOISE**Emission of Noise**

- (F1) Except as otherwise provided by the conditions of the noise schedule of this development approval the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the emission or likelihood of emission of noise.
- (F2) Except as provided for during blasting operations the emission of noise from the approved place must not result in levels greater than those specified in Table 1 of the Noise Schedule.

SCHEDULE F TABLE 1

NOISE LIMITS AT A NOISE SENSITIVE PLACE	
Period	Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level on fast response $L_{Amax\ adj.T}$
7 am - 6 pm	Background noise level plus 5 dB(A)
6 pm - 10 pm	Background noise level plus 5 dB(A)
10 pm - 7 am	Background noise level plus 3 dB(A)
NOISE LIMITS AT A COMMERCIAL PLACE	
Period	Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level on fast response $L_{Amax\ adj.T}$
7 am - 6 pm	Background noise level plus 10 dB(A)
6 pm - 10 pm	Background noise level plus 10 dB(A)
10 pm - 7 am	Background noise level plus 8 dB(A)

- (F3) The absolute maximum instantaneous sound pressure level, when measured at a noise sensitive or commercial place, $Max L_{pA T}$, must not exceed 55 dB(A).

Blasting

- (F4) Noise emanating from blasting operations must not exceed an over-pressure level of 125 dB (linear peak) for more than ten percent (10%) of the total number of blasts when measured at any noise sensitive place or commercial place.
- (F5) Noise emanating from blasting operations must not exceed an over-pressure level of 130 dB (linear peak) at any time when measured at any noise sensitive place or commercial place.
- (F6) Ground vibration caused by blasting operations must not exceed a peak particle velocity of 10 mm/sec for more than ten percent (10%) of the total number of blasts carried out over any twelve (12) month period, when measured at any point within one metre of any residential boundary or in or on any other noise sensitive place.

End of Conditions for Schedule F

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SCHEDULE G - WASTE MANAGEMENT

- (G1) Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this development approval.
- (G2) Waste must not be burnt or allowed to burn on the approved site or removed and burnt elsewhere unless specifically permitted by a development approval.

Waste Management Plan (WMP)

- (G3) By 30 September 1996 the registered operator of this development approval must prepare and submit a Waste Management Plan which is acceptable to the administering authority.
- (G4) The Waste Management Plan must detail at least the following:
- the quantity and nature of each waste produced, and
 - the current method of disposal, and
 - proposed methods of pre-treatment or disposal, and
 - expected reduction in quantity of waste produced through waste minimisation and cleaner production, and
 - provisions for carrying out and submitting to the administering authority a waste audit within two (2) years from the date of issue of this development approval and thereafter every five (5) years.
- (G5) The Waste Management Plan must be implemented by the registered operator of this development approval following its approval in writing.
- (G6) The registered operator of this development approval must submit details of any amendment to the approved Waste Management Plan to the administering authority with the Annual Return which immediately follows the enactment of any such amendment.

Off Site Movement

- (G7) Where regulated waste is removed from the approved place (other than by a release as permitted under another schedule of this development approval), the registered operator of this development approval must monitor and record the following:
- (a) the date, quantity and type of waste removed; and
 - (b) name of the waste transporter and/or disposal operator that removed the waste; and
 - (c) the intended treatment/disposal destination of the waste.

Records

- (G8) Records must be maintained for a period of five (5) years for all wastes mentioned in this schedule

End of Conditions for Schedule G

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SCHEDULE H - SELF MONITORING AND REPORTING

Complaint Recording

- (H1) All complaints received by the registered operator of this development approval relating to operations at the approved place must be recorded in a log book with the following details:
- (i) time and date of complaint;
 - (ii) type of communication (telephone, letter, personal etc.);
 - (iii) name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded);
 - (iv) response and investigation undertaken as a result of the complaint;
 - (v) name of person responsible for investigating complaint; and
 - (vi) action taken as a result of the complaint investigation and signature of responsible person.
- (H2) The complaints record required by condition number H1 must be maintained for a period of not less than five (5) years.
- (H3) A record must be maintained of events including but not limited to:
- (i) the time date and duration of equipment malfunctions;
 - (ii) any shut-downs of the bag filters, sprinklers, etc
 - (iii) the hours of operation of the plant;
- (H4) The record required by condition number H3 must be maintained for a period of not less than five (5) years.

Notification of Emergencies and Incidents

- (H5) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this development approval, the registered operator of this development approval must notify the administering authority of the release by telephone or facsimile.
- (H6) The notification of emergencies or incidents as required by condition number H5 must include but not be limited to the following:
- (i) The registered operator of the development approval;
 - (ii) the location of the emergency or incident;
 - (iii) the number of the development approval;
 - (iv) the Name and telephone number of the designated contact person;
 - (v) the time of the release;
 - (vi) the time the registered operator of the development approval became aware of the release;
 - (vii) the suspected cause of the release;
 - (viii) the environmental harm and or environmental nuisance caused, threatened, or suspected to be caused by the release; and
 - (ix) actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (H7) Not more than fourteen (14) days following the initial notification of an emergency or incident, the registered operator of the development approval must provide written advice of the information supplied in accordance with condition number H6 in addition to:
- (i) proposed actions to prevent a recurrence of the emergency or incident;
 - (ii) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance,
 - (iii) the results of any environmental monitoring performed, and



- (iv) during the sampling period the following additional information must be gathered.

Monitoring of Contaminant Releases to Waters

- (H8) The registered operator of this development approval is responsible for the making of determinations of the quality of the contaminants released for the release points, quality characteristics, and at the frequency specified in Schedule H Table 1:

Schedule H - Table 1

QUALITY CHARACTERISTIC DETERMINATION	RELEASE POINTS	FREQUENCY
Dissolved Oxygen	W1 and W2	Not less than 3 times per annum during any release events
Suspended Solids.	W1 and W2	Not less than 3 times per annum during any release events
pH	W1 and W2	Not less than 3 times per annum during any release events
Oil and grease	W1 and W2	Not less than 3 times per annum during any release events
Turbidity	W1 and W2	Not less than 3 times per annum during any release events

Noise Monitoring

- (H9) Monitoring and recording of noise levels from the environmentally relevant activity to check conformity with conditions **F2, F3, F4 and F5** of the Noise Schedule F must be undertaken at the location from where the noise complaint originated.
- (H10) For the purposes of checking compliance with conditions **F2, F3, F4 and F5** of the noise schedule F the noise levels from the environmentally relevant activity must be undertaken for at least the following descriptors, characteristics and conditions:
- (i) $L_{Amax, Adj, T}$
 - (ii) $L_{Aeq, T}$ (or $L_{A90, T}$);
 - (iii) $L_{Aeq, T_{10}}$
 - (iv) The level and frequency of occurrence of impulsive or tonal noise;
 - (v) Over-pressure level dB (linear peak) **{blasting only}**;
 - (vi) Atmospheric conditions including temperature, relative humidity and wind speed and direction; and
 - (vii) Effects due to extraneous factors such as traffic noise.
- (H11) Noise monitoring must be undertaken to investigate any complaint of noise nuisance upon receipt of a request from the administering authority or upon the receipt of a noise complaint by the registered operator of this development approval to carry out such monitoring.
- (H12) In addition to monitoring at the frequency prescribed in condition H11, monitoring must also be undertaken to investigate any complaint of noise nuisance upon receipt of a request from the administering authority to carry out such monitoring.
- (H13) The method of measurement and reporting of noise levels must comply with the *Department of Environment and Heritage Noise Measurement Manual, second edition, March 1995*, or more recent additions or supplements to that document as become available.

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- (H14) The method of measurement and reporting of noise levels must be undertaken by a person or body acceptable to the administering authority.
- (H15) Records must be kept of the results of all monitoring of noise levels and other information required to be recorded in conjunction with such monitoring for a period of at least five (5) years.
- (H16) The registered operator of this development approval must ensure that the results of all monitoring performed in accordance with this development approval are submitted with the initial Annual Return. Each subsequent Annual Return must include details of the results of monitoring performed during the twelve (12) months preceding that Annual Return.

Exception Reporting

- (H17) The registered operator of this development approval must notify the administering authority in writing of any monitoring result which indicates an exceedance of any development approval limit within twenty-eight (28) days of completion of analysis.
- (H18) The written notification required by condition above must include:
 - (i) The full analysis results; and
 - (ii) Details of investigation or corrective actions taken; and
 - (iii) Any subsequent analysis.

Ambient Particulate Monitoring

- (H19) The registered operator of this development approval must conduct a monitoring program of particulate in ambient air.
- (H20) Sampling must be performed at the following locations as per Plan 6 - as contained in the "Application for Development approval Section 41" dated October 1995:
 - 1 - Dust Collection Flask Location 1;
 - 2 - Dust Collection Flask Location 2; and
 - 3 - Dust Collection Flask Location 3.
- (H21) Analysis of the obtained samples must be made not less than quarterly for the following:
 - (i) total water insoluble dust in milligrams; and
 - (ii) dust fallout in milligrams/square metre/day.
- (H22) The samples must be collected in accordance with the requirements of Australian Standard AS 3580.10.1 - 1991 for Ambient Air - Particulate Matter.
- (H23) Records must be kept of the results of all monitoring of particulate in ambient air for a period of at least five (5) years.

End of Conditions for Schedule H

SCHEDULE I - APPROVED DOCUMENTS

- (11) The environmentally relevant activity must be constructed, operated and maintained in accordance with all undertakings of the development approval application and any other documents approved by the administering authority as set out in the Approved Documents Schedule.
- (12) In the event of any inconsistency arising between the undertakings of the development approval application or other approved documents as set out in the Approved Documents Schedule and the conditions of this development approval, the conditions of this development approval must apply.

For the purposes of this development approval the following stated documents are approved documents:

- (13) Mt Coot-tha Quarry, Application for Development Approval Section 41, dated October 1995.
- (14) Integrated Environmental Management System, Mt Coot-tha and Pine Mountain Quarries, Brisbane City Council dated January 1996.

End of Conditions for Schedule I

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Environmental Protection Agency



SCHEDULE J - DEFINITIONS

- (J1) For the purposes of this development approval any term not otherwise defined in the Act and any subordinate legislation made pursuant to the Act or in the Definitions Schedule of this development approval has the meaning conferred to that term in its common usage.
- (J2) In the event of any inconsistency arising between the meaning of any term provided in the Definitions Schedule of this development approval and any common usage of that term, the meaning conferred in the Definitions Schedule of this development approval prevails.

For the purposes of this development approval the following definitions apply:

- (J3) "Act" means the *Environmental Protection Act 1994*.
- (J4) "Administering Authority" means the Environmental Protection Agency or its successor.
- (J5) "Land" means land excluding waters and the atmosphere.
- (J6) "mg/L" means milligrams per litre.
- (J7) "minimum" means the measured value of the quality characteristic or contaminant must not be less than the release limit stated.
- (J8) "maximum" means that the measured value of the quality characteristic or contaminant must not be greater than the release limit stated.
- (J9) "range" means that the measured value of the quality characteristic or contaminant must not be less than the higher release limit stated nor lower than the lower release limit stated.
- (J10) " $L_{Amax\ adj, T}$ " means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than 15 minutes, using Fast response.
- (J11) "Background noise level" means either:
 $L_{A90, T}$ being the A-weighted sound pressure level exceeded for ninety percent (90%) of the time period not less than 15 minutes, using Fast response, or
 $L_{A\lg, T}$ being the arithmetic average of the minimum readings measured in the absence of the noise under investigation during a representative time period of not less than 15 minutes, using Fast response.
- (J12) " $MaxL_{pA\ T}$ " means the absolute maximum instantaneous A-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.
- (J13) "**authorised person**" means a person holding office as an authorised person under an appointment under the *Environmental Protection Act 1994* by the chief executive or chief executive officer of a local government.

End of Conditions for Schedule J

END OF CONDITIONS



Licence No. SR41

Section 45(1)

Under the provisions of the *Environmental Protection Act 1994* this environmental authority is issued:

To: Brisbane City Council

Address: 503 St Pauls Terrace
FORTITUDE VALLEY QLD 4006

in respect of carrying out the environmentally relevant activities at the following place(s):

Lot 1 on RP 99072, Volume 3581, Folio 51, County of Stanley, Parish of Enoggera

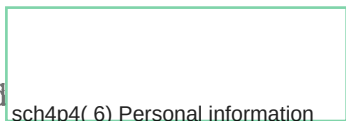
located at : Mt. Coot-tha Road,
TOOWONG QLD 4066

ERA 20(c) - Extracting rock or other material-extracting rock (other than rock mined in block or slab form for building purposes), sand (other than foundry sand), clay (other than clay used for its ceramic properties, kaolin or bentonite), gravel, loam or other material (other than gravel, loam or other material under a mining authority) from a pit or quarry using plant or equipment having a design capacity of 100 000 t or more per year

ERA 22(c) - Screening etc. materials-screening, washing, crushing, grinding, milling, sizing or separating material extracted from the earth (other than under a mining authority) or by dredging using plant or equipment having a design capacity of 100 000 t or more per year

This environmental authority is issued subject to the conditions set out in the schedules attached to this environmental authority.

This licence takes effect from 22 December 2000.

signed 

Sch404(6) Personal information
Kyle Roberts

Operations Manager, Licensing
Delegate of Administering Authority
Environmental Protection Act (1994)

date 7 December 2000

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

This environmental authority consists of the following schedules-

Schedule A - General Conditions

Schedule B - Air

Schedule C - Water

Schedule D - Stormwater Management

Schedule E - Land Application

Schedule F - Noise

Schedule G - Waste Management

Schedule H - Self Monitoring and Reporting

Schedule I - Approved Documents

Schedule J - Definitions

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

SCHEDULE A - GENERAL CONDITIONS**Compliance with Environmental Authority**

- (A1) Contaminants must not be released to the environment other than in accordance with this environmental authority.
- (A2) The holder of this environmental authority must:
- (a) install and operate all works and control equipment, and
 - (b) take all measures, perform all acts and do all things,
- necessary to ensure compliance with the conditions of this environmental authority.

Display of Environmental Authority

- (A3) A copy of this environmental authority must be kept in a location readily accessible to personnel carrying out the activity.

Records

- (A4) Any record required to be kept by a condition of this environmental authority must be kept at the licensed place and be available for examination by an authorised person.
- (A5) Copies of any record required to be kept by a condition of this environmental authority must be provided to any authorised person or the administering authority on request.

Alterations

- (A6) No change, replacement or operation of any plant or equipment is permitted if the change, alteration or operation of the plant or equipment increases, or is likely to substantially increase, the risk of environmental harm or environmental nuisance.

Calibration

- (A7) All instruments and measurement devices used for the measurement or monitoring of any parameter under any condition of this environmental authority must be calibrated, and appropriately operated and maintained. The calibration, operation and maintenance of such instruments and measurement devices in accordance with a protocol, which has been approved in writing by the administering authority, is deemed to demonstrate compliance with this condition.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

Nuisance

- (A8) Notwithstanding any other condition of this environmental authority, this environmental authority does not authorise any release of contaminants which causes or is likely to cause an environmental nuisance beyond the boundaries of the licensed place.

Integrated Environmental Management System (IEMS)

- (A9) The Integrated Environmental Management System submitted with the application must be implemented by the holder of this environmental authority following its approval in writing by the administering authority.
- (A10) The holder of this environmental authority must submit details of any amendment to the approved IEMS to the administering authority with the Annual Return which immediately follows the enactment of any such amendment.
- (A11) By 30 September 1996 the holder of this environmental authority must develop and submit to the administering authority environmental monitoring procedures and record keeping for air, noise, water emissions, waste, erosion and sediment control.

Inspections by Authorised Persons

- (A12) At all reasonable times, and to the satisfaction of an authorised person, the following must be provided to enable an authorised person to check compliance with the conditions of this environmental authority:
- (i) monitoring facilities, and
 - (ii) access to such facilities, and
 - (iii) any reasonable assistance which the authorised person deems necessary.

End of Conditions for Schedule A**SCHEDULE B- AIR**

- (B1) Except as otherwise provided by the conditions of the air schedule of this environmental authority the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the release or likelihood of release of contaminants to the atmosphere.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

Dust Control

- (B2) Water sprays are to be installed and operated on the material as necessary to minimise the release of dust and particulate matter to the atmosphere.
- (B3) All sealed traffic areas must be cleaned as necessary to minimise the release of dust and particulate matter to the atmosphere.

End of Conditions for Schedule B**SCHEDULE C - WATER****Release of Contaminants to Waters**

- (C1) Except as otherwise provided by the conditions of the water schedule of this environmental authority the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the release or likelihood of release of contaminants to waters.
- (C2) Contaminants must not be directly or indirectly released from the licensed place to any waters or the bed and banks of any waters except as permitted under the water schedule or the stormwater management schedule or to a sewer under a trade waste agreement as approved from time to time by the relevant Local Government.

Release Points

- (C3) Contaminants must not be directly or indirectly released from the licensed place to any waters at any location other than the contaminants and sources at the locations listed below:

Release Point No **W1** and **W2** as per Plan No 6 entitled "Discharge and Emission Plan" contained in the Mt Coot-tha Quarry - Application for Environmental Authority Section 41 document dated October 1995 for Contaminated Stormwater runoff from hardrock quarry area to Botanical Garden's natural drainage system then to waters described as the Toowong Creek

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

Sampling Point Details

- (C4) The determinations of the quality of contaminants released to check conformity with condition number C5 shall be undertaken at the sampling point described as:

Sampling Point Nos. **W1** and **W2** - as marked on Plan 6 contained in the Mt Coot-tha Quarry - Application for Environmental Authority Section 41 document dated October 1995.

Quality Characteristics Of Release to Waters

- (C5) The release of contaminants to waters must comply, at the sampling and in-situ measurement point/s specified in Schedule H, with each of the limits specified in schedule Table 1 for each quality characteristic:

SCHEDULE C TABLE 1 - RELEASE QUALITY CHARACTERISTIC LIMITS

QUALITY CHARACTERISTICS	RELEASE POINT NUMBER	RELEASE LIMIT	Limit Type
Dissolved Oxygen (mg/L).	W1 and W2	6 mg/L	Minimum
Suspended Solids. (mg/L)	W1 and W2	30 mg/L	Maximum
pH.	W1 and W2	Not less than 6.5 or greater than 8.5	Range

- (C6) Notwithstanding the quality characteristic limits specified in Schedule C Table 1, the release of contaminants to waters must comply with the following qualitative characteristics:
- (a) The release must not have properties nor contain any organisms or other contaminants which, in the opinion of the administering authority, are capable of causing environmental harm or environmental nuisance.
 - (b) The release must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter.

End of Conditions for Schedule C

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

SCHEDULE D - STORMWATER MANAGEMENT**Contaminant Releases Caused by Rainfall**

- (D1) Except as otherwise provided by the conditions of the stormwater management schedule and the water schedule of this environmental authority, the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the contact of incident rainfall and stormwater runoff with wastes or other contaminants, and prevent or minimise the release or likelihood of release of any such contaminated runoff from the licensed place.

Stormwater Management Plan

- (D2) By 30 September 1996 the holder of this environmental authority must prepare and submit a Stormwater Management Plan for the licensed place which is acceptable to the administering authority.
- (D3) The Stormwater Management Plan must provide detail on the works to be implemented and the timetable proposed to address at least the following issues:
- prevention of incident stormwater and stormwater runoff from contacting wastes or contaminants, and
 - diversion of upstream runoff away from areas containing wastes or contaminants, and
 - minimisation of the size of contaminated areas, and
 - cleaning of contaminated areas without water, and
 - installation of oil separators, silt and rubbish traps, and stormwater diversion systems, and
 - paving and roofing of contaminated areas, and
 - minimisation of the amount of soil to be exposed or disturbed by staging works, and
 - revegetation of exposed or disturbed areas, and
 - installation of sediment control measures such as settling basins, and
 - diversion of upstream runoff from exposed or disturbed areas.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

-
- (D4) The Stormwater Management Plan must be implemented by the holder of this environmental authority following its approval in writing by the administering authority.
- (D5) The holder of this environmental authority must submit details of any amendment to the approved Stormwater Management Plan to the administering authority with the Annual Return which immediately follows the enactment of any such amendment.
- (D6) The maintenance and cleaning of vehicles and any other equipment or plant must be carried out in areas from where contaminants cannot be released into any waters, roadside gutter or stormwater drainage system.
- (D7) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any stormwater drainage system, roadside gutter or waters.

Oil and Grease Conditions

- (D8) All spilled materials on roadways or in bunded areas on the site must be cleaned-up immediately. The first-flush collection system **must** not be used for product recovery.

First Flush Stormwater Containment System

- (D9) A first flush collection system must be installed and maintained to prevent or minimise the release of wastes or contaminants to any waters or the stormwater drainage system.
- (D10) Except as otherwise provided by this environmental authority, stormwater runoff from all contaminated areas must be directed to the first flush collection system.
- (D11) The first flush collection system must operate to effectively collect and contain the first flush of stormwater runoff from contaminated areas and then bypass any continuing storm runoff to the stormwater drainage system or waters.
- (D12) Contaminated areas must include all areas in which rainfall and stormwater runoff may contact wastes or contaminants, including but not limited to such areas as the vehicular areas, washbays, unroofed storage areas, weighbridge, etc.
- (D13) The first flush collection system must have the capacity to collect and contain at least a volume equivalent to rainfall of **22** millimetres over the contaminated areas.
- (D14) A means of readily identifying the available first flush storage capacity at any time, such as a calibrated marker, must be installed and maintained to indicate such capacity to operational staff and authorised persons.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

-
- (D15) When the first flush collection system is filled with water, any continuing stormwater runoff from contaminated areas must be effectively discharged via a stormwater bypass outlet to the stormwater drainage system or waters. The stormwater bypass outlet must be designed such that continuing stormwater runoff does not flush any previously collected contents to any stormwater drain or waters .
- (D16) Within **5 days** of the collection system being filled, the prescribed minimum capacity of the collection system must again be made available in readiness for the next rainfall event.
- (D17) As often as is necessary to maintain the required capacity, settleable solids must be removed from the collection system of the first flush system.
- (D18) Contaminants collected in the first flush system must be reused on the premises in a manner which does not harm the environment or disposed of in a manner in which the contaminants or wastes are unlikely to be released to any stormwater drain, roadside gutter or any waters.

Pond conditions

- (D19) All ponds used for the storage or treatment of contaminants or wastes must be installed and maintained to prevent any discharge through the bed or banks of the pond from causing environmental harm or environmental nuisance in any waters (including groundwater).
- (D20) All ponds used for the storage or treatment of contaminants or wastes must be lined with an impervious liner.
- (D21) All ponds used for the storage or treatment of contaminants or wastes must be installed and maintained so that a freeboard of not less than 0.5 metre is maintained at all times.
- (D22) All ponds used for the storage or treatment of contaminants or wastes must be installed and maintained to ensure the stability of the ponds construction.
- (D23) Ponds or other structures used for the storage or treatment of contaminants or wastes, including any associated pumps and control equipment, must not be located in any area below the one in ten year flood level.
- (D24) Clean uncontaminated stormwater must not be allowed to enter the sedimentation pond(s).
- (D25) All practical measures must be taken to prevent short-circuiting in the first flush sedimentation pond(s) system.

End of Conditions for Schedule D

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

SCHEDULE E- LAND APPLICATION**Release of Contaminants to Land**

- (E1) Except as otherwise provided by the conditions of the land application schedule of this environmental authority the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the release or likelihood of release of contaminants to land.

End of Conditions for Schedule E**SCHEDULE F - NOISE****Emission of Noise**

- (F1) Except as otherwise provided by the conditions of the noise schedule of this environmental authority the environmentally relevant activities must be carried out by such practicable means necessary to prevent or minimise the emission or likelihood of emission of noise.
- (F2) Except as provided for during blasting operations the emission of noise from the licensed place must not result in levels greater than those specified in Table 1 of the Noise Schedule.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

SCHEDULE F TABLE 1

NOISE LIMITS AT A NOISE SENSITIVE PLACE	
Period	Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level on fast response $L_{Amax\ adj,T}$
7 am - 6 pm	Background noise level plus 5 dB(A)
6 pm - 10 pm	Background noise level plus 5 dB(A)
10 pm - 7 am	Background noise level plus 3 dB(A)
NOISE LIMITS AT A COMMERCIAL PLACE	
Period	Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level on fast response $L_{Amax\ adj,T}$
7 am - 6 pm	Background noise level plus 10 dB(A)
6 pm - 10 pm	Background noise level plus 10 dB(A)
10 pm - 7 am	Background noise level plus 8 dB(A)

- (F3) The absolute maximum instantaneous sound pressure level, when measured at a noise sensitive or commercial place, $Max L_{pA\ T}$ must not exceed 55 dB(A).

Blasting

- (F4) Noise emanating from blasting operations must not exceed an over-pressure level of 125 dB (linear peak) for more than 10% of the total number of blasts when measured at any noise sensitive place or commercial place.
- (F5) Noise emanating from blasting operations must not exceed an over-pressure level of 130 dB (linear peak) at any time when measured at any noise sensitive place or commercial place.
- (F6) Ground vibration caused by blasting operations must not exceed a peak particle velocity of 10 mm/sec for more than 10% of the total number of blasts carried out over any 12 month period, when measured at any point within one metre of any residential boundary or in or on any other noise sensitive place.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

SCHEDULE G - WASTE MANAGEMENT

- (G1) Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this environmental authority.
- (G2) Waste must not be burnt or allowed to burn on the licensed site or removed and burnt elsewhere unless specifically permitted by an environmental authority.

Waste Management Plan (WMP)

- (G3) By 30 September 1996 the holder of this environmental authority must prepare and submit a Waste Management Plan which is acceptable to the administering authority.
- (G4) The Waste Management Plan must detail at least the following:
- the quantity and nature of each waste produced, and
 - the current method of disposal, and
 - proposed methods of pre-treatment or disposal, and
 - expected reduction in quantity of waste produced through waste minimisation and cleaner production, and
 - provisions for carrying out and submitting to the administering authority a waste audit within 2 years from the date of issue of this environmental authority and thereafter every 5 years.
- (G5) The Waste Management Plan must be implemented by the holder of this environmental authority following its approval in writing.
- (G6) The holder of this environmental authority must submit details of any amendment to the approved Waste Management Plan to the administering authority with the Annual Return which immediately follows the enactment of any such amendment.

Off Site Movement

- (G7) Where regulated waste is removed from the licensed place (other than by a release as permitted under another schedule of this environmental authority), the holder of this environmental authority must monitor and record the following:
- (a) the date, quantity and type of waste removed; and
 - (b) name of the waste transporter and/or disposal operator that removed the waste; and

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

- (c) the intended treatment/disposal destination of the waste.

Records

- (G8) Records must be maintained for a period of 5 years for all wastes mentioned in this schedule

End of Conditions for Schedule G**SCHEDULE H - SELF MONITORING AND REPORTING****Complaint Recording**

- (H1) All complaints received by the holder of this environmental authority relating to operations at the licensed place must be recorded in a log book with the following details:
- (i) time and date of complaint;
 - (ii) type of communication (telephone, letter, personal etc.);
 - (iii) name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded);
 - (iv) response and investigation undertaken as a result of the complaint;
 - (v) name of person responsible for investigating complaint; and
 - (vi) action taken as a result of the complaint investigation and signature of responsible person.
- (H2) The complaints record required by condition number H1 must be maintained for a period of not less than 5 years.
- (H3) A record must be maintained of events including but not limited to:
- (i) the time date and duration of equipment malfunctions;
 - (ii) any shut-downs of the bag filters, sprinklers, etc
 - (iii) the hours of operation of the plant;
- (H4) The record required by condition number H3 must be maintained for a period of not less than 5 years.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

Notification of Emergencies and Incidents

- (H5) As soon as practicable after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority, the holder of this environmental authority must notify the administering authority of the release by telephone or facsimile.
- (H6) The notification of emergencies or incidents as required by condition number H5 must include but not be limited to the following:
- (i) The holder of the environmental authority;
 - (ii) the location of the emergency or incident;
 - (iii) the number of the environmental authority;
 - (iv) the Name and telephone number of the designated contact person;
 - (v) the time of the release;
 - (vi) the time the holder of the environmental authority became aware of the release;
 - (vii) the suspected cause of the release;
 - (viii) the environmental harm and or environmental nuisance caused, threatened, or suspected to be caused by the release; and
 - (ix) actions taken to prevent further any release and mitigate any environmental harm and or environmental nuisance caused by the release.
- (H7) Not more than 14 days following the initial notification of an emergency or incident, the holder of the environmental authority must provide written advice of the information supplied in accordance with condition number H6 in addition to:
- (i) proposed actions to prevent a recurrence of the emergency or incident;
 - (ii) outcomes of actions taken at the time to prevent or minimise environmental harm and or environmental nuisance,
 - (iii) the results of any environmental monitoring performed, and
 - (iv) during the sampling period the following additional information must be gathered.

Monitoring of Contaminant Releases to Waters

- (H8) The holder of this environmental authority is responsible for the making of determinations of the quality of the contaminants released for the release points, quality characteristics, and at the frequency specified in Schedule H Table 1:

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

Schedule H - Table 1

QUALITY CHARACTERISTIC DETERMINATION	RELEASE POINTS	FREQUENCY
Dissolved Oxygen	W1 and W2	Not less than 3 times per annum during any release events
Suspended Solids.	W1 and W2	Not less than 3 times per annum during any release events
pH	W1 and W2	Not less than 3 times per annum during any release events
Oil and grease	W1 and W2	Not less than 3 times per annum during any release events
Turbidity	W1 and W2	Not less than 3 times per annum during any release events

Noise Monitoring

- (H9) Monitoring and recording of noise levels from the environmentally relevant activity to check conformity with conditions **F2, F3, F4 and F5** of the Noise Schedule F must be undertaken at the location from where the noise complaint originated.
- (H10) For the purposes of checking compliance with conditions **F2, F3, F4 and F5** of the noise schedule F the noise levels from the environmentally relevant activity must be undertaken for at least the following descriptors, characteristics and conditions:
- (i) $L_{Amax, Adj, T}$
 - (ii) $L_{Aeq, T}$ (or $L_{A90, T}$);
 - (iii) $L_{Aeq, T, ...}$
 - (iv) The level and frequency of occurrence of impulsive or tonal noise;
 - (v) Over-pressure level dB (linear peak) **{blasting only}**;
 - (vi) Atmospheric conditions including temperature, relative humidity and wind speed and direction; and
 - (vii) Effects due to extraneous factors such as traffic noise.
- (H11) Noise monitoring must be undertaken to investigate any complaint of noise nuisance upon receipt of a request from the administering authority or upon the receipt of a noise complaint by the holder of this environmental authority to carry out such monitoring.
- (H12) In addition to monitoring at the frequency prescribed in condition H11, monitoring must also be undertaken to investigate any complaint of noise nuisance upon receipt of a request from the administering authority to carry out such monitoring.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

-
- (H13) The method of measurement and reporting of noise levels must comply with the Department of Environment and Heritage Noise Measurement Manual, second edition, March 1995, or more recent additions or supplements to that document as become available.
- (H14) The method of measurement and reporting of noise levels must be undertaken by a person or body acceptable to the administering authority.
- (H15) Records must be kept of the results of all monitoring of noise levels and other information required to be recorded in conjunction with such monitoring for a period of at least 5 years.
- (H16) The holder of this environmental authority must ensure that the results of all monitoring performed in accordance with this environmental authority are submitted with the initial Annual Return. Each subsequent Annual Return must include details of the results of monitoring performed during the 12 months preceding that Annual Return.

Exception Reporting

- (H17) The holder of this environmental authority must notify the administering authority in writing of any monitoring result which indicates an exceedance of any licence limit within 28 days of completion of analysis.
- (H18) The written notification required by condition above must include:
- (i) The full analysis results; and
 - (ii) Details of investigation or corrective actions taken; and
 - (iii) Any subsequent analysis.

Ambient Particulate Monitoring

- (H19) The holder of this environmental authority must conduct a monitoring program of particulate in ambient air.
- (H20) Sampling must be performed at the following locations as per Plan 6 - as contained in the "Application for Environmental Authority Section 41" dated October 1995:
- 1 - Dust Collection Flask Location 1;
 - 2 - Dust Collection Flask Location 2; and
 - 3 - Dust Collection Flask Location 3.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

- (H21) Analysis of the obtained samples must be made not less than quarterly for the following:
- (i) total water insoluble dust in milligrams; and
 - (ii) dust fallout in milligrams/square metre/day.
- (H22) The samples must be collected in accordance with the requirements of Australian Standard AS 3580.10.1 - 1991 for Ambient Air - Particulate Matter.
- (H23) Records must be kept of the results of all monitoring of particulate in ambient air for a period of at least 5 years.

End of Conditions for Schedule H**SCHEDULE I - APPROVED DOCUMENTS**

- (I1) The environmentally relevant activity must be constructed, operated and maintained in accordance with all undertakings of the environmental authority application and any other documents approved by the administering authority as set out in the Approved Documents Schedule.
- (I2) In the event of any inconsistency arising between the undertakings of the environmental authority application or other approved documents as set out in the Approved Documents Schedule and the conditions of this environmental authority, the conditions of this environmental authority must apply.

For the purposes of this environmental authority the following stated documents are approved documents:

- (I3) Mt Coot-tha Quarry, Application for Environmental Authority Section 41, dated October 1995.
- (I4) Integrated Environmental Management System, Mt Coot-tha and Pine Mountain Quarries, Brisbane City Council dated January 1996.

End of Conditions for Schedule I

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

SCHEDULE J - DEFINITIONS

- (J1) For the purposes of this environmental authority any term not otherwise defined in the Act and any subordinate legislation made pursuant to the Act or in the Definitions Schedule of this environmental authority has the meaning conferred to that term in its common usage.
- (J2) In the event of any inconsistency arising between the meaning of any term provided in the Definitions Schedule of this environmental authority and any common usage of that term, the meaning conferred in the Definitions Schedule of this environmental authority prevails.

For the purposes of this environmental authority the following definitions apply:

- (J3) "Act" means the Environmental Protection Act 1994.
- (J4) "Administering Authority" means the Environmental Protection Agency or its successor.
- (J5) "Land" means land excluding waters and the atmosphere.
- (J6) "mg/L" means milligrams per litre.
- (J7) "minimum" means the measured valued of the quality characteristic or contaminant must not be less than the release limit stated.
- (J8) "maximum" means that the measured valued of the quality characteristic or contaminant must not be greater than the release limit stated.
- (J9) "range" means that the measured valued of the quality characteristic or contaminant must not be less than the higher release limit stated nor lower than the lower release limit stated.
- (J10) " $L_{Amax,adj,T}$ " means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than 15 minutes, using Fast response.
- (J11) "Background noise level" means either:

$L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90 percent of the time period not less than 15 minutes, using Fast response, or

$L_{A_{bg},T}$ being the arithmetic average of the minimum readings measured in the absence of the noise under investigation during a representative time period of not less than 15 minutes, using Fast response.

Environmentally Relevant Activity:

20(c) - Extraction of rock or other material

22(c) - Screening etc. materials

(J12) "MaxL_{pA T}" means the absolute maximum instantaneous A-weighted sound pressure level measured over a time period of not less than 15 minutes, using Fast response.

(J13) "**authorised person**" means a person holding office as an authorised person under an appointment under the *Environmental Protection Act 1994* by the chief executive or chief executive officer of a local government.

End of Conditions for Schedule J

14. Appendix A Travel & Field Approval Form

REQUESTING OFFICER/S

(All Officers undertaking the trip must provide details on this form)

Officer's/Participating Personnel Names	Position	Mobile	Pre-diagnosed Medical Conditions and medication affecting safety has been discussed with Team Leader and/or supervisor?	Emergency Contact (EC) for personnel	EC Relationship to Officer	EC Mobile Phone	EC Work and/or Home Phone
Matt Karle	CDM	sch4p4(6) Personal information	Yes / No	sch4p4(6) Personal information			
Nadine Cooper	TL		Yes / No				
Leontie Clough	PEO		Yes / No				
Ben Grant	SEO		Yes / No				
Katrina Wood	EO		Yes / No				
Iwona Kemp	EO		Yes / No				
Tim Adams	SEO		Yes / No				
Sasha Hindmarsh	SEO		Yes / No				
Pete Jeffrey	EO		Yes / No				
Ben McKenzie	TL		Yes / No				
Carleigh Stapleton	SEO		Yes / No				
Simon Vanderduys	SEO		Yes / No				
Judy Vink	EO		Yes / No				
Jessica Kerr	EO		Yes / No				
Alison Goodhand	SEO		Yes / No				
Justin Wilson	EO		Yes / No				
Alex Bulow	AO		Yes / No				
Cassandra Williamson	AO		Yes / No				
Neil Maver	SEO		Yes / No				
Ashley Matheson	EO		Yes / No				

Brief Description of activity:

Brief description..

Risk Assessment attached

Overall Risk derived from risk assessment: LOW / **MEDIUM** (highest determined Risk Level) including risk score or range of scores (**10-15**)

Spatial or remote risk level: HIGH / MEDIUM / **LOW**

DEPARTMENTAL CONTACTS

Order of Contact	Organisational contacts	First name	Surname	Location	Phone (work)	Mobile
1	CP Manager	Bryce	Hertlet	Maroochydore	5459 6124	sch4p4(6) Personal information
2	CD Manager	Matt	Karle	Caboolture	5316 8403	
3	Team Leader	Nadine	Cooper	Caboolture	5316 8407	
4	Team Leader	Ben	McKenzie	Brisbane	3330 6329	

TRIP ITINERARY

(HIGH & MEDIUM spatial or remote risk levels proposals **MUST** include a map attached detailing the location of activities and travel)

Date	Departure location	Planned time of departure	Planned arrival time	Time of call-in and officer taking call	Arrival location	Activity of personnel	Local contact & phone number	Proposed travel time	Proposed leave time	Time of call-in and officer taking call

ACCOMMODATION DETAILS

Date	Location	Accommodation in Name	Accommodation phone number

COMMUNICATION and VEHICLE SPECIFICS

Methods	Proposed (Yes/No)	Phone Number / Identification
Satellite Phone		
Digital Phone (1)		- Cab on call ph
Digital Phone (2)		- Caboolture
Digital Phone (3)		- Brisbane on call ph
Digital Phone (4)		- Brisbane - Nokia
Digital Phone (5)		- Brisbane - Nokia touchscreen
Digital Phone (6)		- Brisbane
EPIRB/PLB		
SPOT Tracker		ESN
Radio - UHF		Channel
Radio - VHF		Channel
OTHER forms:		Call Sign
		Call Sign
Vehicle detail: Bris	Rego QGLT72	Make: Toyota
		Model: Hilux
		Colour: White
Vehicle detail: Bris	Rego:QGM067	Make: Hyundai
		Model: Santa Fe
		Colour: White
Vehicle detail: Bris:	Rego:QGLJ84	Make: Ford
		Model: Ranger
		Colour: White
Vehicle detail:Bris	Rego:QGKB96	Make: Ford
		Model: Ranger
		Colour: White
Vehicle detail: Cab	Rego:QGN20	Make: Hyundai
		Model: Santa Fe
		Colour: White
Vehicle detail:Cab	Rego:QGME82	Make: Ford
		Model: Ranger
		Colour: White

DAILY CALL IN SCHEDULE

Date	Scheduled Call in Time or frequency of call ins (e.g. every 2Hours)	Call-in Officer	Proposed Communication Method	Phone Number / Identification	Approximate Call in Location	Base Office and contact officer	Base Office contact number	Time called	Spoke to

Requesting Officer/s: Name Signature Date:
Requesting Officer/s: Name Signature Date:
Requesting Officer/s: Name Signature Date:

TRIP APPROVAL

Approved By: Position:

Signature Date

COMMENTS FROM APPROVING OFFICER

WHS Risk Assessment				Attachment 2			
Date of assessment: 12 September 2018				Risk Assessment number: _____			
Briefly describe the task/activity/plant/equipment: Cement crushing and milling and drying							
Location where task/activity is being conducted: Mt Coot-tha Rd, Mt Coot-tha							
Work Team: Justin Wilson & Ashley Matheson							
Assessment completed by (team members): Justin Wilson							
References (Acts, regulations, policies, procedures or any other supporting documentation): _____							
Review date for risk assessment: _____ (specify date)							
Step in task	Hazards in carrying out this step	Risk (Harm)	Existing risk controls	Risk rating with	Additional risk controls required	Risk rating with	Risk score
Ensure you number each step. List major steps or task in process eg loading equipment arriving to location operating equipment	For example: dust/fumes heat/cold moving parts	For example: physical injury out/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences Likelihood Risk score	Also complete WHS Risk Treatment Plan. Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitution Isolation Engineering Administration PPE	Consequences Likelihood Risk score	
PPE Failure		Minor or major injury	<ul style="list-style-type: none"> Ensure personal issue PPE is sized correctly to fit individuals providing maximum protection (e.g. safety glasses, gloves etc.) Undertake 3 monthly checks of personal issue PPE for wear and replacement needs Pre-check General PPE Kits held in vehicles as a part of readiness preparation prior to Field Activity departures Pre-check applied PPE for integrity (tears, holes & rips etc.) and wear prior to entering field sites Replace worn and ineffective PPE as necessary Do not enter field sites if PPE is shown to be ineffective 	Major Rare Medium (10)			

18-418	Extreme high temperatures, uv/sun exposure, heat radiation	Sun exposure, heat exhaustion, dehydration	<ul style="list-style-type: none"> • All employees must wear long sleeve shirts with collars and long pants when working in field environments. • Sleeves of shirts should be rolled down and fully buttoned at the wrists and front. (Note: sleeves of shirts are not to be cut off as this defeats protection of arms from the sun.) • All employees must wear the supplied broad-brimmed hat with a brim minimum of 8-10cm (caps are not permitted). • All employees should apply sunscreen (SPF 30+ or better broad spectrum and water-resistant) 15-30 minutes before to going outdoors to all exposed skin areas and re-apply every two (2) hours or as directed by the manufacturer. Zinc cream or lip balm can be applied to lips and/or nose for extra protection. • All employees must wear the supplied safety glasses and/or sunglasses. • Plan work times where possible so that outdoor tasks are done early in the morning or late afternoon during cooler parts of day and when UV risk is lower. • Where practicable, use trees, buildings and other temporary shelter such as awnings and umbrellas to produce shade during activities. • Ensure shade is available for rest and meal breaks. • Drink at least 2 litres of cool water a day, more if sweating heavily. • Take rest breaks as required. • If feeling weak or faint, immediately stop work and cool down, drink water in small sips. 	Minor Likely Medium (12)			
	Chemicals	Respiratory problems, poisoning, chemical burns	<ul style="list-style-type: none"> • Identify all risk chemicals as a part of the activity pre-planning • Refer to the relevant Safety Data Sheets and factor in the safety recommendations applying the necessary treatments / controls 	Major Rare Medium (10)			
File B	<p>General industrial risks</p> <ul style="list-style-type: none"> • Ignition sources from naked flames or electronic devices near areas of fuel storage (i.e., phones, cameras) • Crush and/or pinch sources from moving conveyors and machinery operations, particularly loading operations at port facilities • Operation of heavy equipment and mechanical tools. • Movement of heavy machinery that may result in collision (i.e., rail loading at port facilities, vehicles at mine sites) • Exposure to hazardous materials, including asbestos, industrial chemicals and mineral concentrates (e.g. lead concentrate) • Risk of falling into open voids, dams or other water bodies. • Respiratory or eye irritation from airborne particulates and inhalation of fumes (e.g. dust at crushing operations, mineral concentrate loading, sulphur dioxide at sewage treatment plants and refineries etc.) • Skin irritation from contact with hazardous chemicals or materials 	<ul style="list-style-type: none"> • Respiratory irritation • Eye irritation • Skin irritation • Poisoning or other illness caused by exposure to hazardous chemicals or materials • Physical injury, permanent incapacitation and/or death 	<ul style="list-style-type: none"> 1. Elimination • Pre-inspection risk assessment to identify personnel with asthma or other respiratory concerns. Eliminate risk by not allowing at risk people to undertake specific field activities. • Officers should accompany their site representative at all times and seek advice as to whether an area is safe to access or an activity safe to perform. • Officers should not perform an activity or enter a location if they do not feel safe. 2. PPE • Use standard ESR PPE issued to field officers to minimise the risk of skin, respiratory and eye irritation. 3. Specialised Training • For some activities Officers are to receive White Card (construction) certification prior to entering a construction site. 4. Site inductions & specialised PPE • Officers to undertake required site inductions as directed • Officers to use site supplied PPE as directed. 	Major Unlikely Medium (14)			

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing treatments/controls	Risk rating with existing treatments/			Additional treatments/controls required	Risk rating with additional treatments/		
Ensure you number each step. List major steps or task in process e.g. loading equipment driving to location operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete <u>WHS Risk Treatment Plan</u> . Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering	Consequences	Likelihood	Risk score
	PPE Failure	Minor or major injury	<ul style="list-style-type: none"> Ensure personal issue PPE is sized correctly to fit individuals providing maximum protection (e.g. safety glasses, gloves etc.) Understand 3 monthly checks of personal issue PPE for wear and replacement needs General PPE Kits held in vehicles as a part of readiness preparation prior to Field Activity departures Pre-check applied PPE for integrity (tears, holes & rips etc.) and wear prior to entering field sites Replace worn and ineffective PPE as necessary Do not enter field sites if PPE is shown to be ineffective 	Major	Rare	Medium (10)				
	Extreme high temperatures, uv/sun exposure, heat radiation	Sun exposure, heat exhaustion, dehydration	<ul style="list-style-type: none"> All employees must wear long sleeve shirts with collars and long pants when working in field environments. Sleeves of shirts should be rolled down and fully buttoned at the wrists and front. (Note: sleeves of shirts are not to be cut off as this defeats protection of arms from the sun.) All employees must wear the supplied broad-brimmed hat with a brim minimum of 8-10cm (caps are not permitted). All employees should apply sunscreen (SPF 30+ or better broad spectrum and water-resistant) 15-30 minutes before to going outdoors to all exposed skin areas and re-apply every two (2) hours or as directed by the manufacturer. Zinc cream or lip balm can be applied to lips and/or nose for extra protection. All employees must wear the supplied safety glasses and/or sunglasses. Plan work times where possible so that outdoor tasks are done early in the morning or late afternoon during cooler parts of day and when UV risk is lower. Where practicable, use trees, buildings and other temporary shelter such as awnings and umbrellas to produce shade during activities. Ensure shade is available for rest and meal breaks. Drink at least 2 litres of cool water a day, more if sweating heavily. Take rest breaks as required. If feeling weak or faint, immediately stop work and cool down, drink water in small sips. 	Minor	Likely	Medium (12)				
	Storms Lightning High winds Rain Flooding Trees	Minor or major injury Fatality Hypothermia Drowning Vehicle damage Stranding	<ul style="list-style-type: none"> Prior to starting work check weather conditions, forecast, storm, cyclone and flood warnings with the Bureau of Meteorology. Continue to check storm warnings and forecasts throughout the day (if internet access is available) as weather can change rapidly in some environments. Reschedule work where possible to avoid extreme weather conditions and associated risks. Monitor sky for approaching storms. Always plan to allow for sufficient time to get to safe shelter or higher ground if necessary. Ensure vehicle is equipped with recovery equipment and first aid equipment based on risks. Ensure vehicle is equipped with sufficient wet weather gear based on weather predictions (raincoats, hats, waders, gumboots). Pack a dry change of warm clothes if working in wet areas. Stop all work and return to safe shelter or vehicle if hear thunder or if you see lightning storm approaching, overhead or near by or if there are strong winds. If sheltering in car avoid touching any metal parts until storm has moved away. In the event of lightning do not take shelter or park vehicle in an open field, or on the highest point in the landscape or under large trees and branches. If caught in open area with lightning overhead crouch down in low area (like a ditch) and minimise contact with the ground. Then when safe to do so (e.g.: lightning not close by, visually ok) move to higher ground to avoid flooding areas. Stop all work in stream beds where there is risk of flash flooding (e.g. high rainfall). When sampling waterways look out for signs of flash flooding (sudden increase in debris). Do not enter waterways any deeper than half way up your calf muscle boots or waders with felted soles are recommended to be worn if practicable and safe to do so Do not enter or attempt to drive through fast flowing or flooded waterways under any circumstances Do not work or park under large trees or branches if there is high winds. Dive boots, rubber 	Major	unlikely	Medium (14)				
	Extreme low temperatures Wind Burn,	Minor injury, Hypothermia	<ul style="list-style-type: none"> Ensure you dress for the conditions and wear appropriate PPE. Ensure you continue to drink enough water to remain hydrated. Limit exposure to the elements during extremes in temperature. Check weather forecast prior to field activities. Reschedule work to avoid extreme weather conditions. Wear lip protection (chap stick) if not used to the cold conditions. Make use of body moisturiser to ensure your skin does not dry out 	Moderate	unlikely	Medium (9)				
	Hostile fauna including Snakes and Insects	Bites & Stings (Snake, spider, insects, etc.)	<ul style="list-style-type: none"> All staff must perform a visual risk assessment for hazards when working in a known snake, spider or hostile insect habitat. All vehicles and vessels to carry First Aid Kits which includes snakebite kit and insect repellent. Walk heavily in a suspected snake habitat. Use lifting aids (e.g. crowbar) when lifting objects that may hide snakes / spiders. In the event of a bite, render first aid, then arrange medical assistance. If you know that you are allergic to wasp & bee stings, carry an Epi Pen, advise your manager and other team members of your allergy. If it is required to be used, apply and seek medical help immediately. Personnel must never work alone in areas which are known dangerous snakes habitats Personnel working in these environments are required to undertake regular first aid drills on applying first aid techniques for the treatment of snake bites 	Moderate	Possible	13				
	Crocodile & Shark attack	Death, Drowning, Serious Injury	<ul style="list-style-type: none"> All staff must perform a visual risk assessment for hazards before closely approaching or entering a stream and be aware that crocodiles or sharks maybe present All staff must have completed Crocodile Awareness Training Where vessels are used apply practices identified in "Vessel operational hazards" Ensure that at least one team member watches the waterway at all times to monitor for crocodiles All staff must be aware of the surroundings when working in the area, and maintain vigilance at all times All staff are to avoid operating with their back to the watercourse or marshland Staff are not to access within 5 meters of a watercourse or marshland that are known to be inhabited by crocodiles and must ensure that a visual risk assessment be performed before undertaking activities in these waterways Staff must withdraw from the area to a safe place or higher ground if a crocodile is sighted or suspected 	Moderate	Possible	Medium (13)				
	Confined space	Serious injury, Death	<ul style="list-style-type: none"> Do not enter under any circumstance Seek support from QFES for sampling support using their staff and safety mechanisms to sample (e.g. air monitoring equipment, Breathing Apparatus etc.) 	Catastrophic	Rare	Medium (15)				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing risk controls	Risk rating with existing			Additional risk controls required	Risk rating with additional		
Ensure you number each step. List major steps or task in process e.g. loading equipment, driving to location, operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures, list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete <u>WHS Risk Treatment Plan</u> . Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering	Consequences	Likelihood	Risk score
	Client aggression	Death, serious bodily injury and on-going psychological issues.	<ul style="list-style-type: none"> Collate relevant information about the clients and their situation. Determine the degree of risk involved, always be accompanied by another departmental officer. Use assistance from Queensland Police Service if there is any information that may suggest there is a personal risk. Ensure that as a part of the activity planning more regular call-ins with your nominated contact officer are identified and agree on a code word to use if urgent assistance is required. Always ensure that you have appropriate communications, e.g.. carry a mobile/satellite phone on your person. Always park a vehicle facing towards your exit point to allow for a quick and unobstructed departure. Endeavour to diffuse a situation, if and where possible. If the client becomes abusive/aggressive, end the visit and if appropriate reschedule the contact to a later time. Secure your immediate safety before completing or continuing with the planned activity. Secure the safety of all others in the immediate area. Ensure all potential factors that may exacerbate the situation are minimised. Consult with your manager/director directly in relation to your assessment of the situation and the control measures to be applied. Seek the involvement of the Queensland Police Service if required. 	Moderate	Possible	Medium (13)				
	Situation become threatening or violent	Death, serious bodily injury and on-going psychological issues.	<ul style="list-style-type: none"> Park vehicle close to where you are conducting the inspection - if possible within sight from roadway or public. Always park a vehicle facing towards your exit point to allow for a quick and unobstructed departure Listen for sounds of disturbance and check for anything unusual when approaching the property, for example unusual smells or evidence of drug or alcohol use. When greeting clients, give your name and display your departmental card. Do not enter any house/dwelling unless invited to do so, or it is safe to do so. Ensure there are clear paths to the entry points, and ensure that clients do not restrict these pathways - for example avoid being trapped in a corner of a room where there is no clear exit. Leave immediately if the situation becomes threatening or appears uncontrollable and attempts to defuse the situation have failed. If unable to leave, distract or refocus the attention of the other person and leave promptly when the opportunity arises. Contact the base office as soon as it is safe to do so and give a brief description of the what had happened. Make notes in notebook about what had occurred. 	Major	Unlikely	Medium (14)				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing treatments/controls	Risk rating with			Additional treatments/controls required	Risk rating with additional		
Ensure you number each step. List major steps or task in process e.g. loading equipment driving to location operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete <u>WHS Risk Treatment Plan</u> . Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitution Isolation Engineering Administration	Consequences	Likelihood	Risk score
	Entering properties that have aggressive dogs	Slip, trip, fall, lacerations, infectious disease, serious bodily injury	<ul style="list-style-type: none"> If you are aware that there is an aggressive dog on the property, phone ahead to ensure that the owner secures (ties the dog up), before you visit. <p>There are a number of precautions that you can take to reduce the chances of dog bites occurring:</p> <ul style="list-style-type: none"> Always respect dogs (both known and strange dogs) Never get too close to a strange aggressive dog. Never approach an aggressive dog without the owners permission. Stand still if an aggressive dog approaches you and do not squeal or jump suddenly. At all times, avoid eye contact with an aggressive dog. <p>Constantly monitor the following danger signs when near an aggressive dog:</p> <ul style="list-style-type: none"> Appears ill at ease when you are close or attempt to interact with it. Backs away from you. Remains still but looks at you from the corner of its eye. Raises the hair on its back. Stands close to you or leans up against you. Lays its ears back and holds its tail between its legs. Approaches you with its tail erect. 	Minor	Possible	Medium (8)				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing treatments/controls	Risk rating with existing			Additional treatments/control s required	Risk rating with additional treatments/		
Ensure you number each step. List major steps or task in process e.g. loading equipment driving to location operating equipment	For example: noise dust/fumes heat/cold vapours moving parts electrical	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete WHS Risk Treatment Plan. Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering	Consequences	Likelihood	Risk score
	<ul style="list-style-type: none">• Ignition sources from naked flames or electronic devices near areas of fuel storage (i.e., phones, cameras)• Crush and/or pinch sources from moving conveyors and machinery operations, particularly loading operations at port facilities• Operation of heavy equipment and mechanical tools.• Movement of heavy machinery that may result in collision (i.e., rail loading at port facilities, vehicles at mine sites)• Exposure to hazardous materials, including asbestos, industrial chemicals and mineral concentrates (e.g. lead concentrate)• Risk of falling into open voids, dams or other water bodies.• Respiratory or eye irritation from airborne particulates and inhalation of fumes (e.g. dust at crushing operations, mineral concentrate loading, sulphur dioxide at sewage treatment plants and refineries etc.)• Skin irritation from contact with hazardous chemicals or materials	<ul style="list-style-type: none">• Respiratory irritation• Eye irritation• Skin irritation• Poisoning or other illness caused by exposure to hazardous chemicals or materials• Physical injury, permanent incapacitation and/or death	<ul style="list-style-type: none">1. Elimination<ul style="list-style-type: none">• Pre-inspection risk assessment to identify personnel with asthma or other respiratory concerns. Eliminate risk by not allowing at risk people to undertake specific field activities.• Officers should accompany their site representative at all times and seek advice as to whether an area is safe to access or an activity safe to perform.• Officers should not perform an activity or enter a location if they do not feel safe.2. PPE<ul style="list-style-type: none">• Use standard ESR PPE issued to field officers to minimise the risk of skin, respiratory and eye irritation.3. Specialised Training<ul style="list-style-type: none">• For some activities Officers are to receive White Card (construction) certification prior to entering a construction site.4. Site inductions & specialised PPE<ul style="list-style-type: none">• Officers to undertake required site inductions as directed• Officers to use site supplied PPE as directed.	Major	Unlikely	Medium (14)				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing risk controls	Risk rating with existing			Additional risk controls required	Risk rating with additional		
Ensure you number each step. List major steps or task in process e.g. loading equipment, driving to location, operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures, list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete WHS Risk Treatment Plan . Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering Administration PPE	Consequences	Likelihood	Risk score
	Exposure to ambient lead dust particles Mt Isa environment.	Health impacts at acute and chronic levels	<ul style="list-style-type: none"> Personnel are to familiarise themselves with "Living with Lead Alliance" information (http://www.livingwithlead.com.au/) which identifies practices to minimise lead exposure. These practices are to be applied by personnel undertaking any activities in the at risk environment at Mt Isa. Free blood lead level testing is available at QML in Mount Isa for any resident or visitor. ESR supports staff wishing to undertake blood testing for lead exposure at Mt Isa. 	Moderate	Rare	Low (6)				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing treatments/controls	Risk rating with existing treatments/			Additional treatments/controls required	Risk rating with additional treatments/		
Ensure you number each step. List major steps or task in process e.g. loading equipment driving to location operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete WHS Risk Treatment Plan. Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering Administration PPE	Consequences	Likelihood	Risk score
	Manual Lifting/Handling of unsuitable heavy loads	Body Strains, Sprains and Injury	<ul style="list-style-type: none"> Always size up load (estimate weight) before attempting to lift Only lift loads within safe lifting and handling limits. 	Moderate	Unlikely	Medium (9)				
	Lifting and handling loads incorrectly or in an awkward position	Body Strains, Sprains and Injury	<ul style="list-style-type: none"> Ensure that where available or required lifting aids are used Decide on the best position for lifting, clear a path and face direction for lift movement. Ensure there is sufficient space to lift the load. Ensure there are no obstructions in the path of the lifting movement. Ensure the load to be carried is held as close to the body as possible. Ensure the task does not involve twisting of the torso or joints/appendages. Ensure that when lifting use a straight back utilising leg muscles for the lift. Apply the same listed practices when placing the load to it's destination 	Moderate	Unlikely	Medium (9)				
	Repetitive tasks – Manual Handling Tasks	Body Strains, Sprains and Injury	<ul style="list-style-type: none"> Rotate the tasks amongst personnel to limit repetition Provide regular rest opportunities. 	Moderate	Unlikely	Medium (9)				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing risk controls	Risk rating with existing			Additional risk controls required	Risk rating with additional		
Ensure you number each step. List major steps or task in process e.g. loading equipment driving to location operating equipment	For example: noise, dust/fumes, vapours, heat/cold, electrical, moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete WHS Risk Treatment Plan. Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering Administration PPE	Consequences	Likelihood	Risk score
	Inhalation of Coxiella burnetii from infected animals, animal tissue or animal products. Potential exposure sites are at livestock processing facilities, holding yards and areas frequented by stock. (Animals posing risk include cattle, sheep, goats, camels, llamas, alpacas, rodents, cats, dogs, birds, wallabies and kangaroos)	Health issues including high fever, chills, headache, extreme fatigue, muscle and joint pain and severe sweats.	1. Make available vaccination for officers 2. Using standard issue ESR PPE 3. Applying basic hygiene practices (e.g. hand washing) 4. Minimise dust exposure and inhalation of dust 5. Remove exposed clothing and secure in plastic bags prior to returning to home location / office base 6. Undertake site safety induction prior to entering meat processing facilities	Moderate	Possible	Medium (13)				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing risk controls	Risk rating with existing			Additional risk controls required	Risk rating with additional		
Ensure you number each step. List major steps or tasks in process e.g. loading equipment driving to location operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: Identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE) Staff can use italicised text when completing their assessment where appropriate	Consequences	Likelihood	Risk score	Also complete <u>WHS Risk Treatment Plan</u> . Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering Administration PPE	Consequences	Likelihood	Risk score
	Fatigue, moving parts, mechanical energy, fumes and vapours, noise, heat, electrical energy	Minor or serious injury Fatality	<ul style="list-style-type: none">● Driver to complete the vehicle / equipment safety check prior to vehicle operation● Study route beforehand and consider hazards such as waterway crossings, wildlife, and stock, heavy vehicle traffic● Ensure any equipment or bags stored in vehicle is secured safely.● For long trips (e.g. 2hours or greater) plan for rest breaks and / or shared driving responsibilities● Personnel must be fit for work , driver to be competent to operate vehicle and handle foreseeable road conditions● Driver must have completed training in 4WD vehicles in order to operate a 4WD in off road conditions or remote areas where 4WD conditions are likely● Drivers licence must be valid● Obey all road rules including speed limits● Drive at the speed appropriate for conditions● Reduce speed when sharing the road with pedestrians (particularly children), motorbikes, heavy vehicles, and cyclists● reduce speeds when the vehicle is heavily loaded or towing a trailer● responding to speed warning alerts● All occupants must wear seatbelts● Adopt a zero drugs and alcohol policy for work-related driving or minimise alcohol consumption prior to driving● Take into account the influence of prescribed and other medications before driving● Do not eat or drink whilst driving● Pre-set music/radio, climate controls, seatbelts and mirrors before driving● Pull over to adjust equipment, checking maps or attending to personal grooming● Use passengers to help with any non-driving tasks (e.g. checking maps etc.)● Comply with the laws relating to use of hand held phones and other devices whilst driving	Catastrophic	Rare	Medium (15)				
	Weather and road conditions	Minor or serious injury Fatality Vehicle damage	<ul style="list-style-type: none">● Identify road and weather condition risks prior to departure (e.g. RACQ, Bureau of Meteorology)● Plan ahead alternative routes for adverse conditions● Reschedule trips to times of less extreme conditions● Provide information about driving techniques in adverse conditions (e.g. driving slowly in foggy conditions)● Use specialist or fit for purpose vehicles suitable for expected conditions● Where appropriate, providing specialist training for driving in adverse conditions (e.g. beach driving)	Catastrophic	Rare	Medium (15)				
	Towing	Minor, death, serious bodily injury	<ul style="list-style-type: none">● Driver to be competent to tow a load including reversing and general manoeuvring● Ensure trailer is securely attached to vehicle including safety chain and that indicator/brake lights are working● Ensure all loads are secure and no loose objects● Ensure vehicle is fit for purpose and suitable for towing loads● Keep hands and fingers clear of any pinch points when working with loads	Catastrophic	Rare	Medium (15)				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing risk controls	Risk rating with existing		Additional risk controls required	Risk rating with additional		
Ensure you number each step. List major steps or task in process e.g. loading equipment driving to location operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences	Likelihood Risk score	Also complete WHS Risk Treatment Plan . Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering Administration PPE	Consequences	Likelihood	Risk score
	Force - moving object Mechanical and tripping hazards Noise	Death Drowning Physical injury Hearing damage	<ul style="list-style-type: none"> All staff must perform a visual inspection for hazards before performing boat operations. All staff must perform a boat safety induction before performing operations. All staff must be competent swimmers, must have a current first aid certificate and be proficient in recovery and resuscitation techniques. If required by the vessel master, all staff must wear person flotation devices (Level 275, Level 150, or Level 100 made to AS4758 - formerly PFD type 1, AS 1512-1996) at all times. All staff must wear PPE appropriate for the type of vessel and predicted weather conditions including: sun protection, wet weather protection, warm clothing, and hearing protection (if applicable). All staff operating boats must have a current boat licence relevant to the area and hours of operation, as a minimum requirement. All boats used by staff must have current boat registration meet necessary safety requirements and be maintained in a good working condition. All staff operating boats are required to check all safety equipment required for boat registration is present and functional including personal flotation devices and drinking water. All boats must carry adequate supplies of spare fuel, water and two forms of communication (e.g. radio and mobile phone). 	Major Unlikely Medium (14)	Utilise commercial vessel operator (coxswain ticketed or above) with qualifications for the area and hours of operation	Moderate Rare Low (6)			
	Sinking Mechanical breakdown Fire	Death Drowning Physical injury	<ul style="list-style-type: none"> Operator holds a current Coxswain licence relevant to the area and hours of operation, is sufficiently experienced with boat size, and familiar with local water conditions (river, lake or ocean) Boat registered, 'in survey', and in good repair. Boat must be operated within its carrying capacity, be adequately stable and have ample freeboard when fully loaded. Boat must be operated within the licensed area and hours of operation and within the capabilities of the vessel given the predicted weather conditions. All person flotation devices are Level 275, Level 150, or Level 100 made to AS4758 (formerly PFD type 1, AS 1512-1996). 	Major Unlikely Medium (14)	Boat holds commercial registration. Maximum operating wind speeds 25 knots. Operation during daylight hours only.	Moderate Rare Low (6)			
	Manual handling Awkward postures	Strains, sprains and potential for back injury	<ul style="list-style-type: none"> An initial introduction to manual handling is given to new employees. Team lifting of heavy equipment only Installation and use of trailer jockey wheel to facilitate safe trailer lifting/lowering. 	Minor Unlikely Low (5)					
	Trailer/vehicle sliding	Person being hit by trailer	<ul style="list-style-type: none"> Use boat ramps (where available) Be aware of extra weight of trailer on vehicle. Ensure vehicle towing capacity is not exceeded and that it has sufficient towing power for the boat and trailer's combined weight and sufficient traction for slippery surfaces. All persons to be clear of trailer until stationary and vehicle's hand brake applied. No staff are to "ride" the trailer or boat while reversing. 	Moderate Unlikely Medium (9)	Use a four-wheel drive vehicle to tow and engage low range to launch on slippery ramps or at low tide.	Moderate Rare Low (6)			
	Wet/boggy terrain, trips, slips and falls, manual handling, awkward postures. Cable failure. Moving parts Marine wildlife	Falling, cuts, bruising, fractures, sprains and strains. Serious injury Marine stings or wildlife attack	<ul style="list-style-type: none"> Use a safe and secure location to launch boat Beware of slippery ramp/banks and sharp objects Wear wet boots (such as dive booties) and ensure sole has good grip. Team lift heavy equipment Driver of boat to hold Coxswain licence relevant to the area and hours of operation. Stand clear of cables under strain when winching boat on/off trailer. Stand clear of propeller. Review risks for marine stingers and dangerous wildlife (e.g. crocodiles / sharks) Ensure complete cover of exposed skin if marine stingers are present. Where possible access boat from towing vehicle (e.g. utility tray) removing need to physically enter water during launch & recovery operations 	Major Unlikely Medium (14)					
	Crocodile & shark attack	Death, drowning, serious injury	<ul style="list-style-type: none"> All staff must have completed Crocodile Awareness Training for planned activities in or near crocodile environments Where possible access boat from towing vehicle (e.g. utility tray) removing need to physically enter water during launch & recovery operations All staff must perform a visual risk assessment for hazards before closely approaching or entering a water body and be aware that crocodiles or sharks may be present Ensure that boats are launched and retrieved from the water course during daylight hours and there is good visibility of the waterway and in-water Ensure that at least one team member watches the waterway at all times to check for crocodiles All staff must be aware of the surroundings and maintain vigilance at all times All staff are to avoid operating with their back to the watercourse Staff must withdraw from the area to a safe place or higher ground if a crocodile is sighted or suspected 	Major Unlikely Medium (14)					
	Collision with objects in water Moving parts Crushing Tripping/falling Confined spaces	Drowning Head injuries Physical injuries Asphyxiation/poisoning	<ul style="list-style-type: none"> Two people to be present Driver to hold Coxswain licence (licensed for the area and hours of operation) All staff to be vigilant of potential obstacles and maintain appropriate speeds Be aware of additional obstacle hazard potential at low tide. Ensure boat is not overloaded and within survey passenger/weight requirements Passengers to remain seated (in a designated seta if available) whilst boat is underway Do not hang limbs or head over the side of the vessel while underway Do not sit on the bow (front) of the vessel while underway Wait until vessel is stationary before undertaking work task such as sampling Be aware of overhead hazards when navigating near jetties and wharves Be aware of the risks when navigating near or working near jetties and wharves as they often fall into the risk category as a confined space where there is potential for low oxygen or fumes from chemical spills etc. If required by the vessel master, all persons must wear person flotation devices (Level 275, Level 150, or Level 100 made to AS4758 - formerly PFD type 1, AS 1512-1996) at all times. Full safety equipment (depending on survey class) in watertight container for smaller vessels on board boat. Carry first aid kit in boat 	Minor Unlikely Low (5)					
	Boat boarding - from a Jetty/Wharf: Moving parts Crushing Tripping/falling	Crush injuries Falling overboard Physical injuries	<ul style="list-style-type: none"> Always have both hands free when boarding. If possible load all gear prior to launching. Otherwise hand all gear across to crew on-board the vessel. Do not attempt to board carrying gear Always use designated gangways to board vessels, where provided. Vessel movements can cause gangways to slide off. Ensure gangways are securely fasten to vessel before use. This should include being tied securely to vessel in addition to mechanical attachments. Do not use the gangway if unsure of its security. Rectify the issue before use If there is a gangway available but it has not been erected, ask for it to be put in place and wait before boarding the vessel Review manual handling risks if assisting crew to lift and attach gangways. Always team lift gangways and apply safe manual handling practices Where there is no gangway available, ensure the vessel is securely tied along side close to the jetty and the engines are disengaged before attempting to board. Use a ladder if available. If no ladder is available, have another person on-board to extend a hand (the "sailors handshake") and accept this assistance. Step (do not jump) across from jetty to vessel. Be aware of sharp objects (such as oysters or rusted metal work), and wet and slippery surfaces when embarking/disembarking. The soles of some shoes will not be suitable for aluminium decking and they should be removed before attempting to step across to the vessel Be aware of overhangs and low headroom aboard vessels 	Moderate Unlikely Medium (9)	Use a designated gangway which is properly engineering for the purpose and vessel. Staff are "buddied" with other staff that have experience with boating operations and movement.	Minor Rare Low (3)			

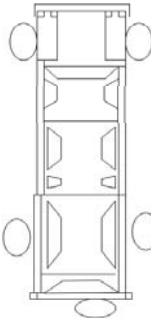
	Boat boarding - from a boat ramp or river bank: Moving parts Crushing Tripping/falling	Crush injuries Falling overboard Physical injuries	<ul style="list-style-type: none"> Always have both hands free when boarding Where possible load all gear prior to launching. Otherwise hand all gear across to crew on-board the vessel. Do not attempt to board carrying gear Take time to assess the best way to climb aboard. If unsure, ask another person for assistance Where possible access boat from towing vehicle (e.g. utility tray) removing need to physically enter water during launch & recovery operations Ensure the motor is disengaged (neutral) and climb over the side of the vessel Be aware that propellers may still spin even if the motor is in neutral. Never approach a boat from the stern (rear) if the engine is running Sit on the side of the boat if possible and swing your legs over the side to board Avoid standing on the sides of the boat (the gunnel) if possible due to the risk of slipping and potentially tipping the boat. If unavoidable, choose a broad surface such as a seat to step onto. Step (never jump) aboard. Review risks for marine stingers and dangerous wildlife (e.g. crocodiles) and take necessary actions Be aware of overhangs and low headroom. 	Minor	Unlikely	Low (5)			
	Boat to boat transfers: Moving parts Crushing Tripping/falling	Death Drowning Crush and physical injuries	<ul style="list-style-type: none"> Boat to boat transfers must only occur to/from commercial vessels with an appropriate passenger landing area (e.g. "duck board") and clear of any overhead obstructions (e.g. shade canopy) Do not transfer from a boat to a ladder Do not transfer passengers bow-to-stern if the forward vessel is in motion Ensure the forward vessel is stationary with engines off Always have both hands free when boarding. Hand all gear across to crew on-board the other vessel. Do not attempt to board carrying gear Use a designated gangway if available. Otherwise step (never jump) from one vessel to the next, using a handhold on each Be aware of the movement of both vessels may be out of sync with each other. Take time to assess this movement before attempting to step across. Do not stand with one foot on each vessel. Move smoothly and quickly from one to the other Assist other people by offering a hand to help step across (the "sailors handshake"), maintaining a firm handhold of the vessel with the other hand Always accept assistance offered. Be aware of wet and slippery surfaces when embarking/disembarking. The soles of some shoes will not be suitable for aluminium decking and they should be removed before attempting to step across to the other vessel. Keep limbs and head inside the boat at all times until it is time to board the other vessel. Do not attempt to manually "steady" the other vessel from rolling. The respective weights of each vessel may cause a crush injury in the attempt. Do not transfer passengers between vessels where overhangs are present (e.g. a shade canopy). 	Moderate	Unlikely	Medium (8)	Plan operations to avoid boat to boat transfers.		
	UV/Sun exposure Heat radiation	Radiation burns Eye damage	<ul style="list-style-type: none"> Apply practices identified in "Field Activity General Hazards" In addition all employees must wear sunglasses suitable for high glare i.e. AS/NZS 1067 Ensure hats and sunglasses are securely fastened while vessel is underway 	Minor	Unlikely	Low (5)			
	Wind, rain, hot / cold conditions	Hypo/Hyper-thermia Blistering and abrasion Decreased mental performance and fatigue	<ul style="list-style-type: none"> Apply practices identified in "Field Activity General Hazards" Pack a suitable wet weather jacket and wear for both wet conditions (including sea spray) and to prevent wind chill/exposure. 	Moderate	Rare	Low (6)			
	Entanglement & trip hazards	Death Drowning Crush and other physical injuries Choking	<ul style="list-style-type: none"> Consider removing jewellery including sunglass chains, bangles, rings (including wedding rings) and necklaces which may become entangled or crushed causing serious injury. Hat and sunglasses straps must fit closely around the back of the neck/under the chin and must have some form of safety release in case of entanglement. Be aware of ropes and cables, both loose and under strain, including rigging, mooring lines, other ropes, fuel lines, anchor chains, and cables. Stand clear of cables/ropes under strain. Do not stand or place hands between loose coils and be aware of tripping hazards on deck. Do not place hands or fingers in-between ropes and fixing points such as bollards and cleats. 	Moderate	Unlikely	Medium (9)	Only appropriately trained and experienced persons to handle mooring lines.	Moderate	Rare Low (6)

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing treatments/controls	Risk rating with existing treatments/			Additional treatments/controls required	Risk rating with additional		
Ensure you number each step. List major steps or task in process e.g. loading equipment driving to location operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: Identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete <u>WHS Risk Treatment Plan</u> . Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering Administration PPE	Consequences	Likelihood	Risk score
	Gravity falling object, Force moving object	Death, physical injury	<ul style="list-style-type: none">Provide training in the use of fall / arrest devices for planned working heights greater than 2metres<ul style="list-style-type: none">Wear a fall / arrest device(e.g. anchored safety harness) with helmet & chin strap when working at a fall height that exceeds 2 metres<ul style="list-style-type: none">Check for electrical power lines and other hazards before climbing to an elevated work platformDo not allow any worker to work directly under another worker<ul style="list-style-type: none">Place ladders on a non - slip surface, and secure them against movementNever let more than one person work off a ladder at any one time<ul style="list-style-type: none">Secure any tools or equipment when working at a elevated heightAlways appoint at least one 'spotter' whose sole task is to monitor the safety of other workers who are working on elevated work platforms.	Moderate	Possible	13				

Step in task	Hazards in carrying out this step	Risk (Harm)	Existing treatments/controls	Risk rating with existing			Additional treatments/controls required	Risk rating with		
Ensure you number each step. List major steps or task in process e.g. loading equipment driving to location operating equipment	For example: noise dust/fumes vapours heat/cold electrical moving parts	For example: physical injury cut/graze chemical burn	List all current treatments that are already in place and will be used to undertake the task for example: identify types facility, location, existing safety measures, existing emergency procedures list of Personal Protective Equipment (PPE)	Consequences	Likelihood	Risk score	Also complete <u>WHS Risk Treatment Plan</u> . Additional treatments may be required to reduce risk rating. Remember the risk treatment options (hierarchy of control) Elimination Substitute Isolation Engineering Administration PPE	Consequences	Likelihood	Risk score
	Moving objects & mechanical	Death, serious bodily injury	<ul style="list-style-type: none">When working on roads and roadsides a minimum of two people must be present. (one to act as a safety spotter)<ul style="list-style-type: none">Radio's, satellite/mobile phones are required when working on roads and roadsides - identify and use most appropriate systemWhen parking vehicle, assess the roadside before pulling over. Park in safest position, off the road, if driver does not have clear view, have an officer check for hazardsDo not park in a manner that blocks or restricts pedestrian's use of the footpathIf parking on footpath is unavoidable then an alternate SAFE route should be provided for pedestriansErect signage if footpath can not be used for a period of time (develop a specific risk assessment for this action)<ul style="list-style-type: none">Plan the task before arriving at the worksiteIdeally select activity times when traffic volumes will be low (i.e. not peak hour and preferably not at night)Review the task plan before exiting the vehicle and make any changes as appropriateHi-vis clothing must be worn by all personnel, in accordance with Australian Standard (minimum Hi-vis vest)<ul style="list-style-type: none">Park the vehicle in a manner that provides greatest protection to officers from traffic, with out affecting travelling motoristsFlashing (warning) lights must be on when parked or when slowing down to parkNotification to relevant authorities may be required when working on certain roads Check before commencing work to determine if approval is required or if any additional requirements are necessary.	Moderate	Unlikely	9				

Date of assessment: DD/MM/YYYY			
Vehicle Registration Number			
Odometer Reading (Kilometres)			
Make / Model			
Colour			
Location where task/activity will be conducted:			
Work Team / Agency:			
Assessment completed by :			
	CHECKLIST	INDICATE WHERE PROVIDED/ CHECKED Y/ N	COMMENTS
Standard Vehicle Checklist	Engine Oil		
	Radiator (Coolant)		
	Power steering fluid		
	Fuel (inc sub tank)		
	Windscreen		
	Water for washes		
	Chips or cracks or defects		If Yes, windscreen to be repaired prior to use.
	Brake Fluid		
	Battery Fluid		
	Clutch Fluid		
	Batteries (including water levels)		
	Tyre Pressure (including spare)		
	Air Filter		
	Wheel nut indicators		They must all face the same direction
	Fan Belts (tension)		
	Spare Tyres and tyre changing equipment (jack, tyre lever & base plate for uneven ground)		
	Lights Working (including indicators)		
	Fire Extinguisher		
	Salt Water (20 litres minimum)		
	Service Overdue - If Yes do not take vehicle until service completed		Next Service Due: DD/MM/YYYY
Log book up to date			
First Aid Kit in Vehicle & Current		Serviced within the last 6 months	
Emergency lights (incident response)			
EPERB (test monthly)			
Two-way radios (test/batteries/aerial)			
Satellite phone (test)			
Mobile Phone (mount)			
Drinking Water (3 litres per person per day)			
Car Fridge			
Remote Area Recovery Kit (includes spare parts)		Note: This can ONLY be taken if OFFICER/S have been TRAINED in the use of Recovery Gear	
PPE kit (in kit bag)		Ensure PPE kit contents have been checked	
Remote area vehicle kit		Does not include vehicle recovery kit	
Sampling kit			
Fish kill kit			
GPS (and spare batteries)			
Camera (and spare batteries)			
Phone			
Sample Pole ("Mighty Gripper") / sediment scoop			
Shovel			
Water container			
YSI Meter (calibrated)			
Extra sampling bottles			
Sampling bottle backpack			

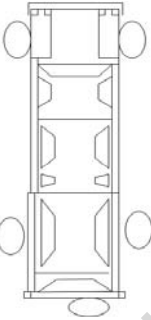
VISUAL VEHICLE INSPECTION - Pre trip



Mark any defects on vehicle plan below. E.g. RHS tyre needs replacing. Report all issues to relevant personnel.

Notes:

VISUAL VEHICLE INSPECTION - Post trip



Mark any defects on vehicle plan below. E.g. RHS tyre needs replacing. Report all issues to relevant personnel.

Notes:

From: [ROWE Sarah](#)
To: [MCKENZIE Ben](#)
Subject: FW: Blast Notification - Friday 17th March
Date: Thursday, 16 March 2017 8:12:33 AM
Attachments: [image001.png](#)

Not sure who is looking after Mt Coot-tha, but here is some info to store away.

Danke,

Sarah Rowe

Principal Community Response Officer

Community Response Team | Regulatory Capability and Customer Service

Department of Environment and Heritage Protection

P 1300 130 372 E pollutionhotline@ehp.qld.gov.au

From: BI-FSG-AandANotices [<mailto:BI-FSG-AandANotices@brisbane.qld.gov.au>]
Sent: Wednesday, 15 March 2017 11:29 AM
To: BI-FSG-AandANotices
Subject: Blast Notification - Friday 17th March

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Friday 17th March.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 9th March were 1.31mm/s and 104dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009

Phone: +61-7-3403 1044

Email: terry.bird@brisbane.qld.gov.au

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Published on DES Disclosure Log
RTI Act 2009

From: [PALM](#)
To: [ES Compliance - Brisbane Moreton](#)
Subject: Dust deposition results MCQ - June- July 2017
Date: Wednesday, 26 July 2017 2:15:00 PM
Attachments: [Dust deposition june_july 2017 BCC quarries \(Autosaved\).pdf](#)
[image001.png](#)
[image005.png](#)
[image006.png](#)

Hello all

Please advise if you would look after the email below.

Thanks

Kim

Kim Christeson

Customer Service

Officer

Customer Service

Team/Regulatory

Capability and

Customer Service

Department of
Environment and
Heritage
Protection

Tel: 1300 130
372 (option 4)
Fax: 3330 5875
400 George
Street, BRISBANE
QLD 4000
GPO Box 2454,
BRISBANE QLD
4001



*make the
move*

From: Robert Bell [mailto:Robert.Bell@brisbane.qld.gov.au]
Sent: Tuesday, 25 July 2017 12:05 PM
To: PALM
Cc: ADAMS Tim; Nigel Jackson

Subject: Dust deposition results MCQ - June- July 2017

Hello, Just notifying you that our routine dust monitoring results at Mount Coot-tha Quarry for June – July have come back with INSOLUBLE SOLIDS on 2 monitors have equalled or marginally exceeded 120mg/m2/day licence limit. Combustible materials were significant (leaf matter etc.) **with ash results at approx. 90mg/m2/day.**

We have investigated the potential causes for these elevated results and believe the dry conditions and garden maintenance/lawn mowing and leaf blower activity in the immediate vicinity of the monitors has contributed to the elevated results of insoluble and combustible matter.

We will continue to monitor these extraneous effects on our monitors to keep them to a minimum.

Please call me if you have any other questions, thks. (3403 2571 – Rob Bell)

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DUST ASSESSMENT

BRISBANE CITY COUNCIL-QUARRIES



NATIONAL LEADER

IN FOOD, AGRICULTURAL & ENVIRONMENTAL TESTING



Introduction

Symbio Laboratories was contracted by Brisbane City Council (BCC) to undertake dust deposition monitoring on a monthly basis at Mt Coot-tha Quarry located off of Mt Coot-tha Road, Toowong and Pine Mt Quarry located at Pine Mountain Road, Mount Gravatt, QLD.

This is part of the regular environmental monitoring conducted by BCC. Sampling was undertaken between 5 June 2017 and 3 July 2017. The scope of work includes the following:

- Collection and reinstallation of dust deposition gauges at three sampling locations at each site (DM1, DM2 and DM3) and DM4 at Mt Coot-tha Quarry ;
- Analysis of the collected sample at Symbio Laboratories; and
- Preparation of summary report.

Methodology

The monitoring has been und in accordance to Australian Standards As 3580.1.1:2007 and AS 3580.10.1:2003.

The limit of 120 mg/m²/day for insoluble solids at sensitive places has been used as the assessment trigger value in this report. The limit of 120 mg/m²/day is commonly used within Queensland as benchmark for amenity impacts and in the assessment for reasonable environmental nuisance.

Laboratory analysis results

Table 1 laboratory analysis results for the dust deposition samples collected at Mt Coot-tha Quarry between 5 June 2017 and 3 July 2017.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM1 Site Office	28	120	86.7	33.3
DM2 Scenic Drive	28	33.3	23.3	10
DM3 Weightbridge	28	123.3	96.7	26.7
Limit of reporting	3.3			

Table 2 laboratory analysis results for the dust deposition samples collected at Mt Coot-tha Quarry between 5 June 2017 and 3 July 2017.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM4 Scenic Drive Gate	28	106.7	90	16.7
Limit of reporting	3.3			

Table 3 laboratory analysis results for the dust deposition samples collected at Pine Mountain Quarry between 5 June 2017 and 3 July 2017.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM1 Pine Mountain Road	28	63.3	46.7	16.7
DM2 Hill Top	28	23.3	16.7	6.7
DM3 Perimeter fence	28	53.3	30	23.3
Limit of reporting	3.3			

Should you require any additional information, please call at any time to discuss further.
Kind Regards,

sch4p4(6) Personal info
Account Manager – Environmental

Symbio ALLIANCE

SYMBIO LABORATORIES

52 Brandl Street
Eight Mile Plains QLD 4113

P: 07 3340 5706 | F: 3219 0333

symbioalliance.com.au

From: HINDMARSH Sasha
To: [STAPLETON Carleigh](#)
Subject: RE: Blast Notification - Friday 13th October
Date: Wednesday, 11 October 2017 1:45:39 PM
Attachments: [image002.png](#)
[image004.png](#)
[image005.png](#)

Hi Carleigh aka BCC/Mt Coot-tha PM ☺

FYI – BCC have notified the department of a blast last Friday and a potential blast this Friday.

I'm not overly familiar with EA EPPR00447313 -<https://environment.ehp.qld.gov.au/env-authorities/pdf/eppr00447313.pdf> (Condition F4) but from a preliminary look things look peachy.

Happy to discuss.

Cheers, Sasha

From: WOOD Katrina **On Behalf Of** ES Compliance - Brisbane Moreton
Sent: Wednesday, 11 October 2017 10:24 AM
To: HINDMARSH Sasha <Sasha.Hindmarsh@ehp.qld.gov.au>
Subject: FW: Blast Notification - Friday 13th October

Hi Sasha,

Another Brisbane one.

Thanks

Katrina Wood

Environmental Officer

South Queensland Compliance | Environmental Services & Regulation

Department of Environment and Heritage Protection

P 07 5316 8404

Level 4, 33 King Street, Qld Caboolture 4510

PO Box 808 Caboolture, Qld 4510

From: FS-AandANotices [<mailto:FS-AandANotices@brisbane.qld.gov.au>]
Sent: Wednesday, 11 October 2017 10:16 AM
To: FS-AandANotices <FS-AandANotices@brisbane.qld.gov.au>
Subject: Blast Notification - Friday 13th October

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between

12.00 noon and 2pm on Friday 13th October.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Friday 6th October were 1.60mm/s and 118.7dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Jamie Hall

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009

Phone: +61-7-3403 1044

Email: jamie.hall@brisbane.qld.gov.au

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From: [KARLE Matt](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Short meeting to discuss Mt Coot-tha Quarry and permit limits
Date: Friday, 10 November 2017 12:21:17 PM
Attachments: [image006.gif](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image010.png](#)
[OP312727 - Letter - Bird to DEHP - 10 Nov 2017 - Mt Coot-tha Quarry Blasting ~ giving undertaking.PDF](#)
[table J4421 AS 2187.pdf](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image016.png](#)

Hi Carleigh

A reply from BCC re Mt Coot-tha Quarry. Can you please eDOCS the corro against the relevant file.

I will need to discuss with Andrew when hes back in the office next week.

Regards

Matt Karle

Compliance Delivery Manager, South Queensland Compliance – Brisbane Moreton Bay

Environmental Services and Regulation

Department of Environment and Heritage Protection

P 07 5316 8403

33 King Street, Caboolture Qld 4510

From: Terry Bird [mailto:Terry.Bird@brisbane.qld.gov.au]
Sent: Friday, 10 November 2017 12:08 PM
To: KARLE Matt <Matt.Karle@ehp.qld.gov.au>; Leanne O'Brien <Leanne.O'Brien@brisbane.qld.gov.au>; CONNOR Andrew <Andrew.Connor@ehp.qld.gov.au>
Subject: RE: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Good afternoon Matt

Please see attached response regarding Mt Coot-tha Quarry.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009

Phone: +61-7-3178 2090

Mobile: [sch4n4\(6\) Personal in](#)

Email: terry.bird@brisbane.qld.gov.au



From: KARLE Matt [<mailto:Matt.Karle@ehp.qld.gov.au>]
Sent: Thursday, 19 October 2017 3:10 PM
To: Terry Bird <Terry.Bird@brisbane.qld.gov.au>; Leanne O'Brien
<Leanne.O'Brien@brisbane.qld.gov.au>; CONNOR Andrew <Andrew.Connor@ehp.qld.gov.au>
Subject: FW: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Thanks for your reply Terry.

EHP continues to field enquiries from the community. An indication (if not a resolution) to the matter discussed at our meeting on 29th August 2017 would be most helpful.

Regards

Matt Karle

Compliance Delivery Manager, South Queensland Compliance – Brisbane Moreton Bay

Environmental Services and Regulation

Department of Environment and Heritage Protection

P 07 5316 8403

33 King Street, Caboolture Qld 4510

From: Terry Bird [<mailto:Terry.Bird@brisbane.qld.gov.au>]
Sent: Wednesday, 11 October 2017 2:31 PM
To: KARLE Matt <Matt.Karle@ehp.qld.gov.au>
Cc: Leanne O'Brien <Leanne.O'Brien@brisbane.qld.gov.au>
Subject: RE: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Good afternoon Matt,

Please see attached.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009

Phone: +61-7-3178 2090

Mobile: [\[sch4p4\(6\) Personal i](#)

Email: terry.bird@brisbane.qld.gov.au

Commerical-in-Confidence



From: KARLE Matt [<mailto:Matt.Karle@ehp.qld.gov.au>]
Sent: Thursday, 28 September 2017 4:29 PM
To: Terry Bird <Terry.Bird@brisbane.qld.gov.au>
Cc: Leanne O'Brien <Leanne.O'Brien@brisbane.qld.gov.au>
Subject: RE: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Hi Terry

I enquire whether Brisbane City Council has had an opportunity to further consider the feasibility of lower vibration levels for the Mt Coot-tha Quarry.

At the meeting on 29th August 2017 I recall council proposed a response within 3 – 4 weeks.

EHP welcomes advice from BCC about these matters at your earliest convenience.

Regard

Matt Karle

Compliance Delivery Manager, South Queensland Compliance – Brisbane Moreton Bay

Environmental Services and Regulation

Department of Environment and Heritage Protection

P 07 5316 8403

33 King Street, Caboolture Qld 4510

From: KARLE Matt
Sent: Tuesday, 29 August 2017 2:41 PM
To: Terry Bird <Terry.Bird@brisbane.qld.gov.au>; CONNOR Andrew <Andrew.Connor@ehp.qld.gov.au>
Cc: Leanne O'Brien <Leanne.O'Brien@brisbane.qld.gov.au>
Subject: RE: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Thanks for the reply email Terry.

EHP looks forward to BCC's further consideration and reply.

Regards

Matt Karle

Compliance Delivery Manager, South Queensland Compliance – Brisbane Moreton Bay

Environmental Services and Regulation

From: Terry Bird [<mailto:Terry.Bird@brisbane.qld.gov.au>]
Sent: Tuesday, 29 August 2017 12:10 PM
To: KARLE Matt <Matt.Karle@ehp.qld.gov.au>
Cc: Leanne O'Brien <Leanne.O'Brien@brisbane.qld.gov.au>
Subject: RE: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Matt,

We refer to our meeting today and appreciate the opportunity to further explain how Council has strategically achieved reduced blasting and vibration levels to-date, but clarified future operational constraints.

We also mentioned that this quarry is recognised by the State Government as Key Resource Area KRA42; the boundary and separation areas are identified by the State in its mapping dated October 2013.

The Department accepts Council is acting in compliance with its ERA but would like to understand whether it is feasible for Council to give assurances about blasting and vibration levels that may provide comfort to some residents who express, from time to time, concern.

Council will consider further and will respond in the near future.

Kind Regards,

Terry Bird
Manager
Asphalt and Aggregates
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009
Phone: +61-7-3178 2090
Mobile: [sch4p4(6) Personal in
Email: terry.bird@brisbane.qld.gov.au
Commerical-in-Confidence



From: KARLE Matt [<mailto:Matt.Karle@ehp.qld.gov.au>]
Sent: Monday, 28 August 2017 9:05 AM
To: Terry Bird; CONNOR Andrew

Cc: Leanne O'Brien

Subject: RE: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Thanks Terry.

I've found a 30 minute window in Andrew's calendar for the morning of 29th August 2017, between 10 and 10.30am. Thanks for agreeing to attend and apologies for the brief time available.

The meeting will be on level 8 in 400 George Street, so please come up to level 3 reception when they will call me to come down to meet you.

Attendees for EHP will be myself and Andrew Connor. The intent of the meeting is a close out of the conversation raised with Brisbane City Council as to whether there was any possibility of an agreement to amend conditions of the EA with respect to vibration. You will recall correspondence from EHP to council dated 26th July 2017, and BCC's reply shortly after.

Thanks for your time. I look forward to seeing you.

Regards

Matt Karle

Compliance Delivery Manager, South Queensland Compliance – Brisbane Moreton Bay

Environmental Services and Regulation

Department of Environment and Heritage Protection

P 07 5316 8403

33 King Street, Caboolture Qld 4510

From: Terry Bird [<mailto:Terry.Bird@brisbane.qld.gov.au>]

Sent: Monday, 28 August 2017 8:29 AM

To: KARLE Matt <Matt.Karle@ehp.qld.gov.au>

Cc: Leanne O'Brien <Leanne.O'Brien@brisbane.qld.gov.au>

Subject: RE: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Matt

Tuesday 29th August is the best day to catch up at short notice.

400 George Street is fine. We have availability in the morning – between 9am and 12pm.

In terms of Council staff it is most likely only myself and Leanne O'Brien who will be attending.

Is there anything specific we need to prepare for the meeting?

See you tomorrow.

Kind Regards,

Terry Bird
Manager
Asphalt and Aggregates
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009
Phone: +61-7-3178 2090
Mobile: [redacted] Personal
Email: terry.bird@brisbane.qld.gov.au
Commercial-in-Confidence



From: KARLE Matt [<mailto:Matt.Karle@ehp.qld.gov.au>]
Sent: Friday, 25 August 2017 2:12 PM
To: Terry Bird
Subject: Short meeting to discuss Mt Coot-tha Quarry and permit limits

Hi Terry.

I hope you are well.

EHP wrote to BCC in 2016 regarding the noise and vibration limits in the Mt Coot-tha Quarry Environmental Authority. BCC responded in writing and EHP acknowledges receipt of that reply.

EHP is keen to close that line of enquiry with BCC, and so I enquire with you whether you have time for a brief meeting in the city either next Tuesday or Wednesday?

If a day and then a time suits, please advise so we can schedule in a discussion. EHP staff including myself and possibly Executive Director for Southern Region Andrew Connor (if available) would meet with you either in our 400 George Street building or a BCC meeting room in the city of your preference.

I look forward to hearing from you. If another time later in the week is more suitable, please suggest some alternatives.

Regards

Matt Karle
Compliance Delivery Manager, South Queensland Compliance – Brisbane Moreton Bay
Environmental Services and Regulation
Department of Environment and Heritage Protection

P 07 5316 8403
33 King Street, Caboolture Qld 4510

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Dedicated to a better Brisbane

Brisbane City Council ABN 72 002 765 795

Manager's Office
Asphalt and Aggregates
228 Curtin Avenue West, Eagle Farm
GPO Box 1434 Brisbane Qld 4001
T 07 317 82090
terry.bird@brisbane.qld.gov.au

10 November, 2017

Mr Andrew Connor
Executive Director
Industry, Development and South QLD Compliance
Department of Environment and Heritage Protection
Via Email: ESComplianceBrisbaneMoreton@ehp.qld.gov.au

Re: Mt Coot-tha Quarry Blasting Activities EPPR00447313

Dear Mr Connor

I refer to the meeting between the Department and Council on 29 August 2017 during which the Department asked Council to once again consider voluntarily reducing blast and vibration limits at its Mt Coot-tha Quarry. For contextual purposes we also refer you to Council's correspondence to the Department dated 30 August 2016.

Council understands that the Department would like reassurance that the structural integrity of buildings adjacent to the quarry will remain intact despite blasting activities. Council understands that one resident has expressed concern that there is no upper limit to Council's allowable blasting vibration which exceeds 10mm/sec. Council accepts and relies upon research that superficial cosmetic damage (such as cracks in plasterboard etc.) may occur to light framed residential structures at levels greater than 75mm/sec. peak particle velocity (PPV).

As discussed, Council is compliant with its environmental authority EPPR00447313. Accordingly, there is no obligation upon Council to agree to amend its approval. By way of background we note the following:

- Mt Coot-tha Quarry is recognised by the Queensland Government as a Key Resource Area known as KRA42 and the boundary and separation areas are identified by the State in its mapping dated October 2013.
- Quarry operations have existed at this site in some form for well over 100 years.
- The quarry pit and mine planning over recent decades has been developed around current approved licence conditions.
- In order for the quarry to be practicable, there are particular operational constraints.
- Nationally and internationally renowned third party experts are retained by Council to design, monitor and provide oversight of the quarrying operations.
- Should the blasting limits be reduced, operations will be changed such that there will be increased environmental impacts, including more blasting over longer periods and much more mechanical rock hammer breaking.

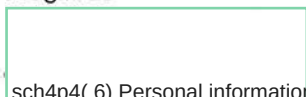
- International Standards like the Australian Standard, the British Standard or the German Standard all indicate levels of vibration that are protective of infrastructure integrity. Appendix J of the Australian Standard AS2187.2-2006, and in particular Table J4.4.2.1 specifies a guide value to prevent cosmetic damage to “unreinforced or light framed structure, residential or light commercial type buildings” as a minimum of 15mm/s for low frequency (4Hz) increasing to 50mm/s for higher frequency component vibration (>40Hz).

Notwithstanding the above, in the interests of assisting the Department in addressing the concerns of one local resident (noting for the sake of clarity, that Council does not accept the basis of those complaints), Council will agree, on an informal basis, that the upper level of permissible vibration not exceed the damage threshold values specified in the Australian Standard (ie. Table J.4.4.2.1), previously mentioned. Council is happy to provide the relevant blasting vibration data to you.

We trust this pledge by Council to not exceed the blast vibration levels detailed in Table J4.4.2.1 (Attached for reference) will reassure any resident who is concerned about upper limits to blast vibration.

Please do not hesitate to contact me should you require any further information.

Regards


sch4p4(6) Personal information

Terry Bird
Manager
Asphalt and Aggregates
Brisbane Infrastructure
Brisbane City Council

Cc
Matt Karle
Compliance Delivery Manager, South Queensland Compliance – Brisbane Moreton Bay
Environmental Services and Regulation
Department of Environment and Heritage Protection
Matt.Karle@ehp.qld.gov.au

J4.4.3 Frequency dependent levels

Frequency-dependent guide levels described in British Standard BS 7385-2 and the United States Bureau of Mines (USBM) RI 8507 are given below. The levels specified are peak component particle velocities, and the methodologies used for assessing the frequencies, are similar in both documents.

The frequency-dependent guide values from BS 7385-2 for the prevention of minor or cosmetic damage occurring in structures from ground vibration are shown in Table J4.4.2.1 and Figure J4.4.2.1 below:

TABLE J4.4.2.1

**TRANSIENT VIBRATION GUIDE VALUES FOR COSMETIC DAMAGE
(BS 7385-2)**

Line	Type of building	Peak component particle velocity in frequency range of predominant pulse	
		4 Hz to 15 Hz	15 Hz and above
1	Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
2	Unreinforced or light framed structure. Residential or light commercial type buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

NOTES:

- 1 Values referred to are at the base of the building.
- 2 For line 2, at frequencies below 4 Hz, a maximum displacement of 0.6 mm (zero to peak) should not be exceeded.

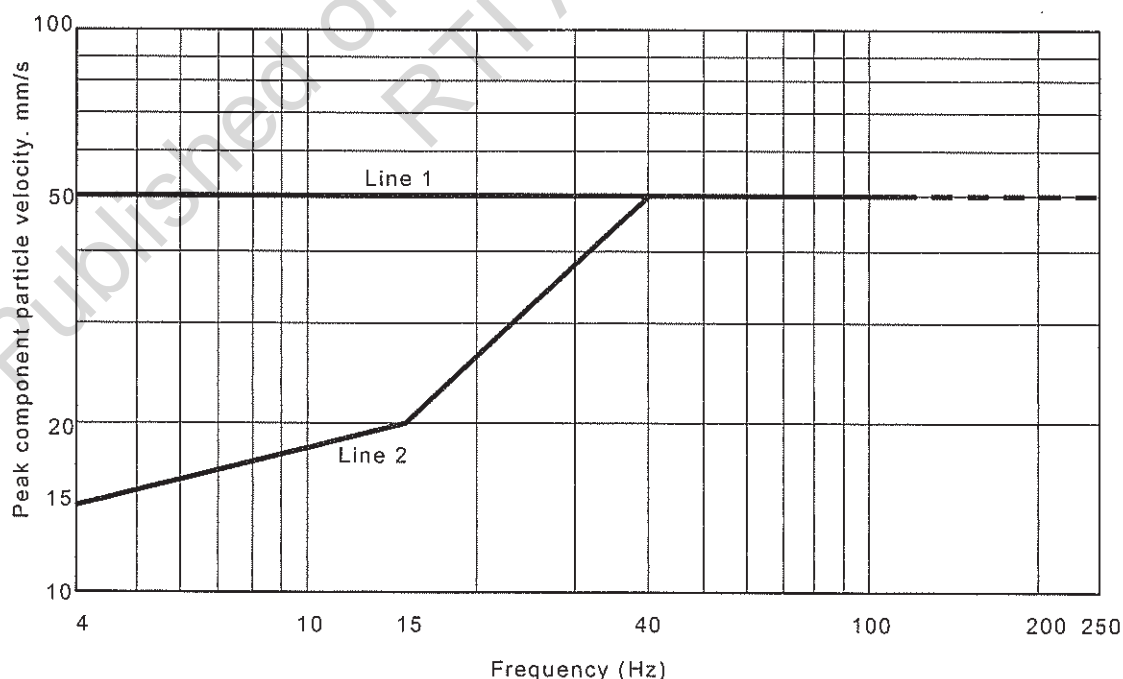


**FIGURE J4.4.2.1 TRANSIENT VIBRATION GUIDE VALUES FOR COSMETIC DAMAGE
(BS 7385-2)**

From: [MCKENZIE Ben](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Wednesday 13th December
Date: Wednesday, 13 December 2017 12:31:44 PM
Attachments: [image006.png](#)
[image001.png](#)
[image003.png](#)

Hi Carleigh

FYI – yes, I realise it may have already happened.

Cheers
Ben

Ben McKenzie

Team Leader | Compliance | Brisbane Moreton Bay
P 07 3330 6329 | GPO Box 2454 | Brisbane QLD 4001

From: WILLIAMSON Cassandra **On Behalf Of** ES Compliance - Brisbane Moreton
Sent: Monday, 11 December 2017 1:38 PM
To: MCKENZIE Ben <Ben.Mckenzie@ehp.qld.gov.au>
Subject: FW: Blast Notification - Wednesday 13th December

Hi Ben,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Heritage Protection

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510

From: FS-AandANotices [<mailto:FS-AandANotices@brisbane.qld.gov.au>]
Sent: Monday, 11 December 2017 12:20 PM
To: FS-AandANotices <FS-AandANotices@brisbane.qld.gov.au>
Subject: Blast Notification - Wednesday 13th December

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Wednesday 13th December

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 7th December were 4.95mm/s and 110.9dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009

Phone: +61-7-3403 1044

Email: terry.bird@brisbane.qld.gov.au

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Cc: [KARLE Matt](#)
Subject: FW: Blast Notification - Friday 23rd February
Date: Wednesday, 21 February 2018 9:18:10 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Good Morning Carleigh,

Please see below.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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If you are an existing EHP customer, your details are already in Connect and you can get your Connect EHP Customer Reference by emailing connecthelp@ehp.qld.gov.au.

From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Wednesday, 21 February 2018 9:11 AM
To: FS-AandANotices <FS-AandANotices@brisbane.qld.gov.au>
Subject: Blast Notification - Friday 23rd February

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between

rd

12.00 noon and 2pm on Friday 23 February.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Friday 9th February were 3.13mm/s and 113.3dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Cc: [KARLE Matt](#)
Subject: FW: Blast Notification - Friday 9th February
Date: Wednesday, 7 February 2018 11:48:22 AM
Attachments: [image005.png](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)

Hi Carleigh,

Please see below.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Wednesday, 7 February 2018 11:44 AM
To: FS-AandANotices <FS-AandANotices@brisbane.qld.gov.au>
Subject: Blast Notification - Friday 9th February

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between
th

12.00 noon and 2pm on Friday 9 February.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Wednesday 13th December were 7.81mm/s and 112dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Cancellation
Date: Friday, 23 February 2018 10:40:13 AM
Attachments: [image005.png](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)

Hi Carleigh,

See below.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Friday, 23 February 2018 10:28 AM
To: FS-AandANotices <FS-AandANotices@brisbane.qld.gov.au>
Subject: Blast Cancellation

Dear All,

For the information of the interested parties, the blast that was planned for Mt Coot-tha Quarry between 12.00 noon and 2pm today has been cancelled.

This information is provided in good faith. This cancellation is due to unexpected circumstances that are unfortunately beyond our control.

At this present time a reschedule date has not yet been set. The addresses on this emailing list will be notified if and when this occurs.

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird
Manager
Asphalt and Aggregates
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Friday 2nd March
Date: Wednesday, 28 February 2018 3:06:41 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Wednesday, 28 February 2018 1:10 PM
To: FS-AandANotices <FS-AandANotices@brisbane.qld.gov.au>
Subject: Blast Notification - Friday 2nd March

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Friday 2nd March.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Friday 9th February were 3.13mm/s and 113.3dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Friday 9th March
Date: Wednesday, 7 March 2018 2:09:15 PM
Attachments: [image005.png](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Wednesday, 7 March 2018 2:07 PM
To: FS-AandANotices <FS-AandANotices@brisbane.qld.gov.au>
Subject: Blast Notification - Friday 9th March

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Friday 9th March

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Friday 2nd March were 2.15mm/s and 109.5dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009

Phone: +61-7-3403 1044

Email: terry.bird@brisbane.qld.gov.au

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Thursday 19th April
Date: Tuesday, 17 April 2018 1:09:52 PM
Attachments: [image001.gif](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

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PO Box 808 Caboolture Qld 4510



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If you are an existing EHP customer, your details are already in Connect and you can get your Connect EHP Customer Reference by emailing connecthelp@ehp.qld.gov.au.

From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 17 April 2018 1:07 PM
Subject: Blast Notification - Thursday 19th April

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between
th

12.00 noon and 2pm on Thursday 19 April.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on **23rd March were 3.44mm/s and 111.dB** at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

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Phone: +61-7-3403 1044

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Thursday 3rd May
Date: Tuesday, 1 May 2018 10:13:35 AM
Attachments: [image006.png](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Carleigh,

Please see below.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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We encourage you to do business with us online and register to become a Connect customer. Please visit our website at www.ehp.qld.gov.au/connect.

If you are an existing EHP customer, your details are already in Connect and you can get your Connect EHP Customer Reference by emailing connecthelp@ehp.qld.gov.au.

From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 1 May 2018 10:12 AM
Subject: Blast Notification - Thursday 3rd May

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 3rd May.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on 26th April were 2.2mm/s and 104.2dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

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From: [MCKENZIE Ben](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Thursday 26th April
Date: Friday, 27 April 2018 11:13:15 AM
Attachments: [image001.gif](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Hi Carleigh

FYI (yes, I realise it was supposed to happen yesterday).

Cheers

Ben

Ben McKenzie

Team Leader | Compliance | Brisbane Moreton Bay
P 07 3330 6329 | GPO Box 2454 | Brisbane QLD 4001

From: BULOW Alexander **On Behalf Of** ES Compliance - Brisbane Moreton
Sent: Tuesday, 24 April 2018 1:01 PM
To: MCKENZIE Ben <Ben.McKenzie@des.qld.gov.au>
Subject: FW: Blast Notification - Thursday 26th April

Hi Ben

FYI

Alex Bulow

Administration Officer
South Queensland Compliance | Brisbane/Moreton Bay

From: FS-AandANotices [<mailto:FS-AandANotices@brisbane.qld.gov.au>]
Sent: Tuesday, 24 April 2018 12:54 PM
Subject: Blast Notification - Thursday 26th April

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 26th April.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on 19th April were **5.10 mm/s and 108.4 dB(L)** at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009

Phone: +61-7-3403 1044



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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Thursday 31st May
Date: Tuesday, 29 May 2018 11:53:08 AM
Attachments: [image006.png](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image007.jpg](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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qldbagan-email-banner-4-percent-recycled



From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]

Sent: Tuesday, 29 May 2018 10:52 AM

Subject: Blast Notification - Thursday 31st May

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 31st May.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 17th May were 6.94mm/s and 113.5dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird

Manager

Asphalt and Aggregates

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009

Phone: +61-7-3403 1044

Email: terry.bird@brisbane.qld.gov.au

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: dust monitoring Mt Coot-tha Quarry
Date: Wednesday, 30 May 2018 4:03:08 PM
Attachments: [Dust deposition-April May 2018 BCC quarries B \(002\).pdf](#)
[image001.png](#)
[image003.jpg](#)
[image002.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image010.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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From: Pollution Hotline
Sent: Wednesday, 30 May 2018 3:07 PM
To: ES Compliance - Brisbane Moreton <ESComplianceBrisbaneMoreton@des.qld.gov.au>
Subject: FW: dust monitoring Mt Coot-tha Quarry

Dear Brisbane Compliance

As discussed with Carleigh Stapleton, this notification does not appear to be a UCE as site EA does not appear to set dust deposition limits. I am sending it through to you FYI.

Kind regards

Jemma

Jemma Lanyon
Community Response Officer
Community Response | Regulatory Capability and Customer Service
Department of Environment and Science

P 1300 130 372 (option 2) **E** pollutionhotline@des.qld.gov.au
Lvl 9 400 George Street, Brisbane QLD 4000
GPO Box 2454, Brisbane QLD 4001

From: PALM
Sent: Wednesday, 30 May 2018 2:00 PM
To: Pollution Hotline <PollutionHotline@des.qld.gov.au>
Subject: FW: dust monitoring Mt Coot-tha Quarry

Good Afternoon,

Can you please help out with the following dust / pollution enquiry attached above and below.

Kind Regards,

Amy Mortleman
Customer Service Support Officer
Customer Service Team
Regulatory Capability and Customer Service
Environmental Services and Regulation
Department of Environment and Science

P 07 1300 130 372 – Option No. 4
F 07 3330 5875
E palm@des.qld.gov.au
L9 400 George Street BRISBANE
GPO Box 2454 BRISBANE QLD 4001
www.des.qld.gov.au

EHP Cultural capability_web graphic APPD



From: Robert Bell [<mailto:Robert.Bell@brisbane.qld.gov.au>]
Sent: Wednesday, 30 May 2018 1:23 PM
To: PALM <PALM@des.qld.gov.au>
Subject: dust monitoring Mt Coot-tha Quarry

Hello, One of our dust monitors reported insoluble solids of 120 this month. This is due to significant vegetation matter only finding its way in to the flask which is probably weather related. Please refer to the attached report.

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DUST ASSESSMENT

BRISBANE CITY COUNCIL-QUARRIES

25/5/18



NATIONAL LEADER

IN FOOD, AGRICULTURAL & ENVIRONMENTAL TESTING



Introduction

Symbio Laboratories was contracted by Brisbane City Council (BCC) to undertake dust deposition monitoring on a monthly basis at Mt Coot-tha Quarry located off of Mt Coot-tha Road, Toowong and Pine Mt Quarry located at Pine Mountain Road, Mount Gravatt, QLD.

The dust deposition sampling is part of the regular environmental monitoring conducted by BCC. Samples were collected between the 4th of April 2018 and the 3th of May 2018. The scope of work included the following:

- Collection and reinstallation of dust deposition gauges at three sampling locations (DM1, DM2 and DM3) for each site;
- Analysis of the collected sample at Symbio Laboratories; and
- Preparation of summary report.

Methodology

The monitoring has been und in accordance to Australian Standards As 3580.1.1:2007 and AS 3580.10.1:2003.

The limit of 120 mg/m²/day for insoluble solids at sensitive places has been used as the assessment trigger value in this report. The limit of 120 mg/m²/day is commonly used within Queensland as benchmark for amenity impacts and in the assessment for reasonable environmental nuisance.

Laboratory analysis results

Table 1 laboratory analysis results for the dust deposition samples collected at Mt Coot-tha Quarry.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM1 Site Office	30	120	37	80
DM2 Scenic Drive	30	53	17	37
DM3 Weighbridge	30	47	27	20
Limit of reporting	3.3			

Table 2 laboratory analysis results for the dust deposition samples collected at Mt Coot-tha Quarry.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM4 Scenic Drive Gate	30	43	6.7	37
Limit of reporting	3.3			

Table 3 laboratory analysis results for the dust deposition samples collected at Pine Mountain Quarry.

Sample ID	Sampling period (days)	Insoluble solids (mg/m ² /day)	Ash (mg/m ² /day)	Combustible matter (mg/m ² /day)
DM1 Pine Mountain Road	30	73	47	27
DM2 Hill Top	30	37	13	23
DM3 Perimeter fence	30	40	10	30
Limit of reporting	3.3			

Should you require any additional information, please call at any time to discuss further.
Kind Regards,

sch4p4(6) Personal inf

Account Manager – Environmental

Symbio ALLIANCE

SYMBIO LABORATORIES

52 Brandl Street
Eight Mile Plains QLD 4113

P: 07 3340 5706 | F: 3219 0333

symbioalliance.com.au

From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Mt Coot-tha Quarry Blast Notification: Thursday 14th June
Date: Tuesday, 12 June 2018 12:30:36 PM
Attachments: [image001.gif](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image010.jpg](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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qldbagan-email-banner-life-span (003)



From: Terry Bird [mailto:Terry.Bird@brisbane.qld.gov.au]
Sent: Tuesday, 12 June 2018 12:13 PM
Subject: Mt Coot-tha Quarry Blast Notification: Thursday 14th June

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 14th June.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on May 31st were 3.29mm/s and 112.3dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird
Manager
Asphalt and Aggregates
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009
Phone: +61-7-3403 1044
Email: terry.bird@brisbane.qld.gov.au
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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Mt Coot-tha Quarry Blast Notification: Thursday 21st June
Date: Tuesday, 19 June 2018 11:27:20 AM
Attachments: [image001.gif](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image010.jpg](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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qldbagan-email-banner-life-span (003)



From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 19 June 2018 11:22 AM
Subject: Mt Coot-tha Quarry Blast Notification: Thursday 21st June

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 21st June.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 14th June were 3.77mm/s and 111.2 dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please contact me or direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Terry Bird
Manager
Asphalt and Aggregates
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

228 Curtin Ave West, Eagle Farm, QLD 4009
Phone: +61-7-3403 1044
Email: terry.bird@brisbane.qld.gov.au
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From: [MCKENZIE Ben](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Monday 6th August 2018
Date: Thursday, 2 August 2018 12:35:07 PM
Attachments: [image001.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)
[image007.png](#)

Hi Carleigh

FYI

Ben McKenzie

Team Leader | Compliance | Brisbane Moreton Bay
P 07 3330 6329 | GPO Box 2454 | Brisbane QLD 4001

From: WILLIAMSON Cassandra **On Behalf Of** ES Compliance - Brisbane Moreton
Sent: Thursday, 2 August 2018 12:28 PM
To: MCKENZIE Ben <Ben.McKenzie@des.qld.gov.au>
Subject: FW: Blast Notification - Monday 6th August 2018

Hi Ben,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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From: FS-AandANotices [<mailto:FS-AandANotices@brisbane.qld.gov.au>]
Sent: Thursday, 2 August 2018 12:12 PM
Subject: Blast Notification - Monday 6th August 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Monday 6th August.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions

could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 21st June were 5.69mm/s and 109.5dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

-

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From: [WILLIAMSON Cassandra](#)
To: [MCKENZIE Ben](#)
Cc: [STAPLETON Carleigh](#)
Subject: FW: Blast Cancellation - Thursday 2nd August
Date: Thursday, 2 August 2018 12:28:04 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Ben,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Thursday, 2 August 2018 12:06 PM
Subject: Blast Cancellation - Thursday 2nd August

Dear All,

For the information of the interested parties, the blast that was planned for Mt Coot-tha Quarry between 12.00 noon and 2pm today has been cancelled.

This information is provided in good faith. This cancellation is due to unexpected circumstances that are unfortunately beyond our control.

At this present time a reschedule date has not yet been set. The addresses on this emailing list will be notified if and when this occurs.

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane
Infrastructure
BRISBANE CITY COUNCIL

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From: [WILLIAMSON Cassandra](#)
To: [MCKENZIE Ben](#)
Cc: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Thursday 2nd August 2018
Date: Tuesday, 31 July 2018 12:28:42 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Ben,

In Carleigh's absence – FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 31 July 2018 11:38 AM
Subject: Blast Notification - Thursday 2nd August 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 2nd August.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 21st June were 5.69mm/s and 109.5dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond

directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Cc: [MCKENZIE Ben](#)
Subject: FW: Blast Notification - Thursday 9th August 2018
Date: Tuesday, 7 August 2018 1:22:01 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 7 August 2018 12:36 PM
Subject: Blast Notification - Thursday 9th August 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 9th August.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Monday 6 August were 5.57mm/s and 108.0dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

We also want to take this opportunity to apologise for the confusion that was caused around the rescheduling of the last blast.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

-

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Cc: [MCKENZIE Ben](#)
Subject: FW: Blast Notification - Thursday 16th August 2018
Date: Tuesday, 14 August 2018 11:56:03 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 14 August 2018 11:53 AM
Subject: Blast Notification - Thursday 16th August 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 16th August.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 9 August were 4.47mm/s and 109.5dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond

directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

-

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Thursday 23rd August 2018
Date: Tuesday, 21 August 2018 11:36:22 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 21 August 2018 11:21 AM
Subject: Blast Notification - Thursday 23rd August 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 23rd August.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 16th August were 3.07mm/s and 111.5dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

-

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Friday 14th September 2018
Date: Wednesday, 12 September 2018 12:26:46 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



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From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Wednesday, 12 September 2018 12:19 PM
Subject: Blast Notification - Friday 14th September 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Friday 14th September.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 23rd August were 1.85mm/s and 107.0dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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From: [MCKENZIE Ben](#)
To: [STAPLETON Carleigh](#); [WILSON Justin](#)
Subject: FW: Blast Notification - Thursday 20th September 2018
Date: Friday, 21 September 2018 11:53:33 AM

Hi Carleigh & Justin

FYI (for yesterday ☺)

Cheers

Ben

Ben McKenzie

Team Leader | Compliance | Brisbane Moreton Bay
P 07 3330 6329 | GPO Box 2454 | Brisbane QLD 4001

From: COOPER Nadine **On Behalf Of** ES Compliance - Brisbane Moreton
Sent: Tuesday, 18 September 2018 4:24 PM
To: MCKENZIE Ben <Ben.McKenzie@des.qld.gov.au>
Subject: FW: Blast Notification - Thursday 20th September 2018

For allocation

From: FS-AandANotices [<mailto:FS-AandANotices@brisbane.qld.gov.au>]
Sent: Tuesday, 18 September 2018 11:47 AM
Subject: Blast Notification - Thursday 20th September 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 20th September.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Friday 14th September were 4.46mm/s and 108.0dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Cc: [MCKENZIE Ben](#)
Subject: FW: Blast Notification - Thursday 11th October 2018
Date: Tuesday, 9 October 2018 12:31:31 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



...make the move

From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 9 October 2018 12:29 PM
Subject: Blast Notification - Thursday 11th October 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 11th October.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 20th September were 4.66mm/s and 108.0dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond

directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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From: [WILLIAMSON Cassandra](#)
To: [STAPLETON Carleigh](#)
Cc: [MCKENZIE Ben](#)
Subject: FW: Blast Notification - Thursday 18th October 2018
Date: Tuesday, 16 October 2018 1:38:46 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Carleigh,

FYI.

Cassandra Williamson
Compliance Support Officer
Environmental Services and Regulation
Department of Environment and Science

P 07 5316 8402
33 King Street, Caboolture Qld 4510
PO Box 808 Caboolture Qld 4510



...make the move

From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]
Sent: Tuesday, 16 October 2018 1:34 PM
Subject: Blast Notification - Thursday 18th October 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 18th October.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 11th October were 4.29mm/s and 112.8dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond

directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

-

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From: FS-AandANotices
Subject: Blast Notification - Thursday 29 November 2018
Date: Tuesday, 27 November 2018 12:23:38 PM

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 10.30am and 2pm on Thursday 29th November.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 22nd November were less than 0.80mm/s and did not trigger the monitor at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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From: [SCHIFFKE Fiona](#)
To: [MCKENZIE Ben](#); [STAPLETON Carleigh](#)
Subject: FW: Blast Notification - Thursday 6 December 2018
Date: Monday, 3 December 2018 2:09:37 PM
Attachments: [image001.png](#)
[image002.png](#)

Fiona Schiffke

A/Administration Officer

Environmental Services and Regulation

Department of Environment and Science

P 07 5316 8404

33 King Street, Caboolture Qld 4510

PO Box 808 Caboolture Qld 4510

From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]

Sent: Monday, 3 December 2018 11:57 AM

Subject: Blast Notification - Thursday 6 December 2018

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 10.30am and 2pm on Thursday 6th December.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 29th November were 4.00mm/s and 108.8db(L) at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch

Field Services | Brisbane Infrastructure

BRISBANE CITY COUNCIL

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From: FS-AandANotices
Subject: Blast Notification - Thursday 22 November 2018
Date: Tuesday, 20 November 2018 11:31:42 AM

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 12.00 noon and 2pm on Thursday 22nd November.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays on the day or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on Thursday 18th October were 0.87mm/s and 104.2dB at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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From: [MCKENZIE Ben](#)
To: [STAPLETON Carleigh](#); [MCKENZIE Ben](#)
Subject: FW: Blast Notification - Thursday 28 February 2019
Date: Wednesday, 27 February 2019 8:59:25 AM

Morning Carleigh

FYI

Cheers

Ben

Ben McKenzie

Team Leader | Compliance | Brisbane Moreton Bay
P 07 3330 6329 | GPO Box 2454 | Brisbane QLD 4001

From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]

Sent: Tuesday, 26 February 2019 2:35 PM

Subject: Blast Notification - Thursday 28 February 2019

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 10.30am and 2pm on Thursday 28 February 2019.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays or vary the time of shot on the day, or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on 6 December 2018 were 8.06mm/s and 109.9db(L) at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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Published on DES Disclosure Log
RTI Act 2009

From: [MCKENZIE Ben](#)
To: [STAPLETON Carleigh](#); [MCKENZIE Ben](#)
Subject: FW: Blast Notification - Thursday 11th April 2019
Date: Tuesday, 9 April 2019 2:43:44 PM

Hi Carleigh

FYI

Cheers

Ben

Ben McKenzie

Team Leader | Compliance | Brisbane Moreton Bay
P 07 3330 6329 | GPO Box 2454 | Brisbane QLD 4001

From: FS-AandANotices [mailto:FS-AandANotices@brisbane.qld.gov.au]

Sent: Tuesday, 9 April 2019 1:35 PM

To: FS-AandANotices <FS-AandANotices@brisbane.qld.gov.au>

Subject: Blast Notification - Thursday 11th April 2019

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 10.30am and 2.00pm on Thursday 11th April 2019.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays or vary the time of shot on the day, or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on 14th March 2019 were 3.12mm/s and 106.5 dB(L) at 3SSGD at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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Published on DES Disclosure Log
RTI Act 2009

From: FS-AandANotices
To: [FS-AandANotices](#)
Subject: Blast Notification - Thursday 30 May 2019
Date: Thursday, 30 May 2019 9:19:31 AM

Dear All,

For the information of the interested parties, a blast is planned for Mt Coot-tha Quarry between 10.30am and 2.00pm on Thursday 30 May 2019.

This information is provided in good faith. Technical issues or unsatisfactory weather conditions could cause delays or vary the time of shot on the day, or postponement of the blast.

If the blast is postponed for any reason, the addresses on this emailing list would be notified of a rescheduled date.

The preliminary results for the last blast on 11 April 2019 were at 6.75mm/sec and 108.8dB(L) at the Mt Coot-tha Road monitoring point (outside #3 Sir Samuel Griffith Drive).

If you have any questions or concerns please direct your calls to the Mt Coot-tha Weighbridge on 07 3403 2567 or respond via email.

If you haven't been emailed directly with this notification and wish to be, then please respond directly with your email address.

Kind Regards,

Asphalt and Aggregates Branch
Field Services | Brisbane Infrastructure
BRISBANE CITY COUNCIL

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