3.9 Traffic Management Plan

This Traffic Management Plan (TMP) primarily deals with vehicles engaged in product haulage from Kin Kin Quarry however, other heavy vehicles that service the company's quarries are included.

3.9.1 Rationale

Due to the nature of a Quarry Operation, there will be additional traffic from haulage vehicles transporting the quarry product to customers in the surrounding region. There will be minor additional traffic from site employees.

The principal objectives of the Traffic Management Plan are to manage the impact of haulage vehicles on the local roads and community.

3.9.2 Issues/Aspects/Impacts

The principal issues involved in the haulage of product from the quarry site are;

- Safety
- Noise and Vibration
- Dust
- Product spillage
- Increased road maintenance requirements

Haulage from Kin Kin Quarry is anticipated to be by a range of truck configurations. Product haulage will be along the existing quarry access road to Shepperson's Lane thence to the Kin Kin – Pomona Road. From Pomona, the major road network or the Bruce Highway will be utilised, depending on the final destination of the product.

Apart from Sheppersons Lane, all roads are sealed State Controlled Roads.

Previous works on Sheppersons Lane (as required by current town planning consent from Noosa Council (TPC 1899 – 21/7 1987) and subsequently modified by Court Order dated 13/5/1988) have been carried out by the previous lessee of the quarry site. These upgrade works included;

- Upgrading the intersection of Sheppersons Lane and Kin Kin road to the requirements of the Main Roads Department;
- Widening and upgrading Sheppersons Lane from the intersection with Kin Kin road, to the Quarry access point using appropriate gravel fill or material approved by the Shire Engineer for the quarry site;
- Upgrading the existing timber bridge on Sheppersons Lane to a suitable standard for quarry-generated traffic (following receipt of Engineers investigation into the existing bridge).

Roadworks to widen and seal Shepperson's Lane past any neighbouring residences are proposed for the first half of 2012 (following Council approval). Approximately 950m or two thirds of the length of Sheppersons Lane from the Pomoma-Kin Kin Road will be widened and sealed.

The quarry product haulage route along the Pomona-Kin Kin Road is narrow, winding and contains numerous hills, 3 single lane bridges and other testing driving conditions – in particular there is the operation of the local School Bus. Traffic safety along this route will be an ongoing priority for the company and the community.

3.9.3 Performance Targets

The target for the Kin Kin Quarry is to minimise traffic-related community complaints and have no incidents or accidents involving haulage vehicles associated with the quarry.

3.9.4 Management Procedures and Practice

Neilsens has adopted a Road Transport Protocol across its quarrying, concrete and distribution operations addressing traffic management issues, driver code of conduct, driver training and authorisation for company drivers, and special conditions for the Kin Kin Quarry. This is attached as **APPENDIX 4: NEILSEN'S ROAD TRANSPORT PROTOCOL**.

Specific control measures to be adopted at Kin Kin Quarry include:

- Installation of approved signage on both approaches to the Shepperson Lane on the Kin Kin Pomona road, warning of heavy vehicle traffic movements
- Implementation of the road transport protocol and a "Drivers Code" which includes avoiding cartage during times when the school bus is using the local road system
- Restricting speed of heavy vehicles along Sheppersons Lane
- Sealing of Shepperson's Lane according to agreement with Council and maintenance to an appropriate standard to minimise noise, dust, tracking of fine materials onto sealed road surfaces
- All loads except large rock boulders, will be covered. The quarry will adopt a 'no tarp' 'no load' policy
- Vehicles will be fitted with well maintained engine mufflers
- Reduced speed and increased care to be taken by drivers approximately 2.5 km south of Kin Kin (as per the Road Transport Protocol in APPENDIX 4, where the Pomona-Kin Kin road becomes steep and winding
- Ongoing liaison with drivers, Council and community to identify priorities for continual improvements in road traffic safety for the Pomona-Kin Kin road
- Discourage practices such as truck early arrivals or convoying which can impact on residents and other road users

3.9.5 Monitoring and Reporting

Any complaints received at the quarry will be recorded in the complaints register. The **Quarry Manager** will investigate complaints and take actions in accordance with the complaints handling protocol (refer **Section 3.12).**

Noise or dust monitoring will be undertaken to investigate a noise or dust complaint from road haulage, providing this complaint is reasonable and not frivolous or vexatious.

There will be a weekly inspection of road approaches to the quarry for build up of product spillage and actions taken to remove any unacceptable build-up of gravel or clay.

There will be regular inspection of road surfaces, lines of sight and inspection of safety signs for damage, general condition or obscurement by vegetation.

3.9.6 Responsibility

The **Quarry Manager** will be responsible for educating all transport operators of the requirements of the Drivers Code. The **Quarry Manager** will also be responsible for enforcing the requirements of the Drivers Code.

The **Transport Operators** are responsible for understanding and following the Drivers Code. The **Transport Operators** are also responsible for reporting any accidents, incidents or near misses to the Quarry Manager.

The **Quarry Manager** shall investigate any community complaints, in accordance with the Community Relations Management Plan.

The **Quarry Manager** is responsible for recording and investigating any transport related accidents, incidents or near misses.

3.9.7 Corrective Actions

The **Quarry Manager** will, following appropriate investigation, inform transport operators of legitimate community complaints, and modified procedures to be followed to prevent repeat complaints.

Where inspection or reporting indicates product spillage or build-up, clean up the product spillage or build-up of gravel/clay material as soon as reasonably practical.

Make changes to procedures/drivers code/signage as necessary to prevent repeat transport related accidents, incidents or near misses.

Following inspection of road and safety signage, undertake maintenance as necessary.

3.9.8 Auditing and Review

The **Quarry Manager** will review the Drivers Code every 2 years to make sure it remains relevant to the site and local situation.

Quarry Manager (or consultant) will keep details of any complaints received, actions taken and details of any transport related accidents, incidents or near misses. These will be communicated with the relevant transport authorities.

3.9.9 Special Conditions

The main haulage route for trucks using the Kin Kin Quarry is the Pomona-Kin Kin Road. This road is narrow, winding and contains numerous hills, 3 single lane bridges and other testing driving conditions, particularly operation of the local School Bus, which need special attention. Accordingly, drivers of haulage vehicles using the Kin Kin Quarry are required to adhere to the following:

Truck Drivers are to be especially wary of oncoming vehicles and ensure that they stick to the LHS of the road at all times.

- A recommended maximum speed to be used on Sheppersons Lane snd the winding 3 km section of the Pomona Kin Kin Road is 40 kmph.
- Truck Drivers are not to overtake other vehicles.
- Single Lane Give Way signs are to be strictly adhered to.
- The School Bus generally operates in school terms between the weekday hours of: 6:30 to 8:00am and 3:00 to 4:30pm. During these times, the quarry will seek to minimize truck movements by re-scheduling product deliveries from the site and discouraging unnecessary truck movements on the Kin Kin Pomona Road, during these hours.
- If the School Bus is encountered along the Kin Kin Pomona Road then it is a requirement that the School Bus must not be overtaken, unless indicated to do so by the Bus Driver, and it is safe to do so.

3.10 Blasting Management Plan

3.10.1 Rationale

Blasting can result in ground vibration and air blast overpressure that may cause annoyance, discomfort and alarm to blast site neighbours or, in extreme circumstances, cause damage to buildings, structures and services.

The objective of the blast management plan is to ensure blasting activities are carried out in accordance with Australian Standard AS2187-2-1993 to minimise any public concerns in relation to ground vibration and air blast overpressure.

3.10.2 Issue/Aspects/Impacts

Blasting for quarry development works can take place several times in a month, but for production blasts the quarry is expected to conduct a blast about once every month over the next few years, once commercial quarry production is established.

There are established and proven design methodologies and technologies for blasting of hard rock at the quarry site, that can ensure any impacts are managed to below acceptable emission thresholds.

Nevertheless, poor blasting practice has the potential to generate unacceptable levels of ground vibration and air blast overpressure, and at a much lower probability, flyrock, dust, and fumes.

3.10.3 Performance Targets

Performance targets for blast management and its environmental impacts are based on DERM's *Noise and Vibration From Blasting* guidance note dated 23rd March 2006. The key provisions from this guidance note are summarized below:

(a) the airblast overpressure is no more than 115dBL (Linear) peak for 9 out of any 10 consecutive blasts;

(b) the airblast overpressure must not exceed 120 dBL peak for any blast;

(c) the ground-borne vibration must not exceed a peak particle velocity of 5mm per second for 9 out of 10 consecutive blasts initiated; and

(d) the ground-borne vibration must not exceed a peak particle velocity of 10mm per second for any blast.

No flyrock greater than 50m from the blast.

3.10.4 Management Procedures and Practice

Blasting will be restricted to between the hours of 09.00am to 03.00pm weekdays (special circumstances aside). Sentries will be placed to prevent any inadvertent access to the site when blasting. Neighbours to the quarry will be advised as soon as is known (normally within 1 to 2 days) of the date and expected time for a forthcoming blast by the quarry. Signage will also be erected on the Noosa Horse Trail to advise trail users that they are approaching the vicinity of a quarry site where occasional blasting occurs (eg monthly, for a few seconds). The trail riders are not at physical risk from the blasts because of the distance from the quarry blasts, but blast noise could startle horses and risk injury to rider and horse. The signage will be prepared in consultation with the Noosa Trail people who are horse riders. Quarry management will be responsible for ensuring that blasting is carried out to minimise the level of air blast overpressure and ground vibration generated.

Quarry management will adopt modern blasting technology (leading industry practices) and blasting risk management practices including securing of the site during the blast. Only suitably experienced and qualified blasting personnel will be employed to provide blasting services. These services may include laser surveying of quarry face profile; blast-hole design and layout; blast-hole deviation measurement; explosives loading and blast initiation planning; priming, loading, stemming and initiation of blast; ground vibration/air blast monitoring; and reporting.

Blast shot loading practices shall be documented and supervised by the Quarry Manager to ensure explosives are appropriately confined by interlocking stemming of sufficient depth and that appropriate burden distances are provided.

A blast plan shall be prepared for each blast shot and shall describe shot hole layout, initiation sequence, charging, stemming type and height, charge weight and any other design element required for good blasting practice, including management of any secondary blasting or breakage that may be required from time to time. The blast plan shall include actions to be taken if levels of induced air overpressure or ground vibration approach maximum permissible levels.

Various options are available for controlling vibration and air blast from blasting activities. Australian Standard AS2187-2-1993 outlines the principal variables that may influence the level of ground vibration and air blast overpressure resulting from blasting. These variables and their relative significance are shown in **TABLE 3 - GROUND VIBRATION AND AIR BLAST CONTROLS.**

TABLE 3 GROUND VIBRATION AND AIR BLAST CONTROLS

VARIABLES	GROUND VIBRATION AND AIR BLAST CONTROLS					
	INFLUENCE ON GROUND MOTION			INFLUENCE ON OVERPRESSURE		
	Significant	Moderately Significant	Insignificant	Significant	Moderately significant	Insignificant
1. Within the control of blasting operators Charge mass per delay (MIC)	X			X		
Delay interval	X			X		
Burden and spacing		X		X		
Stemming: *Amount* *Type*			X X	X X		
Charge length and diameter			X		X	
Angle of blast-hole			X			X
Direction of initiation		X		X		
Charge mass per blast			X			X
Charge depth			X	X		
Covering of detonating cord			X	X		
Charge confinement	X			X		
Blast-hole Deviation	X			X		
2. Not in control of blasting operators General surface			X		X	
Type and depth of overburden	X			X		
Wind and weather Conditions			X	X		

Source: Australian Standard AS2187.2 -1993 Appendix J.

3.10.5 Monitoring and Reporting

- Quarry Manager is to ensure blast monitoring is undertaken to confirm that air blast and ground vibration performance targets are being met. Blast monitoring will be undertaken at the nearest residence to the blast or at an adjacent location as required.
- Additional blast monitoring is to be undertaken to investigate complaint of blasting nuisance upon receipt of request from an administering authority (DERM or DEEDI).
- The Quarry Manager will keep reports and records of any monitoring of air blast and ground vibrations at affected dwellings.

- The Quarry Manager will ensure an up to date list of residents and their addresses, contact details and preferred means of contact is kept at the quarry so that they can be contacted to advise residents of blasting details

3.10.6 Responsibility

- The Quarry Manager is to ensure that suitably experienced/qualified explosive suppliers, drillers, shot loaders and shot firers are used for drill and blast operations at the quarry, and that all matters relating to blasting are carried out in accordance with to this Management Plan.
- All complaints received at the Kin Kin Quarry are to be recorded in the public complaints register. The Quarry Manager is to investigate complaints and take necessary actions to satisfy the complainant.

3.10.7 Corrective Actions

- The Quarry Manager is to personally meet with any person making a complaint and to resolve issues raised by the complainant. The Quarry Manager may request the services of a specialist consultant to assist in blast designs to achieve optimal environmental performance.
- Specialist consultants might be required to give advice on blasting techniques or audit blasting methods if airblast overpressure and/or ground vibration is consistently greater than the nominated performance targets.

3.10.8 Auditing and Review

- The Quarry Manager and shot firer are to undertake continual auditing and review of blast performance.
- Quarry Manager (or consultant) will keep records of monitoring undertaken in the preceding 12 months, compare the monitoring results against relevant legislative requirements, approval conditions and nominated performance targets, and review changes to the extraction or processing activities employed at the site and any complaints received and actions taken.

3.11 Ecological Restoration Plan

3.11.1 Rationale

Land subject to quarrying is intensely disturbed, however the quarry can use buffer land to 'buffer' the quarrying and related activities from the surrounding environment. Buffer land can be used for a variety of purposes which primarily include ecological restoration of the site. Ecological restoration of the site includes rehabilitation and landscaping activities which are designed to

- Provide for the effects of noise, dust and vibration;
- provide for, in so far as is practical, ecologically undisturbed or rehabilitated areas;
- provide for wildlife corridors and habitat;

This Ecological Restoration Plan provides a focus for managing the buffer lands and integrating the various environmental management plans for the site. The Ecological Restoration Plan will be implemented by a specialist restoration ecologist. At this point in time the local land care group has been engaged to complete the works under the supervision of appropriately qualified environmental scientists.

The principal objectives of the Ecological Restoration Plan are to:

- by rehabilitation and land care management practices "restore the land" in so far as is practical to its former ecological state;
- ensure biological resources and biodiversity are managed and maintained in so far as is practical;
- maximise the area of land returned to its former ecological state;
- reduce the potential for erosion, salination and degradation;
- protect the general amenity of the area both during and subsequent to extractive operations; and
- protect and enhance biodiversity environments

Other objectives include:

- restricting land disturbance to that which is essential for the extraction and processing of quarry materials;
- designing post extraction landforms that are stable and compatible with the site and surrounds;
- promoting the use of local native plant species for rehabilitation; and
- minimising long term site maintenance costs

3.11.2 Issues/Aspects/Impacts

Land degradation and management is recognised as an important environmental issue. The whole of the community benefits from ecological restoration and landcare through the prevention and control of land degradation.

The term "ecological restoration" is defined as returning the land in so far as is practical to its former ecological state post development. The term "landcare" describes programs established to address land degradation. The purpose of landcare is to ensure the long term sustainability of land resources by preventing or managing land degradation.

Ecological Restoration involves the completion of specific activities, generally rehabilitation activities, which are designed to commence immediately after a stage of quarry development has been completed. The purpose of the rehabilitation is to in so far as is practical, restore the areas in which quarrying has been completed to it former ecological state.

Contrastingly landcare involves individual property owners sharing experiences and information for community wide action to protect lands including broadacre land systems and catchments.

Extractive industry operations, by their very nature, cause land disturbance and modification of the ecology of particular environment and the landscape. This ecological disturbance and modification has the potential to result in ecological and land degradation over the short term. Activities and facilities which may cause ecological and land degradation include:

- vegetation clearing
- vehicle and mobile equipment movements
- mobile and stationary equipment noise "scaring off" native animals
- indiscriminate waste disposal
- dust deposition
- water use, storage and diversion
- sedimentation
- bush fire
- introduction of weed seeds and pests
- increase in nutrient loads
- fragmentation of bushland and introduction of edge effects
- disturbance to gullies and drainage lines
- offsite truck movements
- multiple land use
- post extraction landform and land use
- chemical storage and handling
- poor rehabilitation and landscaping
- fencing and security

3.11.3 Performance Targets

The principal performance targets for ecological restoration and land care practices relate to the establishment of a stable, self sustaining environment during and subsequent to post extractive operations.

This includes the establishment of vegetation from landscaping activities according to **FIGURE 9: LANDSCAPING, VEGETATION AND FENCING PLAN**.

For the construction phase of the quarry, initial landscape buffers have been established along the western buffer strip near the entrance from RL 80m to RL 65m AHD. This provides shielding from the quarry entrance road to the west of the stockpile area.

Other landscaping actions and milestones planned for completion by March 2012 include:

- established vegetation on all dam and earth embankments that have been hydro-mulched and/or stabilised with geotextile, following completion of the 2011 stormwater and erosion controls works program at the quarry, and
-
- Extension of the western landscaped buffer strip to RL 90m and RL 105m AHD using as a guide the planting schedule in **FIGURE 12 PLANTING LAYOUT**.

The landscaped western buffer strip will be progressively vegetated to the top of the hill over the next 2 years.

3.11.4 Ecological Restoration and Management Practices

Topsoil/Plant Growth Media Management Successful ecological restoration consists of rehabilitation and land management techniques. The success of the restoration works is primarily determined by the availability of good quality plant rooting media and using suitable endemic species with. To achieve success during ecological restoration appropriate topsoil stripping and handling measures will be employed to ensure the availability of good quality plant rooting media for use in ecological restoration works.

Landform Management

The final landform will generally be determined by the practicalities and economics of extraction and the overarching quarry development plans. The resulting landform will be in the main determined by the need to extract the material available pursuant to the quarry development plans.

Reasonable and practicable control measures may include but are not limited to:

- delineating on the ground with durable markers the approved extent of extraction
- flattening the terminal batters to the maximum practicable extent, particular if the final batters are to be revegetated.
- utilising overburden and like waste materials for landforming
- progressively reshaping and trimming the terminal batters using earthmoving equipment to the rehabilitation design profiles.
- ensuing terminal batters have gradients suitable for maintaining a permanent vegetation cover, if applicable.
- rounding or marrying terminal batters into the natural ground surface to prevent toppling subsidence and slumping
- barring down loose rock
- providing access to the terminal batters to allow the rehabilitation activities
- installing permanent drainage structures to control runoff.

Vegetation Establishment and Enhancement

Management measures for vegetation establishment and enhancement are provided in the Rehabilitation Management Plan.

Erosion and Stormwater Controls

Drainage, erosion and sediment controls are presented in the Water and Erosion Management Plan.

Weed Control and Management

Weeds (and declared plants) can affect the establishment of vegetation and can significantly affect the quality of bufferland habitat. The Land Protection (Pest and Stock Route Management) Act 2002 requires that declared weeds and plants be controlled to;

- prevent the introduction and establishment of new pests in Queensland;
- prevent the spread of established pest plants into new areas; and
- reduce the extent of existing infestations where feasible.

Reasonable and practicable weed control measures may include but are not limited to:

- ensuring equipment entering a site is free of soil and vegetation, both externally (viz. tracks/tyres, underbody, engine bay, radiator, buckets, body, chassis, trays, blades) and internally (viz. cabins, tool boxes, storage compartments)
- using materials such as mulches, seeds and seedlings for rehabilitation purposes, which are certified as declared pest free

- spraying of disturbed areas and bufferland to control weeds. Only herbicides approved by the Department of Natural Resources, Mines and Energy should be used for weed control.

Fire Control

Fire control measures are necessary for ensuring plant and equipment, stock and bufferland vegetation is protected from fire. Reasonable and practicable fire control measures may include but are not limited to:

- installing fire controls between surrounding land and the site (the location and type of firebreak needed requires careful consideration. A poor firebreak would not only offer little fire protection but may create a significant erosion problem. Generally fire controls should be located in proximity to site boundary fencing);
- maintaining fire controls in good condition; (Note topsoil must not be disturbed during the construction and maintenance of fire controls)
- carrying out fuel reduction burns within bufferland at a frequency approved by the Department of Natural Resources and Mines, Environmental Protection Agency, local fire warden and Local Authority;
- obtaining a permit and advice from the local fire warden prior to any burns;
- only carrying our burns during favourable weather conditions;
- ensuring burns can be adequately controlled by deployment of site personnel and equipment;
- deploying mobile equipment to fight bushfires if requested by the local fire warden; and
- ensuring adequate water is available onsite to fight fires.

Maintenance and rehabilitation of gully lines, waterways and water storages

Ephemeral drainage lines and gullies as well as water storages will be managed to:

- minimise water quality impacts
- control declared weeds established in either land or water
- where practical, integrated into site landscaping and post extraction rehabilitation plans (eg vegetated linkages)

Permanent diversion drains established as part of the quarry works will include fauna friendly design features following advice from fauna/flora experts.

3.11.5 Monitoring and Reporting

The **Quarry Manager** should carry out an inspection of work areas, protected areas, rehabilitated areas and bufferland regularly to identify:

- areas where weed control and/or vegetation enhancement is required (six monthly);
- effectiveness of installed drainage, erosion and sediment controls (monthly and following major rainfall events);
- condition of topsoil stockpiles (quarterly);
- areas where landscaping and revegetation are required (quarterly)

The **Quarry Manager** shall record the results of inspections and prepare actien plans for capital works and maintenance.

3.11.6 Responsibility

The **Quarry Manager** shall be responsible for overseeing the implementation of ecological restoration activities associated with good landcare practices and shall ensure that all persons undertaking work in landcare have the required competencies and are appropriately instructed and supervised.

3.11.7 Corrective Actions

Corrective actions will be taken by the **Quarry Manager** if inspections or reports indicate:

- weed infestation
- high fuel loads
- excessive erosion
- waterway impacted by sediment
- presence of vermin, feral animals or pests
- uncontrolled fire
- loss or damage to natural vegetation communities or landscaped or rehabilitated areas

3.11.8 Auditing and Review

Quarry Manager (or consultant) will keep a summary of the landcare management activities in the preceding 12 months, and review changes to the extraction or processing activities employed at the site.
The **Quarry Manager** shall review the Land Management Plan as required and at least once every three (3) years.

3.12 Community Relations Management Plan

3.12.1 Rationale

The Kin Kin quarry operation is located in a rural community. As a member of the local community, the operator has obligations to meet and discuss issues and concerns raised by surrounding land users relating to the day to day operation of the quarry.

The objective of the Community Relations Management Plan is to foster good relationships and co-operation with the local community.

3.12.2 Issues/Aspects/Impacts

The local community has an interest in ensuring that sound quarry management is carried out and that amenity and environmental values are protected.

Quarry activities that may be of interest to the local community include;

- land clearing, and topsoil and overburden stripping (biodiversity, noise, dust and water quality);
- rock drilling, blasting and quarry bench development (noise, air blast, ground vibration, dust, visual amenity and water quality);
- raw product handling and haulage (noise, dust and water quality);
- crushing and screening activities (noise, dust and water quality);
- product outloading and haulage (noise, dust and water quality);
- vehicle movements on and off the site (noise, dust, water quality and public safety);
- maintenance works (noise and water quality);
- rehabilitation and enhancement programs (noise, dust, water quality, sequential land use and visual amenity); and
- land management (fire control, pests and water quality).

3.12.3 Performance Targets

There are no specific legislative requirements for achieving good community relations.
The general target for the Kin Kin Quarry is to prevent repeated complaints.

3.12.4 Management Procedures and Practice

A protocol for settling complaints has been prepared and sets out specific procedures and timeframes for dealing with complaints. This protocol is reproduced on the next page.

The quarry shall implement an 'open door policy' with the local community and welcome community members to visit the quarry and observe activities on the site.

PROTOCOL FOR SETTLING COMPLAINTS

Objective

To ensure that there is response to all complaints and that reasonable complaints are investigated and appropriate action is taken.

Complaint Recording

All complaints relating to the operation of the quarry must be recorded in a log book with the following details:

(i) time, date and nature of complaint including urgency and significance

(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) names of persons responsible for receiving and/or investigating complaint

(vi) action taken as a result of the complaint investigation and signature of responsible person

Investigating Complaints

All complaints should be investigated. The investigations should include:

- determining what activities (and equipment) were being carried out or operated at the time of the complaint
- determining whether, at the time of the complaint, normal day to day activities were conducted or whether new activities were conducted (viz. operation of new plant and/or equipment, or operation of equipment in a new location on the site)
- identifying whether equipment or activities on the extractive industry site were the source of complaint (or whether other activities in the locality were the cause of the complaint)
- determining what potential actions may be carried out to resolve complaint and/or minimise the likelihood of further complaint

Resolving Complaints

Resolving complaints will be necessary to ensure that a good relationship with landholders in the locality is fostered.

Resolving complaints involves determining what actions are required to resolve the complaint and to reduce the likelihood of further complaints.

To ensure that a person making the complaint is satisfied with the actions taken (if actions are required) to resolve the complaint, contact should be made with the complainant following the carrying out of investigations/actions to ensure that the complaint has been satisfactorily resolved.

Complaint Log Book

A complaint log book/register will be kept at the site office.

Management Responsibility

The Quarry Manager will be responsible for ensuring all employees at the quarry site are familiar with the procedure for complaint recording.

Employee Responsibility

Employees receiving a complaint are required to record the complaint and notify the Quarry Manager that the complaint has been received.

Employees are to show respect and understanding to complainants.

PERFORMANCE TARGETS

Complaints are to be investigated within two working days of complaint being received.

Confirmation by the complainant within one month of completion of investigations of the complaint, that the issue has been satisfactorily resolved.

No repeated complaints.

3.12.5 Monitoring and Reporting

If monitoring is undertaken, the **Quarry Manager**, or the consultant commissioned to undertake the study/survey, will provide an objective summary of the results of the survey to the complainant. Actions resulting from commissioning of a study will also be provided to the complainant.

The **Quarry Manager** will at least annually update records of property owners and contact details within one (1) km of the quarry.

The **Quarry Manager** shall maintain a register of all environmental complaints received in accordance with the protocol for settling complaints.

Upon assessing the complaint to the best practical extent, the **Quarry Manager** will record the actions taken to settle the complaint in the complaints register.

3.12.6 Responsibility

The **Quarry Manager** upon consideration of the complaint, will if possible, personally investigate the issue raised by the Complainant. The Quarry Manager may commission an investigatory study to determine whether the complaint can be substantiated.

Employees receiving a complaint are required to record the complaint and notify the Quarry Manager that the complaint has been received.

3.12.7 Corrective Actions

The **Quarry Manager** will ensure that actions to reduce the likelihood of further complaints will be undertaken.

3.12.8 Auditing and Review

Quarry Manager (or consultant) will keep records summarising any complaints received in the preceding 12 months, and review changes to the extraction or processing activities employed at the site. Any actions carried out in response to a complaint will also be included in the Annual Return Report. In addition, the *Protocol for Settling Complaints* will be reviewed, and modified where necessary.

3.13 Monitoring and Auditing Management Plan

3.13.1 Rationale

Environmental monitoring can provide information to assess whether environmental performance targets and legislative requirements have been achieved. Monitoring can also be used as a management tool to assess whether additional or modification of existing environmental management measures is required to protect the amenity of surrounding land and environmental values.

The objective of the Monitoring and Auditing Management Plan is to ensure that monitoring and auditing is carried out to assess compliance with any legislative requirements / nominated performance targets and whether environmental management practices have been successful in protecting the amenity of surrounding areas.

3.13.2 Issues/Aspects/Impacts

It is inevitable that during the life of an extractive industry operation, environmental monitoring will be carried out. Environmental monitoring may be carried out;

- during a complaint investigation;
- to assess compliance with any nominated performance targets; and
- to assess the effectiveness of environmental management practices employed;
- following a request from a local authority or the Environmental Protection Agency.

Monitoring may either be qualitative (for example, visual surveillance) or quantitative (for example, measuring sound levels at a near residence).

3.13.3 Performance Targets

The performance targets for the Kin Kin Quarry, under this Management Plan shall be;

- Monitoring shall be carried out, as required by the Environmental Management Plan
- An Annual Return Report will be prepared within one month prior to the anniversary of the issue of the environmental authority, as required by the Environmental Management Plan

3.13.4 Management Practices

Management will adopt standard monitoring and reporting requirements to ensure the legitimacy of the results over the life of the project and to enable trends to be detected.

The following should be recorded for all monitoring undertaken;

- reason for carrying out the monitoring
- location/s where monitoring was conducted (description and plan showing the monitoring location/s);

- the monitoring method (qualitative and/or quantitative)
- description of the monitoring location/s including observations made (qualitative measurements – for example sampling depth, visible water quality or audibility of noise)
- prevailing weather conditions;
- the name of the person carrying out the monitoring;
- method of monitoring (for example photograph, grab sample, survey, field measurements)
- the type, model, serial number and calibration of any monitoring equipment used;
- sampling/measurement date and time, including the measurement duration/period;
- parameters measured, including units of measurement;
- measurements taken or monitoring results (for example noise levels or water quality measurements)
- any standards, guidelines or protocols in which monitoring was carried out in accordance with (for example, noise monitoring carried out in accordance with the Noise Measurement Manual).

Monitoring records and results shall be kept at the site office for a period of at least 5 years. Management shall make available monitoring results following a written request from the local authority, Environmental Protection Agency or other relevant stakeholder.

The results of monitoring during a complaint investigation should be made available to the complainant, along with any additional measures which have been undertaken to resolve the complaint.

The Monitoring Schedule is included as **TABLE 4**.

TABLE 4
KIN KIN QUARRY MONITORING SCHEDULE

Environmental Aspect	Monitoring Frequency
Dust Deposition	Monthly
Complaints	As Received
Noise	Following Complaint; Daily Surveillance
Visible Dust	Daily surveillance
Flyrock	Event Inspection
Blast Report	Each Blast Event
Blast Charge Weight	Each Blast Event
Ground Vibration	Each Blast Event
Blast Overpressure	Each Blast Event
Fire Controls	Bi-annual Inspection
Bushfire Fuel Load	Bi-annual Inspection
Buffer Areas	Annual Inspection
Weeds	Six monthly Inspection
Erosion	After rainfall event & at least monthly inspection
Animal Pests	Annual Inspection
Review Employee and Contractor Environmental Competencies	New employee on commencement Existing employees on an annual basis
Site Signage	Inspect Annually
Integrity of Bunds, Packaging and Liquid Storage	Quarterly
Record and Track Regulated Waste Disposal	Event
Inspect Waste Storage Facilities	Quarterly
Update Material Safety Data Sheets	Event and Annually
Inspect Oil, Grease and Fuel Stores	Monthly
Inspect Rehabilitation Works	1 Month after Planting 3 months after Planting 6 months after Planting 12 months after Planting 2 years after Planting
Stormwater Structures	Following major rainfall events
Surface Water Quality	During discharges and following major rainfall events

3.13.5 Monitoring and Reporting

The **Quarry Manager** shall ensure that a suitably experienced person;

- Compares the monitoring results with the legislative requirements and/or nominated performance targets; and
- Assesses/reviews additional environmental management practices which may be required to ensure legislative requirements and/or nominated performance targets are met.
-

The results of the above shall be recorded in a suitable form for review by quarry management.

3.13.6 Responsibility

The **Quarry Manager** is responsible for ensuring that all monitoring required by the Management Plans in this document are carried out in a timely manner

The **Quarry Manager** is responsible for ensuring that monitoring is carried out by experienced personnel.

The **Quarry Manager** is responsible for ensuring that all monitoring results are recorded in a consistent fashion, and the results are stored for easy retrieval.

The **Quarry Manager** is responsible for ensuring that monitoring results are assessed and reported on by a suitably qualified person.

The **Quarry Manager** is responsible for ensuring that any additional monitoring or changes to management practices recommended from the review of monitoring records by a suitably qualified person) be implemented in a timely manner.

3.13.7 Corrective Actions

Where monitoring or reporting has not been carried out as required in these Management Plans – carry out the monitoring as soon as reasonably practical.

3.13.8 Auditing and Review

Quarry Manager (or consultant) will keep records summarising monitoring undertaken in the preceding 12 months, compare the monitoring results against relevant legislative requirements, licence conditions and nominated performance targets, and review changes to the extraction or processing activities employed at the site and any complaints received and actions taken.

3.13.9 Reporting of Results to Council

The **Quarry Manager (or consultant)** will provide an annual environmental compliance monitoring report and also an annual audit report to council during the life of the project. Each report will provide a written discussion of results and also recommendations and necessary actions which are required to ensure continued compliance. Each area of the EMP assessed should be audited against the approved EMP.

3.14 Waste Management Plan

3.14.1 Rationale

Un-Managed wastes can detract from the amenity of the site and the locality, contaminate land and water and constrict post extraction land uses, attract vermin and pose a fire risk.

The objective of the Waste Management Plan is to minimise wastes generated by quarry activities and to control disposal of waste.

3.14.2 Issues/Aspects/Impacts

Principal wastes at an extractive industry site may include, but not necessary limited to;

- paper and general wastes from the office, workshop and amenities;
- scrap metals from fabricating, maintenance and construction activities;
- conveyor belts, crushing cones/plates and screens from processing plants;
- overburden and stone mixed with overburden
- crusher dust or other by products of production;
- water from truck washdown facilities, washing plants and cleanups;
- chemicals, solvents and paints
- oils and grease from plant, equipment and vehicle servicing;
- used machinery and equipment;
- consumables such as batteries, tyres and oil filters
- silt and fines from sediment basins;
- used containers, drums, bags and packaging;
- water from sediment basins and sewage treatment systems;
- general rubbish, litter and miscellaneous items

The management of oils, greases, fuels and chemicals is detailed in the Oil, Greases, Fuels and Chemicals Management Plan

3.14.3 Performance Targets

The Environmental Protection (Waste Management) Policy 2000 (EPP (Waste)) came into force in July 2000 and provides a statutory basis for waste management, for protection of environmental values and provides a framework for managing environmental impacts.

The objective of the EPP (Waste) is to protect and enhance environmental values. The EPP (Waste);

"(a) identifies environmental values to be enhanced or protected; and

(b) provides a framework for the administering authority to make consistent and fair decisions that—

(i) ensure waste is managed in a way that is consistent with ecologically sustainable development; and

(ii) minimise the impact of waste on the environment including, in particular, the impact of waste so far as it directly affects human health; and

(iii) minimise the amount of waste generated from all sources; and

(iv) promote efficiency in the use of resources; and

(v) promote the maximum use of wastes as a resource; and

(vi) otherwise achieve continuous improvement in the standard of waste management activities; and

(c) provides for the preparation of waste management programs to—

(i) minimise the amount of waste generated; and

ii) promote efficiency in the use of resources; and

(d) provides for the preparation of industry waste reduction programs; and

(e) provides for government planning for waste management.

The EPP (Waste) nominates a waste management hierarchy in a preferred order of adoption. The hierarchy is as follows;

1. *waste avoidance*
2. *waste re-use*
3. *waste recycling*
4. *energy recovery from waste*
5. *waste disposal.*

The performance target for the Kin Kin Quarry will be to manage its wastes in accordance with the EPP (Waste).

3.14.4 Management Practices

Waste Avoidance

Waste avoidance relates to preventing the generation of waste or reducing the amount of waste generated. Reasonable and practicable measures for achieving waste avoidance may include, but are not necessarily limited to;

- input substitution (using recyclable materials instead of disposable materials, for example using oil delivered in recyclable steel drums instead of non-recyclable plastic containers
- increased efficiency in the use of raw materials, energy, water or land (purchasing consumables in bulk (viz. large containers) rather than in small quantities)
- product redesign
- improved maintenance and operation of equipment (keep equipment in good working order to reduce wear and overhaul)
- closed-loop recycling
- undertaking an assessment of waste minimisation opportunities from time to time

Waste Reuse

Waste re-use refers to re-using waste, without first substantially changing it's form. Reasonable and practicable measures for reusing waste may include, but are not necessarily limited to;

- recovering and separating solvents, metals, oil, or components or contaminants and reusing separated solvents for degreasing plant and equipment
- applying waste processing fines to land in a way that gives agricultural and ecological benefits (using silts in rehabilitation activities)

- using water collected in sediment traps for irrigation of bufferland or rehabilitated areas and dust control
- scaling, washing, treating overburden and dirty rock to more fully utilise the extractive resource
- using overburden for constructing bunds and landforming
- using silt/sediment in rehabilitation

Waste Recycling

Waste recycling refers to treating waste that is no longer useable in it's present form and using it to produce new products. Reasonable and practicable measures for reusing waste may include, but are not necessarily limited to;

- recovering oils, greases and lubricants for collection by a licensed oil recycling contractor.
- recovering, separating and recycling packaging (including paper, cardboard, steel and recyclable plastics
- recycling used plant and equipment to the maximum practicable extent
- finding alternatives to disposal of non-recyclable materials (using conveyor belts for noise attenuation, mudflaps, ute tray liners
- providing suitable receptacles and storage areas for collection of materials for recycling.

Energy Recovery from Waste

This refers to recovering and using energy generated from waste. Reasonable and practicable measures may include, but are not necessarily limited to;

- Separating wastes and outloading to a licensed waste disposal facility which can burn the waste to generate heat for industrial processed or electricity (such as tyres for cement manufacture or vegetation for electricity generation)

Waste Disposal

This refers to disposing of waste which cannot be otherwise reused, recycled or used for energy recovery. Reasonable and practicable measures may include, but are not necessarily limited to;

- regulated wastes must be transported and disposed of in accordance with the Environmental Protection (Waste) Policy
- disposal to a licensed waste disposal facility (viz landfill or transfer station)
- disposal of effluent from on site sewerage plants in accordance with AS1547 or licensed waste disposal

3.14.5 Monitoring and Reporting

The **Quarry Manager** shall ensure that a system is in place to record and track waste disposal in accordance with the Environmental Protection (Interim Waste) Regulation and the Environmental Protection (Waste Management) Regulation 2000.
Regular (monthly) visual inspections of waste storage areas should be carried out to ensure that;

- containers are not overflowing, and becoming a visual blight
- odours are not causing a nuisance to employees or neighbours
- weeds and / or vermin are not becoming established
- the waste holding facilities have not become a fire risk

3.14.6 Responsibility

The **Quarry Manager** shall ensure all employees and contractors are made aware of the Waste Management Plan and the objective to reduce waste.

The **Quarry Manager** will ensure that the waste treatment measures are implemented at the quarry.

The **Quarry Manager** will ensure that temporary waste storage areas are signed, waste and recycling bins are emptied when full and materials which may cause land contamination are not disposed of on the site.

The **Quarry Manager** shall ensure that regular (monthly) inspections of waste storage areas are undertaken.

All **Quarry Employees** will be responsible for ensuring wastes are temporarily stored in the designated areas and that recycling is undertaken to the maximum practical extent.

The **Quarry Manager** shall ensure that a system is in place to record and track waste disposal in accordance with the Environmental Protection (Interim Waste) Regulation and the Environmental Protection (Waste Management) Regulation 2000.

3.14.7 Corrective Actions

Where inspections of waste holding areas indicate problems with overflowing bins, odour, weeds, vermin or fire risk, the **Quarry Manager** shall arrange for remedial actions to take place as soon as reasonably practical (i.e. remove waste to licensed waste facility).

3.14.8 Auditing and Review

Quarry Manager (or consultant) will keep records summarising monitoring undertaken in the preceding 12 months, compare the monitoring results against relevant legislative requirements, licence conditions and nominated performance targets, and review changes to the extraction or processing activities employed at the site and any complaints received and actions taken.

The **Quarry Manager** shall review the Waste Management Plan as required and at least once every three (3) years.

3.15 Oil, Grease Fuel, and Chemical Management Plan

3.15.1 Rationale

Quarry operations have the potential to contaminate land and water in and surrounding the site by the release of oils, greases, fuels and other hazardous substances. Contamination can be prevented by the implementation of control measures.

The objective of the Oil, Grease, Fuel and Chemical Management Plan, is to prevent the contamination of land or water and to prevent land contamination.

3.15.2 Issues/Aspects/Impacts

Various chemicals are likely to be used and/or stored on the site. These chemicals could include;

- distillate (fuel for stationary and mobile engines)
- oils (lubricants and hydraulic oils for stationary and mobile equipment)
- greases (lubrication of equipment)
- solvents (degreasing and cleaning of engine parts)
- paints and paint thinners (maintenance of equipment, buildings and signs)
- explosives (chemicals used in blasting)
- miscellaneous chemicals (weedicides, additives to products, cleaning agents etc)

3.15.3 Performance Targets

The performance targets for the Kin Kin Quarry are;

- No major spills of oils, greases, fuels or other hazardous chemicals and compliance with relevant Australian Standards.

3.15.4 Management Procedures and Practice

Management procedures for oils, greases, fuels and chemicals used at the quarry will include:

-
- maintaining all material/chemical safety data sheets and information relating to the storage, use and handling of chemicals at the site office, and at the location of use;
- inducting all new employees on the use and handling of chemicals;
- preparing an accidental spill containment and cleanup protocol;
- storing flammable and combustible liquids in accordance with AS19404;
- storing and handling corrosive materials in accordance with AS37805;

---

4 AS1940 - 1993:
The storage and handling of flammable and combustible liquids. Australian Standards.

- disposing of unused or unwanted substances that have the potential to contaminate the site in accordance with statutory requirements;
- storing and handling laboratory chemicals in accordance with AS2243.106,
- transporting chemicals in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)7;
- maintaining the site in a neat and tidy condition; and
- providing and maintaining spill containment and cleanup kits at the workshop and primary crusher.

3.15.5 Monitoring and Reporting

Each month the **Quarry Manager** will inspect the integrity of chemical stores, oil storages and fuel stores. This will include the inspection of bunds, enclosures or collection trays.

Monitoring results and integrity tests for fuel storages will be kept at the quarry office.

The location, volumes and chemicals involved in major spills will be reported to the Environmental Protection Agency and the Noosa Shire Council. Appropriate reporting forms are included as **APPENDIX 1 AND 2**.

3.15.6 Responsibility

All employees will be responsible for the safe day to day handling, use and storage of chemicals.

The **Quarry Manager** shall be responsible for ensuring all employees and contractors are aware of the requirements of the Oil, Grease, Fuel and Chemical Management Plan.

The **Quarry Manager** shall be responsible for training employees in the procedures for safe use of chemicals on site, where the use of such chemicals is a day to day requirement for their job.

The **Quarry Manager** shall be responsible for training all employees on the procedure for containing and cleaning up of chemical, oil and fuel spills.

The **Quarry Manager** shall be responsible for notifying the Environmental Protection Agency and the Noosa Shire Council of the location, volumes and chemicals involved in major spills.

3.15.7 Corrective Actions

Spillage and contamination will be immediately contained and a program designed to remediate any contamination will be implemented.

Oils and grease spills will be cleaned up and materials disposed of in accordance with statutory requirements.

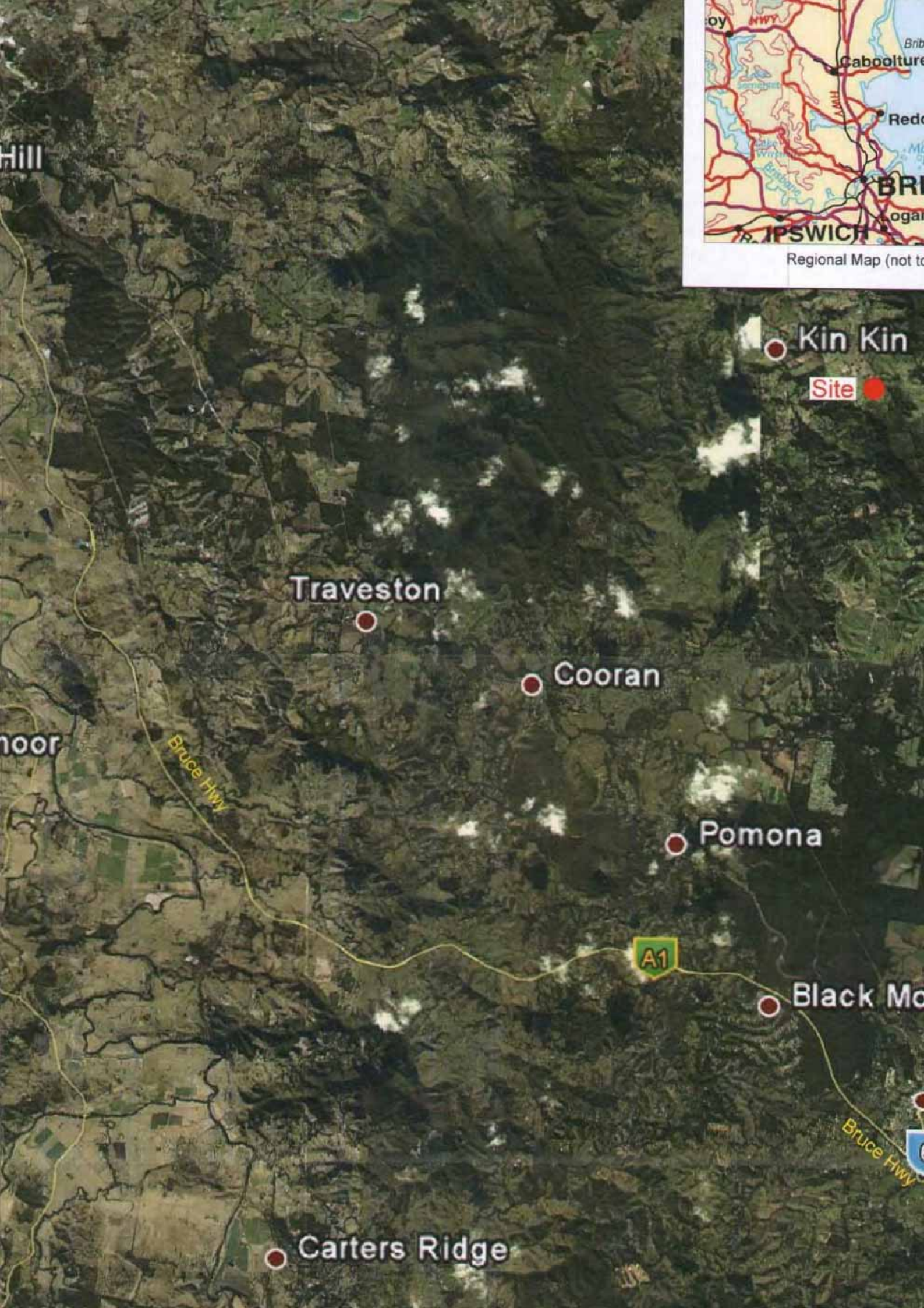
Repair of bunds, enclosures or collection trays will be where inspection has found them to be damaged, or otherwise not in good order.

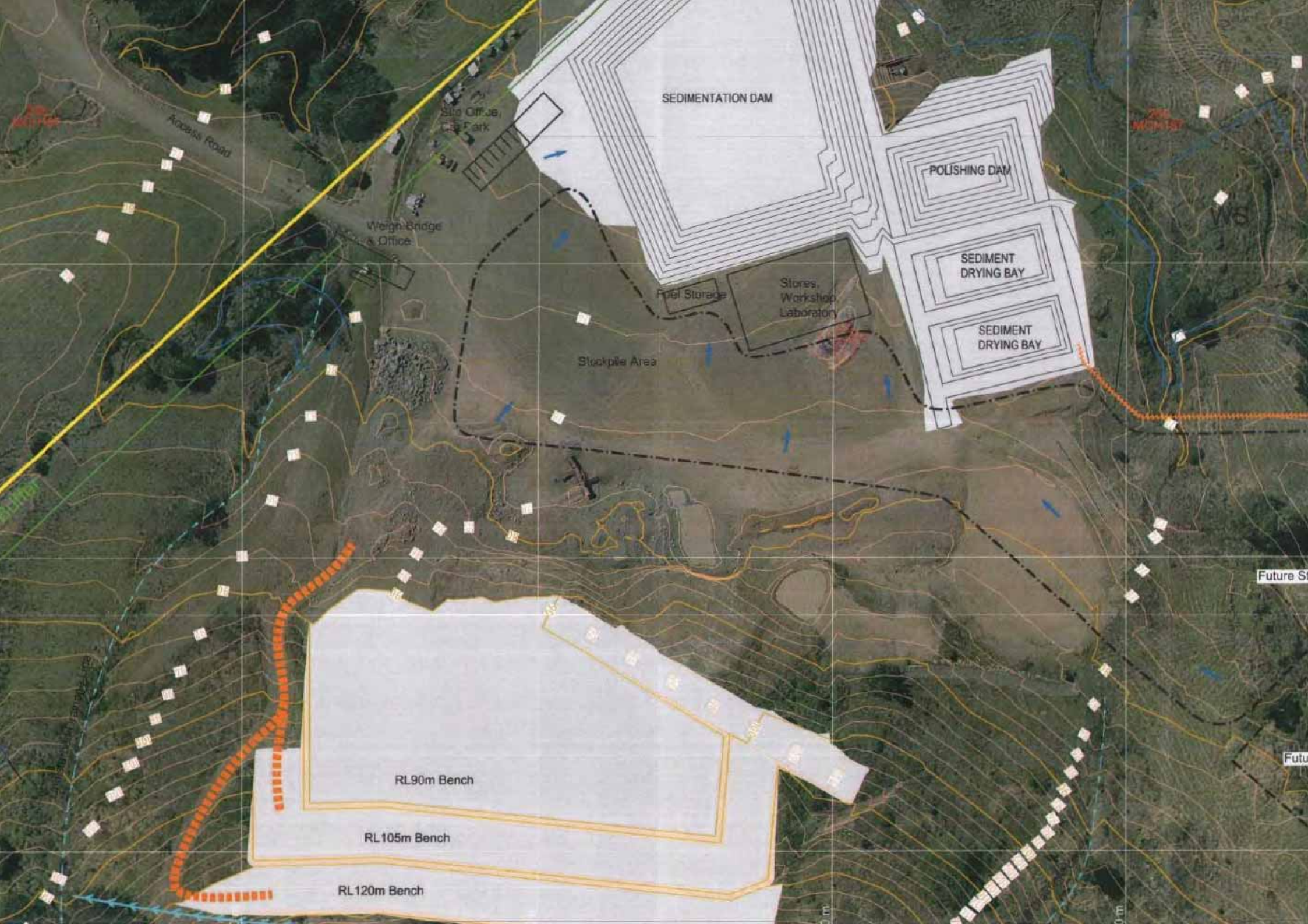
---

5 AS3780 - 1994:
The storage and handling of corrosive substances
6 AS2243.10 - 1993:
Storage of Chemicals. Australian Standards
7 Federal Office of Road Safety (1992):
The Australian Dangerous Goods Code, Sixth Edition, Australian Government Publishing Service.

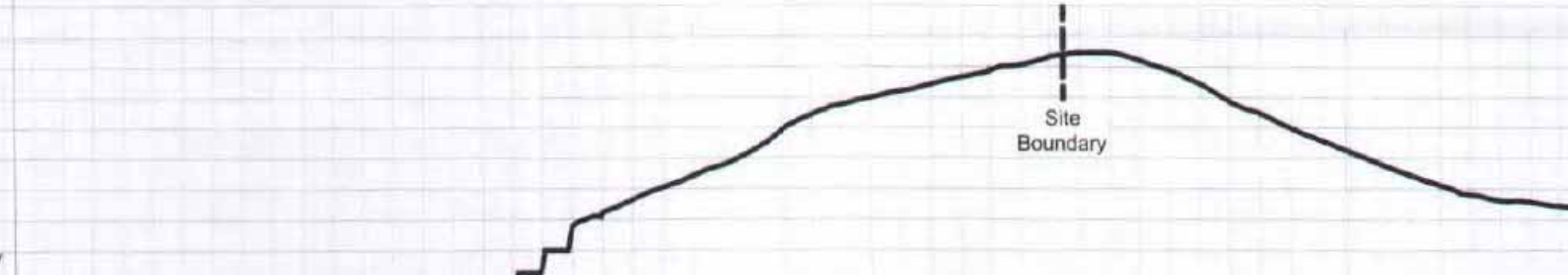
3.15.8 Auditing and Review

Quarry Manager (or consultant) will keep records of monitoring undertaken in the preceding 12 months, compare the monitoring results against relevant legislative requirements, licence conditions and nominated performance targets, and review changes to the extraction or processing activities employed at the site and any complaints received and actions taken.

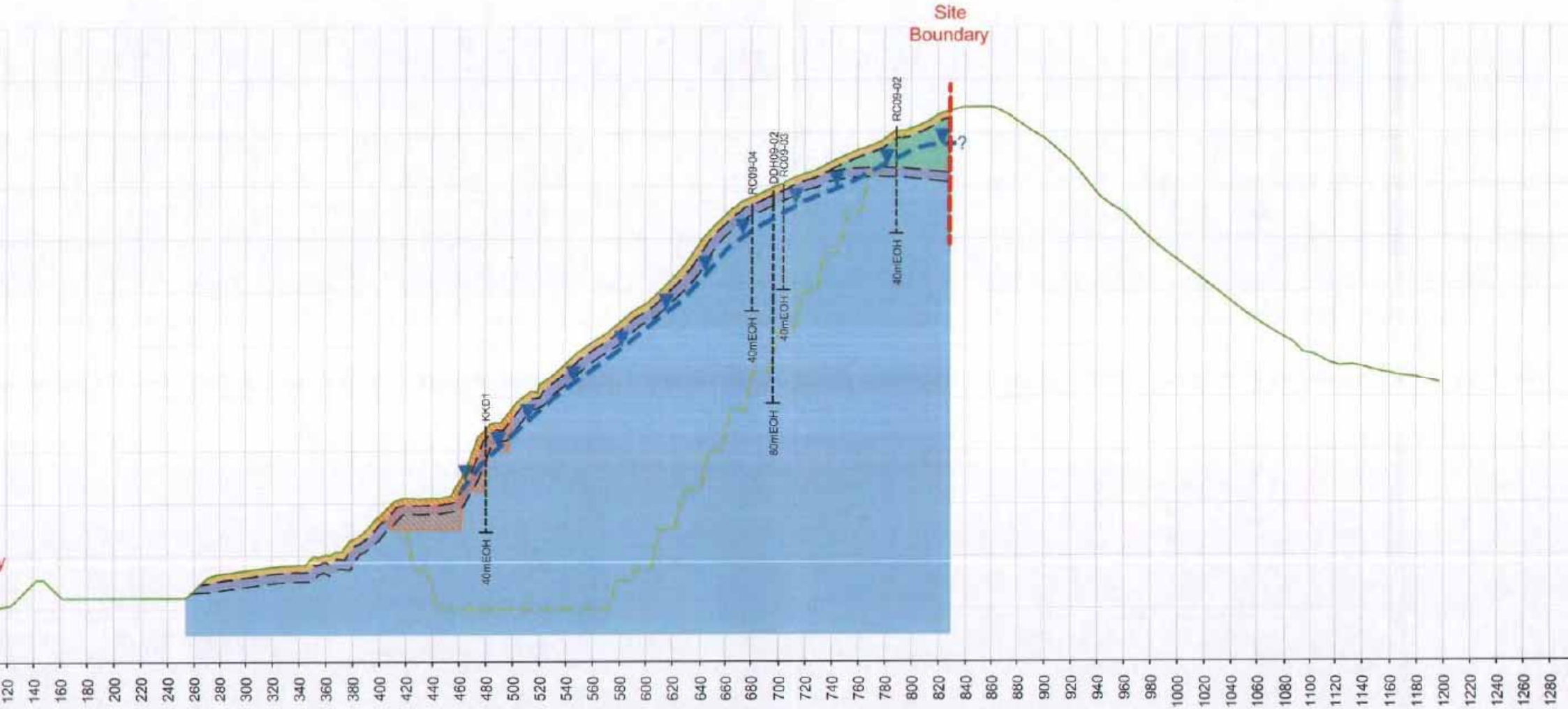

Hill
Kin Kin
Site
Traveston
Cooran
noor
Bruce Hwy
Pomona
A1
Black Mo
Bruce Hwy
Carters Ridge
Caboolture
IPSWICH
Regional Map (not to

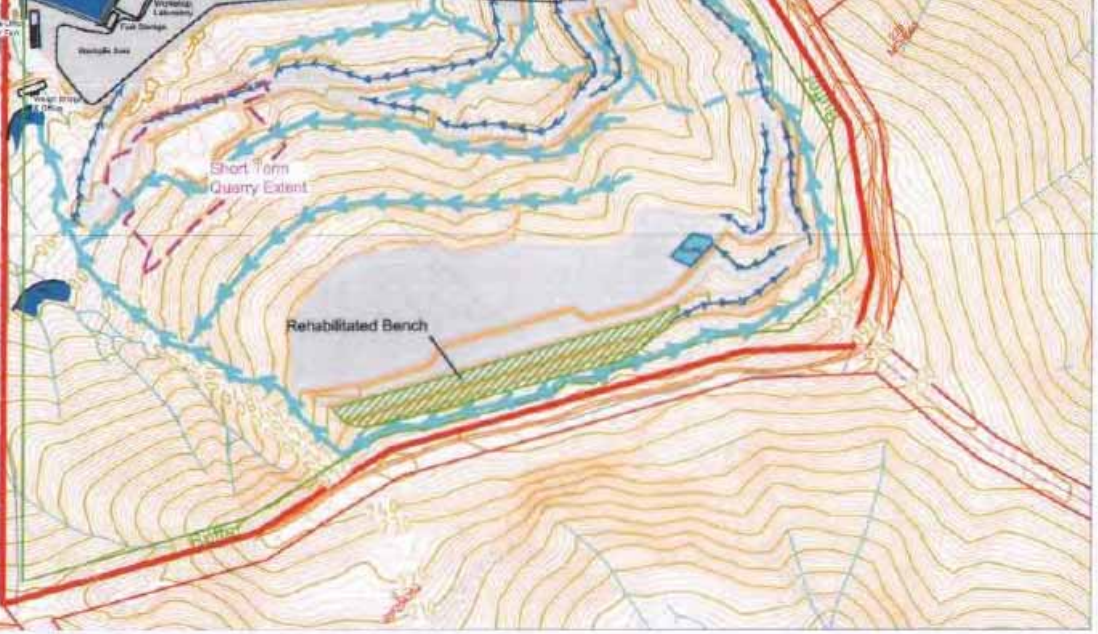

SEDIMENTATION DAM
POLISHING DAM
SEDIMENT DRYING BAY
SEDIMENT DRYING BAY
Site Office, Car Park
Access Road
Weigh Bridge & Office
Fuel Storage
Stores, Workshop, Laboratory
Stockpile Area
RL90m Bench
RL105m Bench
RL120m Bench
Future St
Futu


Quarry Sump
KKD1
RC09-04
RC09-03
DDH09-02
RC09-02

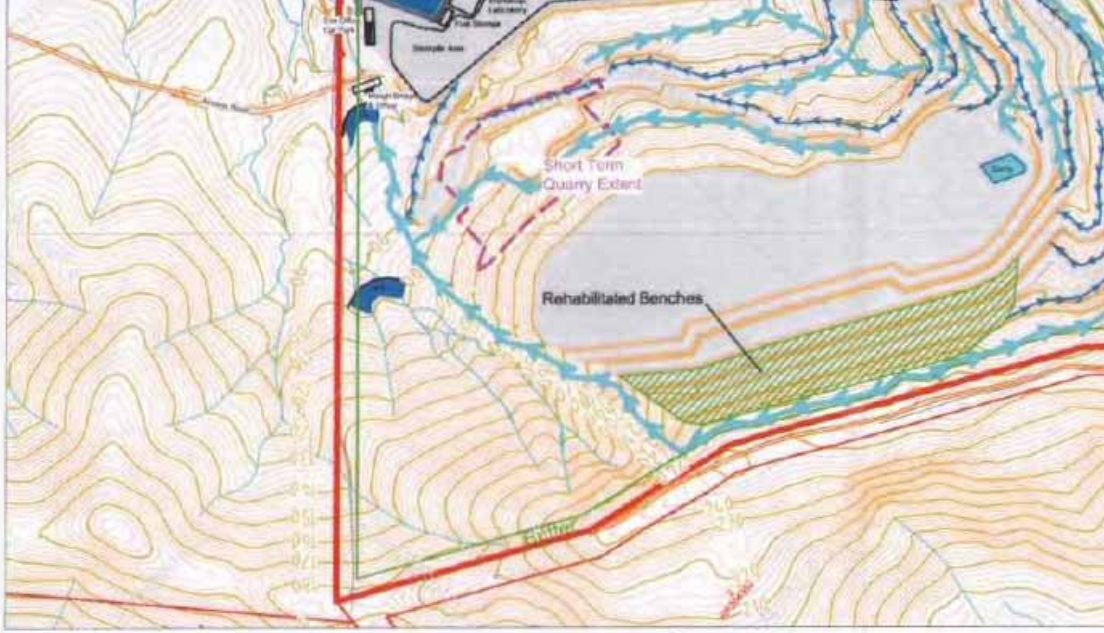

Site
Boundary

Vertical Exaggeration 2:1

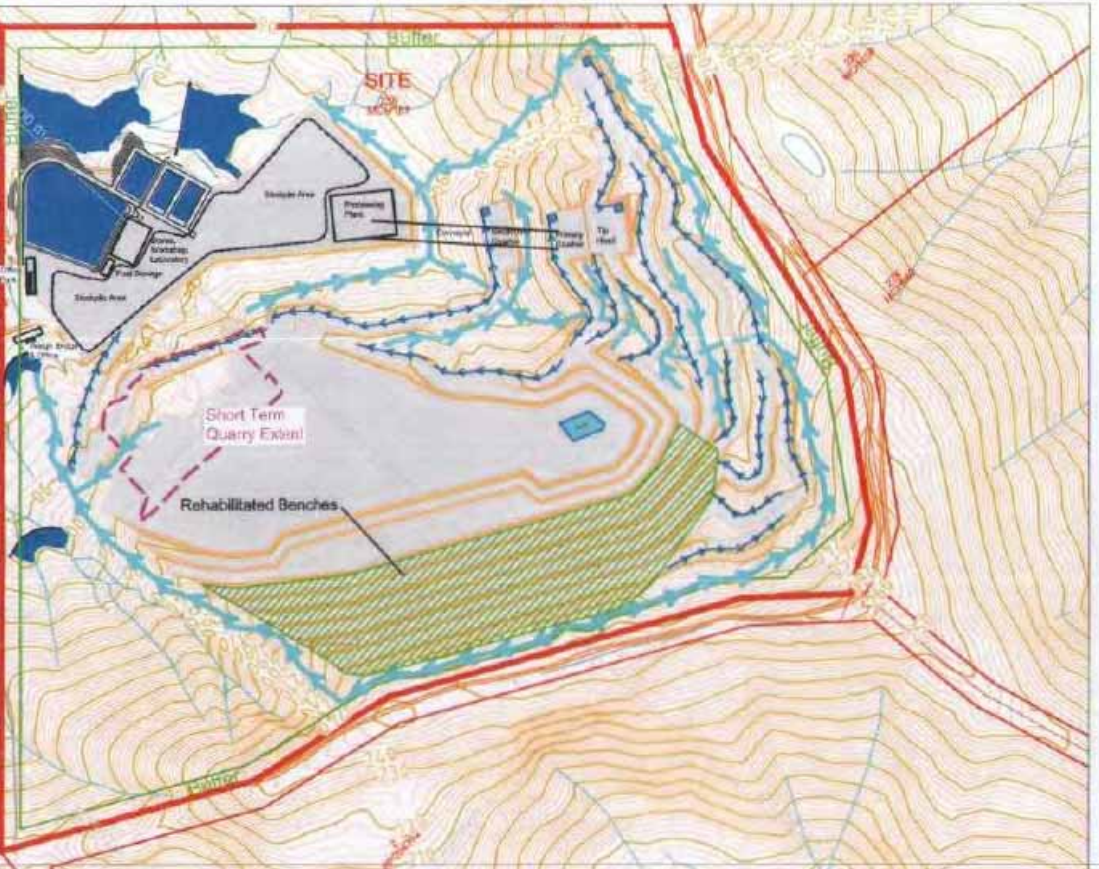


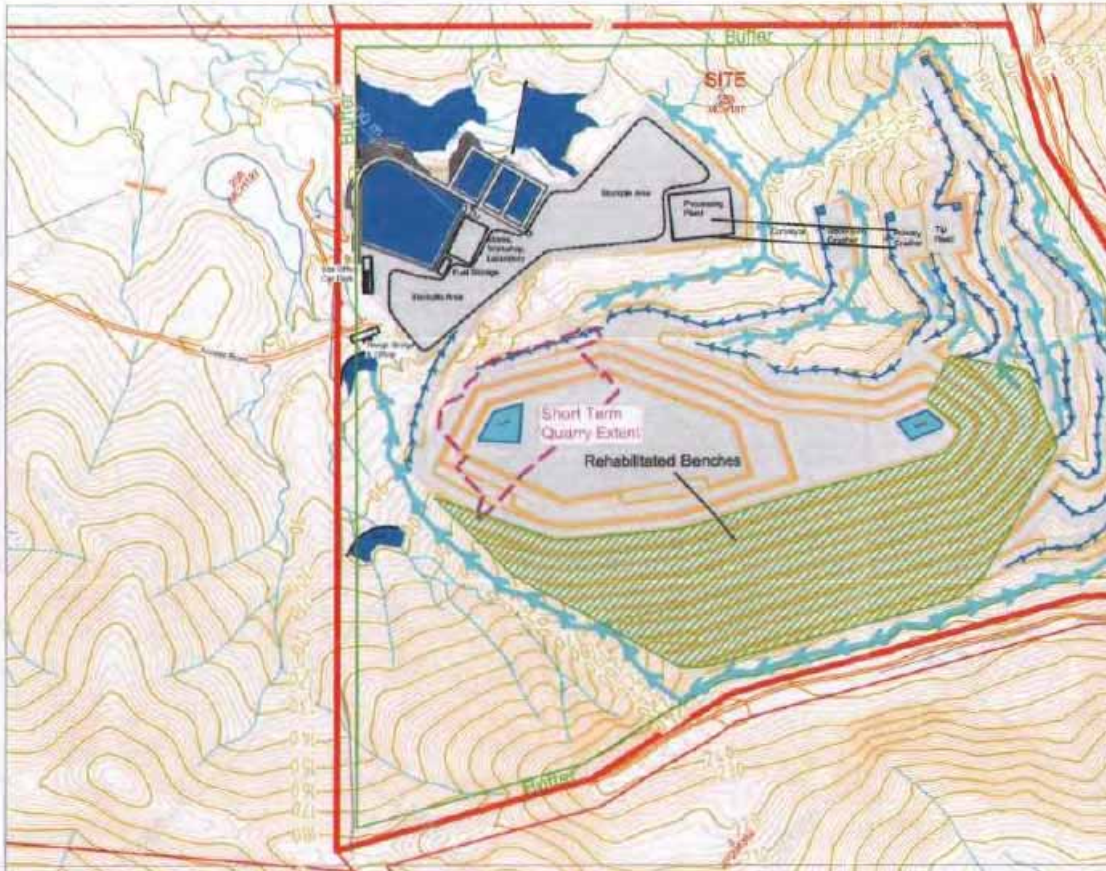


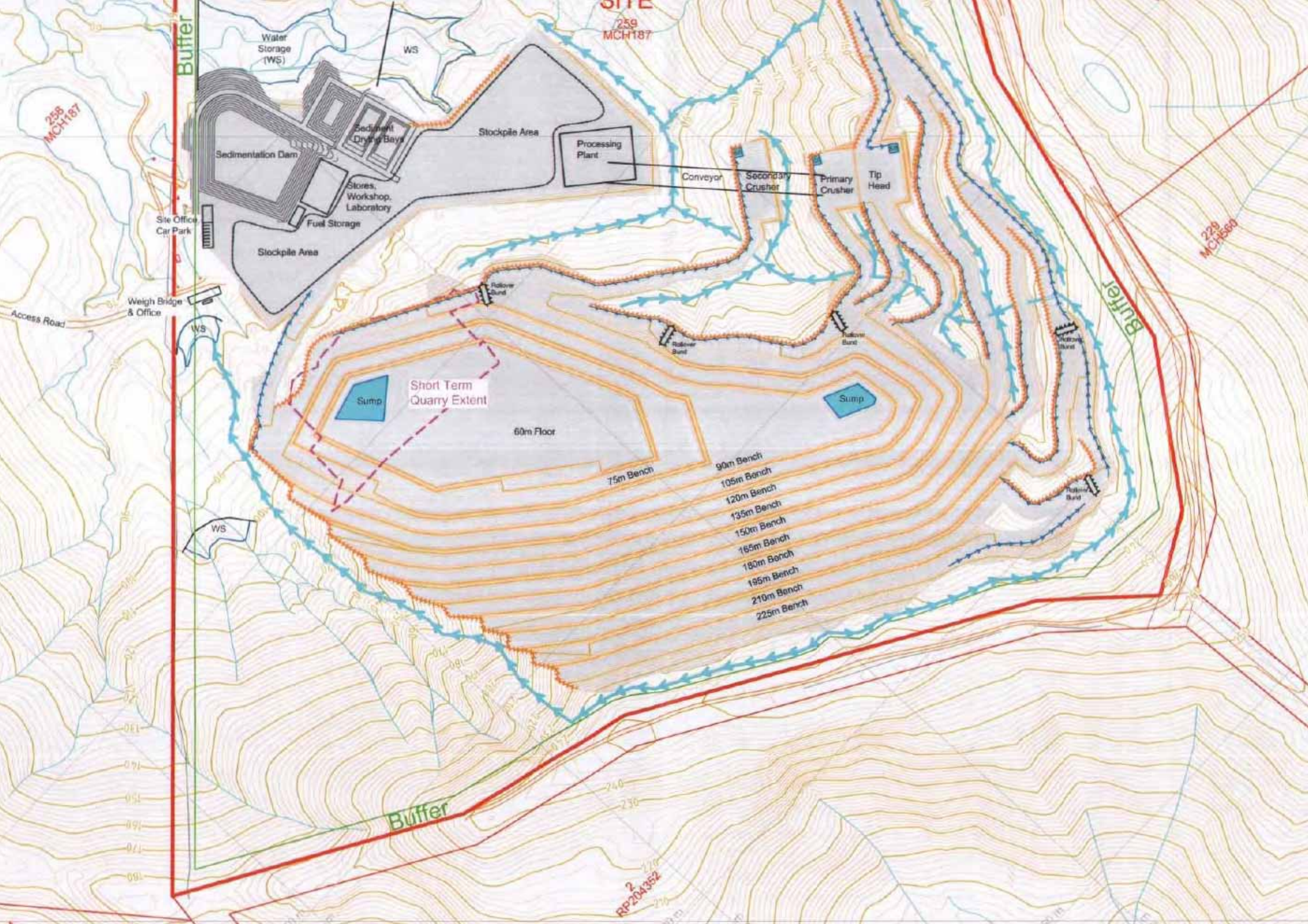
Stage 1



Stage 2

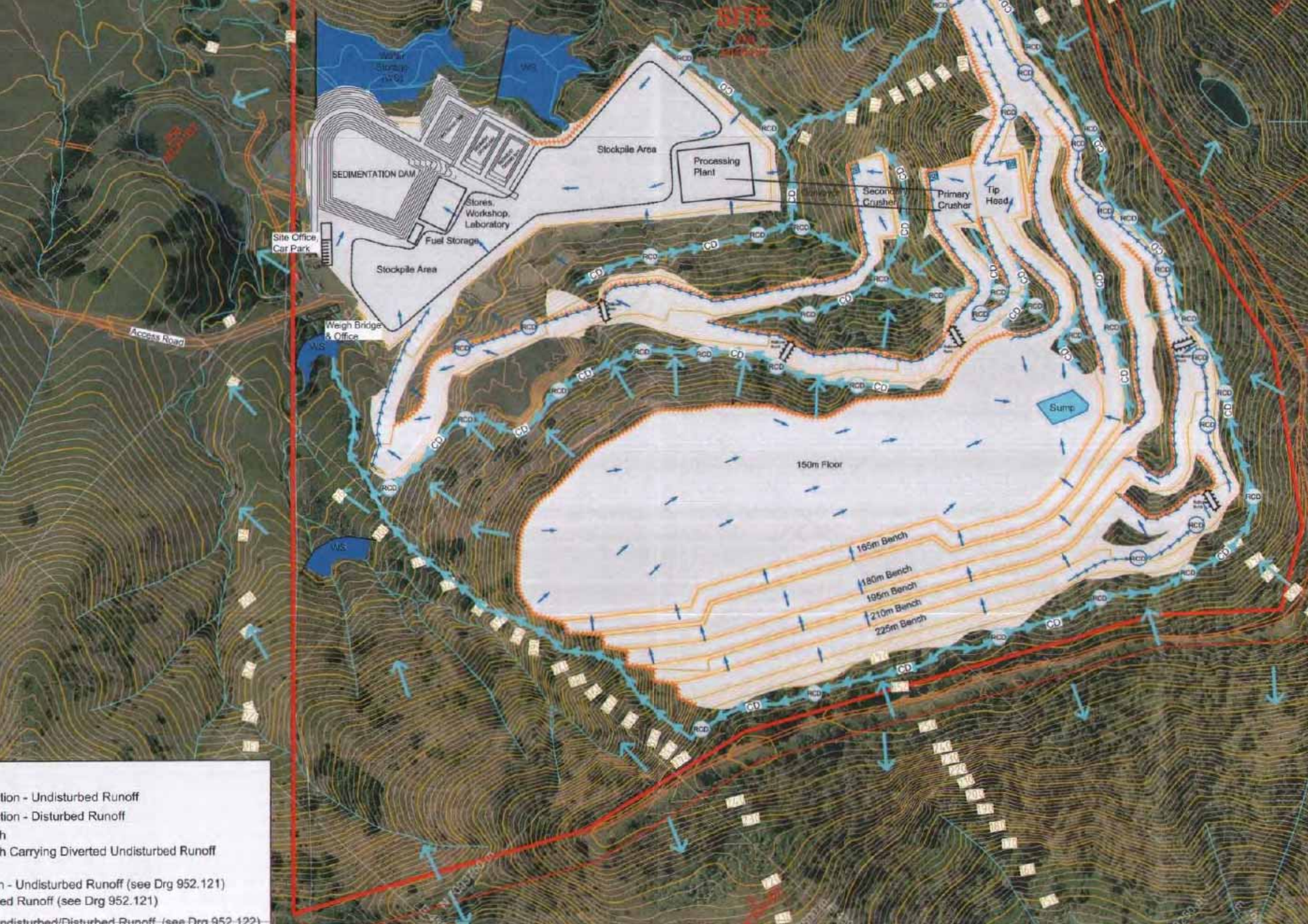


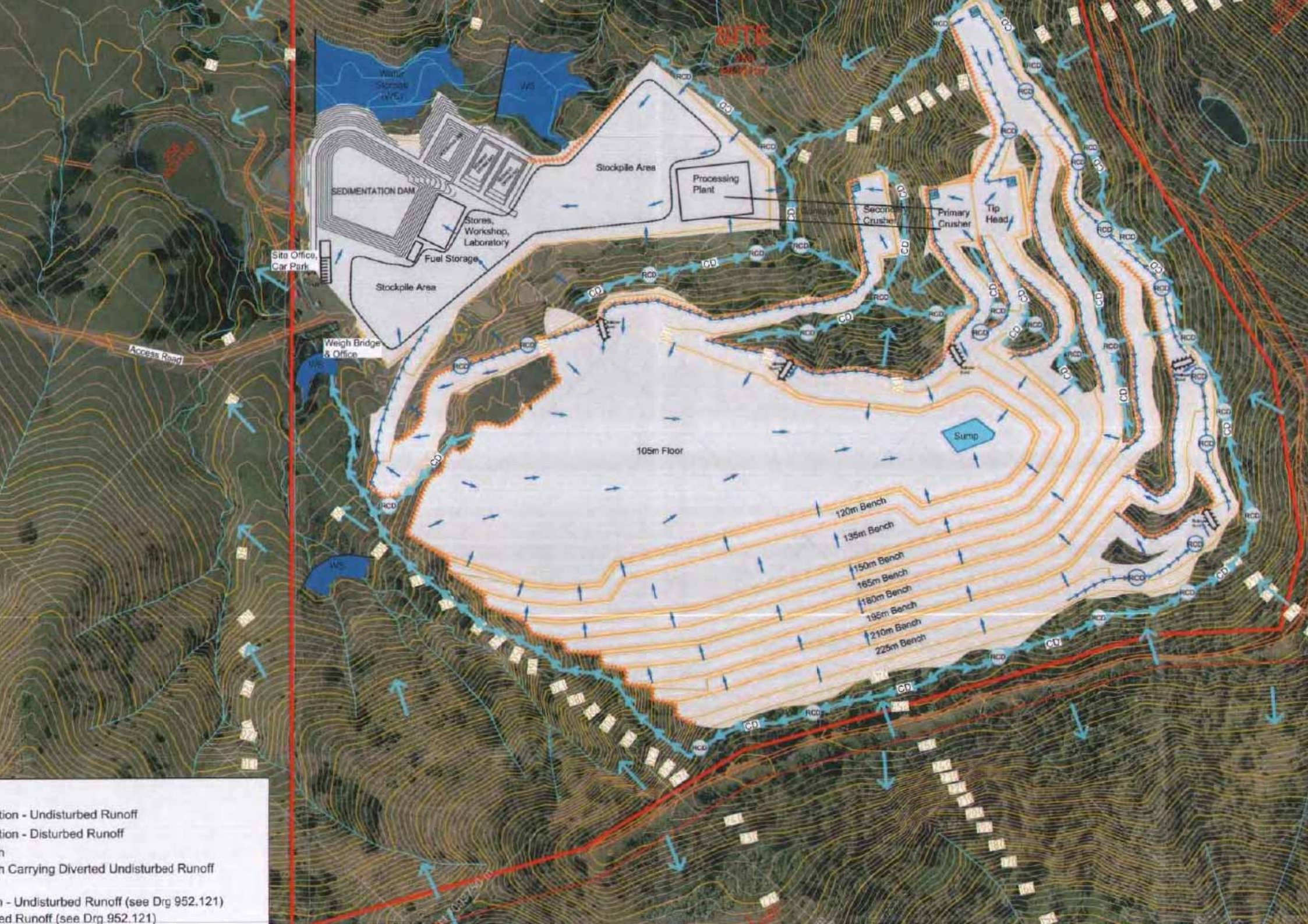



SITE
259
MCH187
Buffer
Water Storage (WS)
WS
Sedimentation Dam
Sediment Drying Bays
Stockpile Area
Processing Plant
Conveyor
Secondary Crusher
Primary Crusher
Tip Head
Stores, Workshop, Laboratory
Fuel Storage
Site Office Car Park
Stockpile Area
Weigh Bridge & Office
Access Road
Rollover Bund
Sump
Short Term Quarry Extent
60m Floor
75m Bench
90m Bench
105m Bench
120m Bench
135m Bench
150m Bench
165m Bench
180m Bench
195m Bench
210m Bench
225m Bench
Buffer
Buffer
2
RP204352

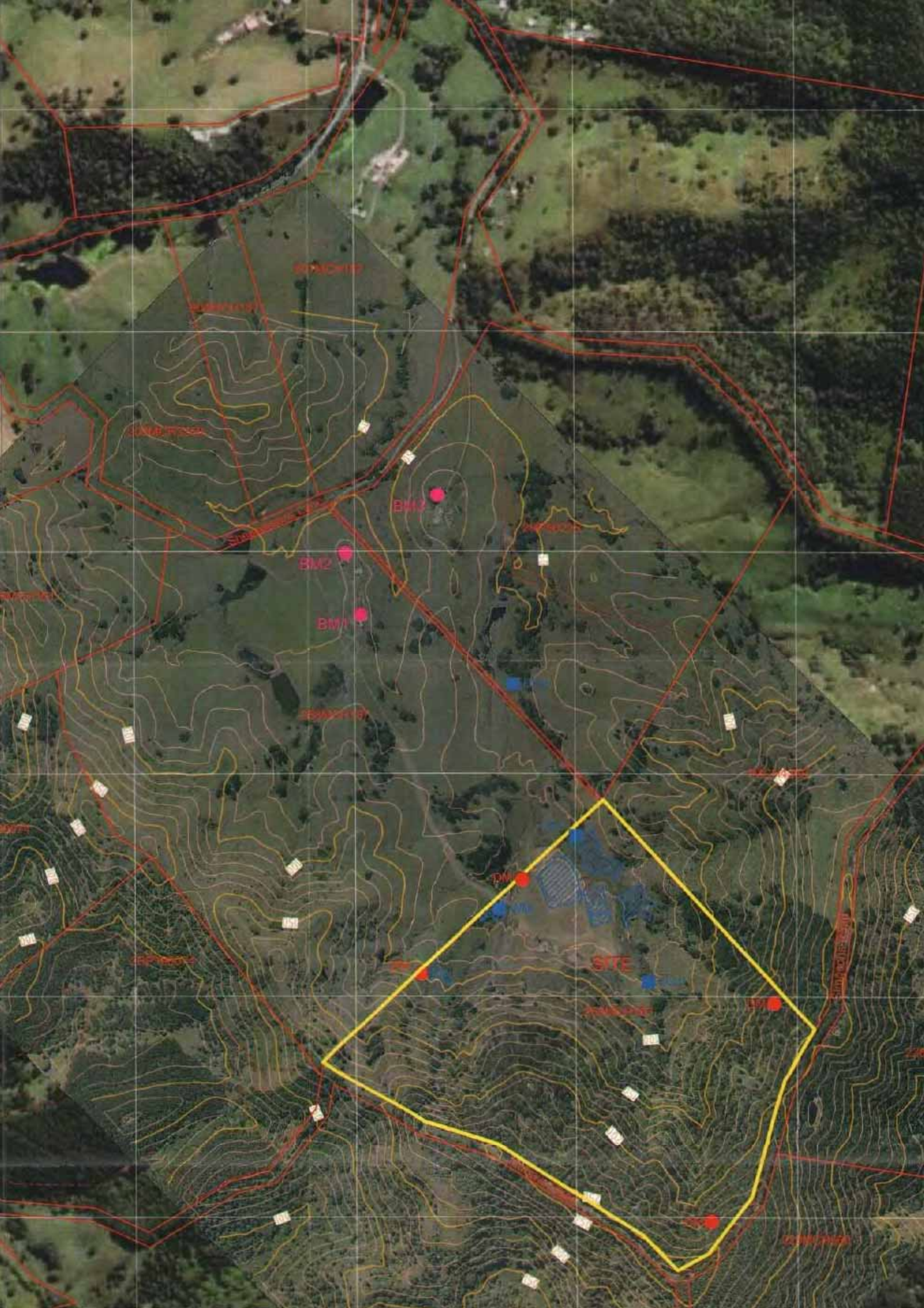
Simpsons Road
Murrays Road
Sheppersons Lane
Kin Kin


SITE
Water Storage (WS)
WS
Stockpile Area
Processing Plant
SEDIMENTATION DAM
Stores, Workshop, Laboratory
Fuel Storage
Site Office, Car Park
Stockpile Area
Secondary Crusher
Primary Crusher
Tip Head
Access Road
Weigh Bridge & Office
WS
WS
Sump
195m Floor
210m Bench
225m Bench
RCD
CD
ion - Undisturbed Runoff
ion - Disturbed Runoff
n
n Carrying Diverted Undisturbed Runoff
- Undisturbed Runoff (see Drg 952.121)
ed Runoff (see Drg 952.121)


SITE
Water Storage (WS)
WS
Stockpile Area
Processing Plant
SEDIMENTATION DAM
Stores, Workshop, Laboratory
Fuel Storage
Site Office, Car Park
Stockpile Area
Conveyor
Secondary Crusher
Primary Crusher
Tip Head
Weigh Bridge & Office
Access Road
WS
WS
Sump
150m Floor
165m Bench
180m Bench
195m Bench
210m Bench
225m Bench
RCD
CD
tion - Undisturbed Runoff
tion - Disturbed Runoff
h
h Carrying Diverted Undisturbed Runoff
n - Undisturbed Runoff (see Drg 952.121)
ed Runoff (see Drg 952.121)

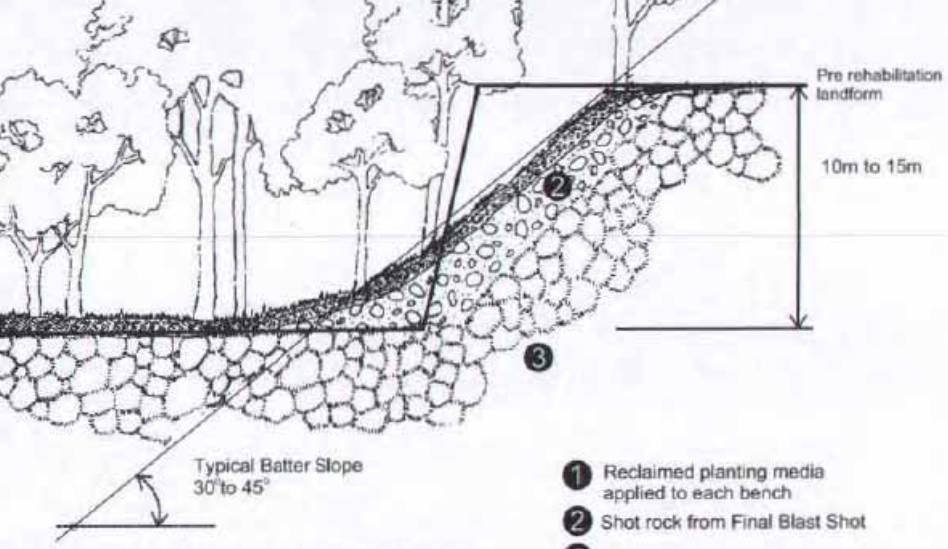

SITE
Water Storage (WS)
WS
SEDIMENTATION DAM
Stockpile Area
Processing Plant
Stores, Workshop, Laboratory
Fuel Storage
Site Office, Car Park
Stockpile Area
Secondary Crusher
Primary Crusher
Tip Head
Access Road
Weigh Bridge & Office
WS
Sump
105m Floor
120m Bench
135m Bench
150m Bench
165m Bench
180m Bench
195m Bench
210m Bench
225m Bench
RCD
CD
tion - Undisturbed Runoff
tion - Disturbed Runoff
h
h Carrying Diverted Undisturbed Runoff
- Undisturbed Runoff (see Drg 952.121)
ed Runoff (see Drg 952.121)


SITE
SEDIMENTATION DAM
Stockpile Area
Processing Plant
Secondary Crusher
Primary Crusher
Tip Head
Stores, Workshop, Laboratory
Fuel Storage
Site Office, Car Park
Stockpile Area
Weigh Bridge & Office
Access Road
60m Floor
75m Bench
90m Bench
105m Bench
120m Bench
135m Bench
150m Bench
165m Bench
180m Bench
195m Bench
210m Bench
225m Bench
tion - Undisturbed Runoff
tion - Disturbed Runoff
h Carrying Diverted Undisturbed Runoff
- Undisturbed Runoff (see Drg 952.121)
ed Runoff (see Drg 952.121)


BM3
BM2
BM1
SITE

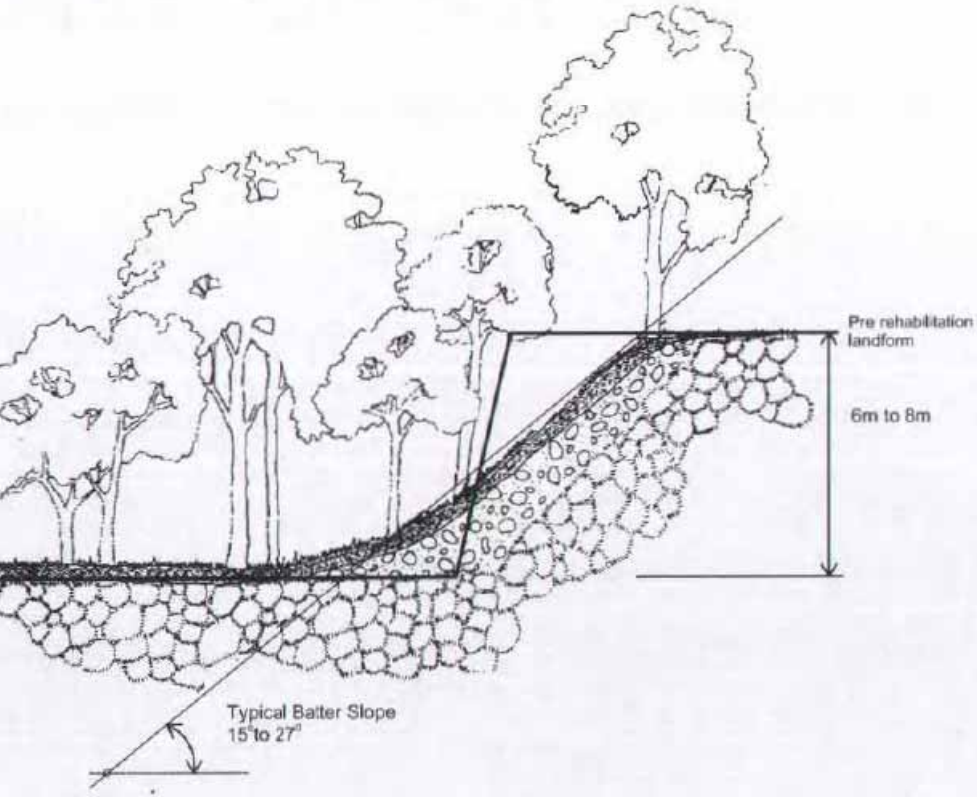

Sedimentation Dam
Sediment Drying Bays
Stockpile Area
Processing Plant
Stores, Workshop, Laboratory
Fuel Storage
Site Office Car Park
Stockpile Area
Weigh Bridge & Office
Access Road
Conveyor
Secondary Crusher
Primary Crusher
Tip Head
Rollover Bund
Sump
Short Term Quarry Extent
Sump
60m Floor
75m Bench
90m Bench
105m Bench
120m Bench
135m Bench
150m Bench
165m Bench
180m Bench
195m Bench
210m Bench
225m Bench


Revegetated Quarry Face
as per Batter Treatments

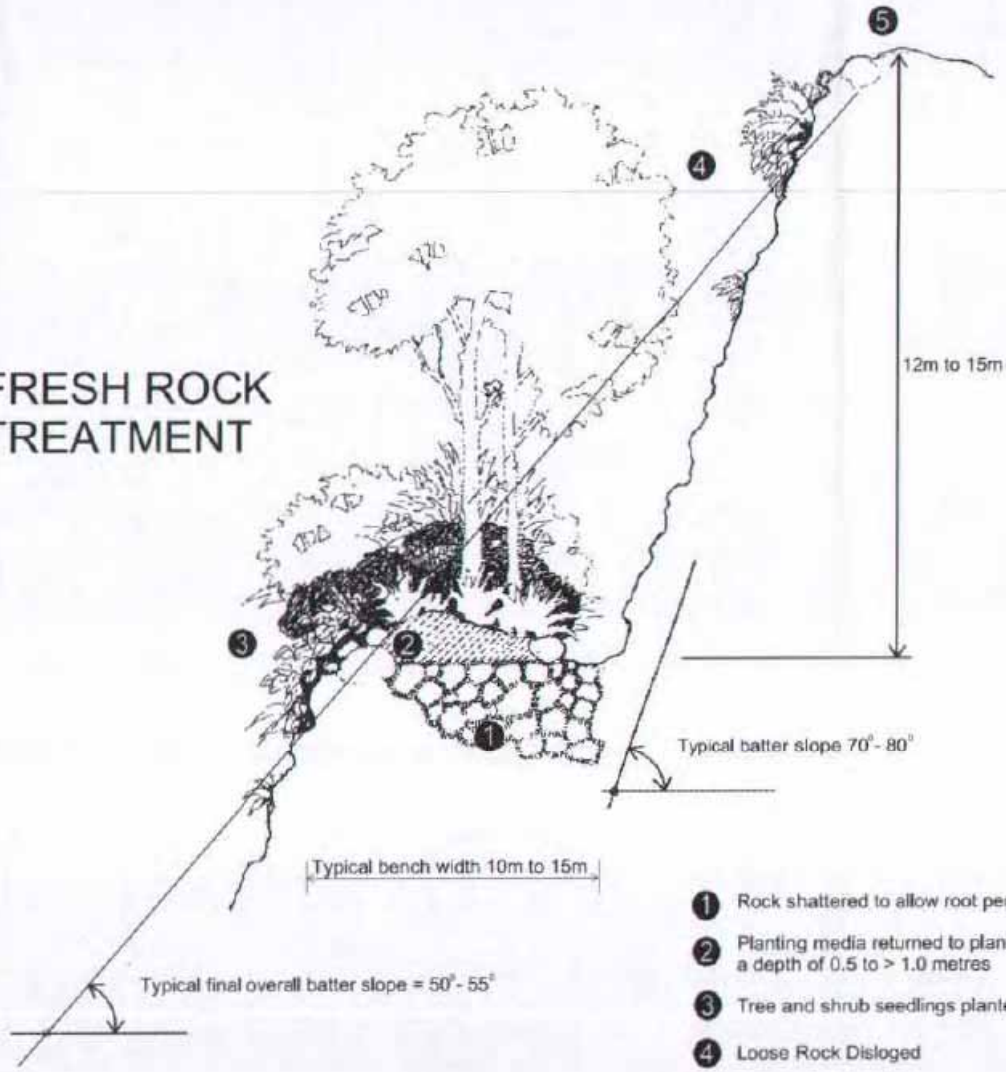


1. Reclaimed planting media applied to each bench
2. Shot rock from Final Blast Shot
3. Pre-existing sub-strata

HLY TO MODERATELY
ATHERED ROCK TREATMENT



FRESH ROCK
TREATMENT



1. Rock shattered to allow root penetration
2. Planting media returned to plant sites to a depth of 0.5 to > 1.0 metres
3. Tree and shrub seedlings planted
4. Loose Rock Disloged
5. Edge rounded with Hydraulic pick

COMPLETLY WEATHERED ROCK

Lake

Open Forest

Structural Function:
US Upper Story
MS Mid Story
GC Ground Cover

The plant shall be carefully removed from the container and the positioning of the plant shall be carried out with a minimal amount of root disturbance.

Plants shall be set plumb and at such a level that on well firming and settlement, a normal and natural relationship of the crown of the plant with the ground surface will be established.

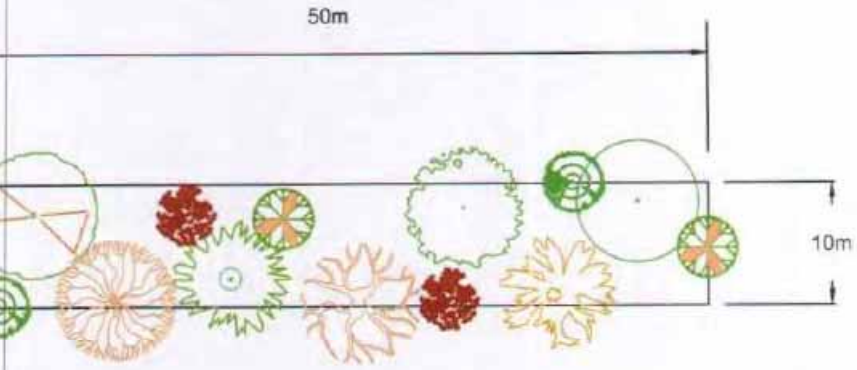
BACKFILLLING
Holes shall be backfilled with good quality friable, organic rich soil and shall be free from weeds, stones, clods of subsoil, other extraneous material, or any substance toxic to plants. Soil shall be progressively firmed during backfilling to avoid air pockets.

establish free of water stress.

REPLACEMENT
All tree and shrub planting shall be ins
that have not taken, died, or have bee
inspections are to be carried out annu
maintenance program until all specifie
showing healthy growth.

MONITORING AND GENERAL MAIN
Monitoring and maintenance will be re
replace damaged or diseased stock, a
mulching materials, inspect erosion co
generally tend to works.

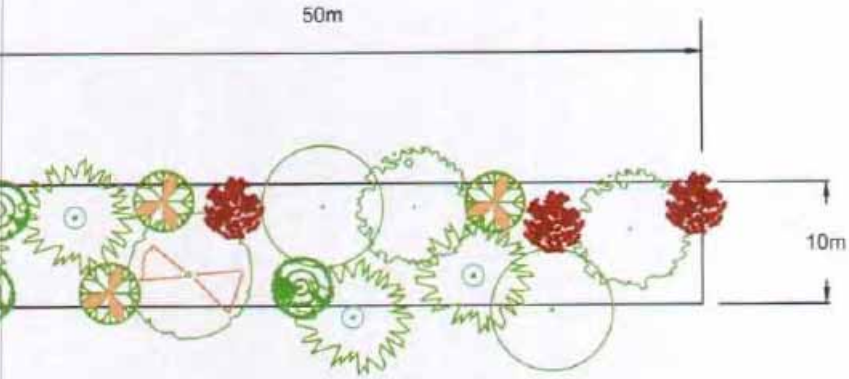
QUARRY BENCH PLANTING LAYOUT



rated in planting layout

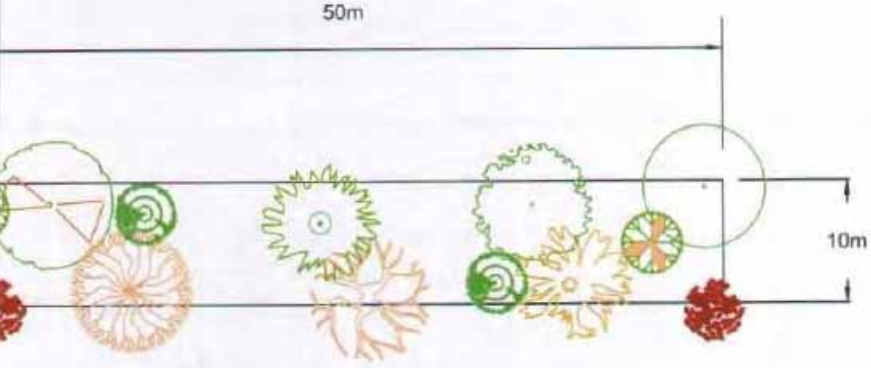
Graphic Symbol	Botanical Name	Heig (met
	Angophora Leiocarpa	10
	Eucalyptus crebra	10
	Eucalyptus microcorys	10
	Eucalyptus terreticornis	10
	Corymbia citriodora	10
	Eucalyptus propinqua	10
	Lophostemon confertus	6
	Acacia fimbriata	2
	Acacia concurrens	2
	Alphitona excelsa	2
	**Poa labillardierii*	
	**Microlaena stipoides*	0

DENSE/LANDSCAPE PLANTING LAYOUT



Graphic Symbol	Botanical Name	Heig (met
	Angophora Leiocarpa	10
	Eucalyptus crebra	10
	Eucalyptus microcorys	10
	Eucalyptus terreticornis	10
	Acacia concurrens	2
	Acacia fimbriata	2
	Alphitona excelsa	2

OPEN FOREST PLANTING LAYOUT



Graphic Symbol	Botanical Name	Hei (me
	Angophora Leiocarpa	10
	Eucalyptus crebra	10
	Eucalyptus microcorys	10
	Eucalyptus terreticornis	10
	Corymbia citriodora	10
	Eucalyptus propinqua	10
	Lophostemon confertus	6
	Acacia fimbriata	2
	Acacia concurrens	2
	Alphitona excelsa	2

figures

attachments

Attachment 1

Initial Notification Form

KIN KIN QUARRY

EMERGENCY AND INCIDENT

Department of Environment and Resource Management

Initial Notification Form

This form is to be completed when notifying the DERM any emergency or incident, which has or may cause environmental harm. DERM is to be contacted by telephone or facsimile (of this form) as soon as practicable after becoming aware of the emergency or incident.

Date .....

Holder of Approval .....

Quarry Name .....

Your Name .....

Location of quarry .....

Location of emergency or incident within quarry .....

.....

Licence Number/Development Approval .....

Name and telephone number of Contact Person .....

.....

Time of the emergency of incident .....

Time that Kin Kin Management became aware of the incident .....

The suspected cause of the emergency/incident .....

.....

The environmental harm caused, threatened, or suspected to be caused by the incident

.....

.....

Actions taken to prevent further environmental harm and mitigate any environmental harm caused by the incident

.....

.....

Attachment 2

Further Notification Form

EMERGENCY AND INCIDENT

Department of Environment and Resource Management

Further Notification Form

Not more than 14 days following the initial notification of an emergency or incident, the holder of this environmental authority must provide the following written advise along with the initial notification form.

This record must be kept for a period of five (5) years.

Environmental Authority Number .....

Designated Contact Person .....

Date of Release: ...../...../..... Time of Release: ..... am/pm

Proposed Action to prevent a recurrence of the Emergency or Incident

.....

.....

.....

Outcomes of Actions taken at the time to prevent or minimise Environmental Harm and/or Environmental Nuisance

.....

.....

.....

Results of any Environmental Monitoring performed

.....

.....

.....

Further comments

.....

.....

Name: ..... Signature: .....

Attachment 3

Council Approval and DERM Development Permit Conditions

NOOSA

If telephoning or calling please ask for:
Dana McKenzie (07) 5449 5293
00177

Your Ref:

11 August 2003

ROB SOWERBY
9 MCINROY STREET
TARINGA QLD 4068

STANDARD PLANNING AND DEVELOPMENT CERTIFICATE

PREMISES: LOT 259 MCH187 PARISH NOOSA COUNTYMARCH, SITUATED AT 150 SHEPPERSONS LANE, KIN KIN

In accordance with Section 5.7.10 of the Integrated Planning Act, I hereby certify the following information for the premises described above.

PLANNING SCHEME

The following provisions of the Planning Scheme for the Shire of Noosa gazetted on 4 May 1985 and amended from time to time, apply specifically to the premises:-

Strategic Plan:

Preferred Dominant Land Use Designation	Extractive Resource Precinct
	Rural
	Rural Conservation
	Open Space - Conservation & Waterway Protection
Other Designation:	Agricultural Land Conservation Area
	Potential Area of Extractive Resource Precinct Influence

Development Control Plan:

Not Applicable

Zone:

Rural Pursuits

Regulatory Maps:

Not Applicable

DESIGNATIONS APPLYING TO THE PREMISES:

Nil

NOOSA COUNCIL ABN 97 969 214 121
9 Pelican Street Tewantin PO Box 141 Tewantin Q 4565
Phone: 07 5449 5200 Fax: 07 5447 1062
Email: mailbox@noosa.qld.gov.au

INFRASTRUCTURE CHARGES OUTSTANDING:

Nil

DECISION NOTICES:

See attached.

File Reference	Description of Approved Development	Council Decision & Dates
TPC 1899	Extractive Industry	Approved 21/7/87

MINOR CHANGES:

File Reference	Description of Minor Change/s
Nil	

COURT JUDGEMENT OR ORDER:

File Reference	Description of Judgement or Order	Date
TPC 1899	Order	13/5/88

AGREEMENT ABOUT A CONDITION OF THE DEVELOPMENT APPROVAL INVOLVING NOOSA COUNCIL OR A CONCURRENCE AGENCY:

File Reference	Description of Agreement
Nil	

INFRASTRUCTURE AGREEMENT INVOLVING NOOSA COUNCIL OR A CONCURRENCE AGENCY:

File Reference	Description of Agreement
Nil	

PROPOSED AND PROCEEDING AMENDMENTS OF THE PLANNING SCHEME, BUT NOT YET ADOPTED:

Nil

Shane Adamson
MANAGER - LAND USE

FILE

FOLIO 18

Town Planning Dept.

RW.jh TPC 1899
(132)

21st July, 1987

John W. Shepperson,
c/- Post Office,
KIN KIN. Q. 4571

Dear Sir,

Re: TPC 1899 - Extractive Industry - Portion 259, Murrays Road, Via Kin Kin

Your application was considered by Council at its meeting on 21st July, 1987.

Council resolved to approve your application subject to the conditions listed below:-

1. Prior to the commencement of operations on the site the applicant shall carry out the following external roadworks to the satisfaction of the Shire Engineer:-

   (i) Upgrade the intersection of Sheppersons Lane and Kin Kin Road. These works are also to be carried out to the requirements of the Main Roads Department.

   (ii) Bitumen surfacing of 0.5 kilometres of carriageway past Agney Farm..

   (iii) Upgrade the existing timber bridge within Sheppersons Lane.

   (iv) Widen and upgrade approximately one (1) kilometre of Sheppersons Lane, comprising the balance area of gravel pavement, to the access point to the site.

   The design of the above works shall be prepared by a Registered Civil Engineer and shall be submitted to the Shire Engineer for approval prior to commencement of construction. The Registered Civil Engineer shall certify that the works have been constructed in accordance with the approved plans.

   In lieu of the above works, Council may accept a contribution of $150,000 with the works then to be carried out by Council.

2. Detailed management plans are to be submitted to Council for approval by the Shire Engineer and Shire Planner following further investigation by the applicant. Such management plans shall address:-

(i) the location of siltation ponds;

(ii) the extent of proposed excavations;

(iii) the proposed access locations;

(iv) the proposed location of the gravel crusher and site office;

(v) provision of buffer areas to adjoining property boundaries;

(vi) the location of the area proposed to be leased to Council; and

(vii) rehabilitation procedures.

No construction or excavation works are to be commenced, without prior approval of the Shire Engineer, until such times as management plans are approved. Council reserves the right to expand upon the conditions contained within this approval following submission of detailed management plans.

3. Performance of regular maintenance of roadworks within Shepparsons Lane, including the removal of any materials which may fall from vehicles transporting quarry materials.

4. Deleted As offered, the applicant shall enter into an agreement with Council for a long term registered lease over the area to be negotiated between the applicant and the Shire Engineer.

Such lease is to ensure the long term availability to Council of suitable material. The applicant shall agree to supply material for Council's need at the cost of production plus a fair profit for the applicant.

The leased area is to be made available, at no cost to Council, with Council to bear the cost of all legal and survey fees associated with the transfer.

5. The applicant shall revegetate the quarry in stages as quarrying operations proceed. The species of plants to be used shall be acceptable to Council.

6. The quarry is to be operated in accordance with the provisions of the Town Planning Scheme, Bylaws, Policies and Acts.

7. All blasting operations shall be conducted such that stone, rock or other materials are not ejected from the site.

8. Blasting operations and explosions shall not be conducted:

   (i) before the hour of 7.00 a.m;

   (ii) after the hour of 6.00 p.m; or

   (iii) on any weekend or public holiday (unless in an emergency and with the prior approval of the Shire Engineer).

9. Prior to commencement of operations a cash bond or bank guarantee to the sum of $20,000 is to be lodged to secure performance of:

   (i) regular maintenance of roadworks in Shepparsons Lane; and

   (ii) general performance of other conditions.

10. This approval remains current for a period of three (~~3~~ 30 years, provided that Council may grant extensions to the approval period, where an application for extension is lodged at least three (3) months prior to the approval expiry date. Council's decision will be made prior to the expiry date, in order that its decision has force and effect. Council may approve or refuse such an application. Should an extension be granted, the terms and conditions of this approval may be varied if considered warranted.

11. This approval may be revoked pursuant to Section 33(16D) of the Local Government Act, if the rights conferred by this approval are not exercised in accordance with this Permit within two (2) years from the date hereof.

~~12.~~ Deleted If at any time after two (2) years the use, once established is discontinued for a period of six (6) months for any cause whatsoever, this approval may be revoked pursuant to Section 33 (16D) of the Local Government Act.

There were no objections against the application.

Enclosed for your use are copies of parts of the Local Government Act which outline appeal rights against Council's decision.

Yours faithfully,

D.J. Philpot,
SHIRE CLERK.

IN THE LOCAL GOVERNMENT COURT
HELD AT GYMPIE

L.G. Appeal No. 1 of 1987

BETWEEN: JOHN WALLACE SHEPPERSON

Appellant

AND: COUNCIL OF THE SHIRE OF NOOSA

Respondent

BEFORE HIS HONOUR JUDGE K.F.C. ROW

THE 13th DAY OF May 1988

ORDER

This action having come before his Honour Judge K.F.C. Row on the 13th day of May, 1988 and the solicitors having been heard for the Appellant and Mr. T.N. Trotter of Counsel having been heard for the Respondent

By Consent, IT IS ORDERED that:-

(1) The decision of the Respondent contained in the letter to the Appellant dated 21st July, 1987 be varied:

A. By deleting condition 1 thereof which reads:

"1. Prior to the commencement of operations on the site the applicant shall carry out the following external roadworks to the satisfaction of the Shire Engineer:-

(i) Upgrade the intersection of Sheppersons Lane and Kin Kin Road. These works are also to be carried out to the

L.S.

5 AUG 1988

MESSRS. JEFFERY
& CUDDIHY
Solicitors
218 Mary Street,
GYMPIE Qld. 4570

Phone (071)821244

requirements of the Main Roads Department.

(ii) Bitumen surfacing of 0.5 kilometres of carriageway past Agney Farm.

(iii) Upgrade the existing timber bridge within Sheppersons Lane.

(iv) Widen and upgrade approximately one (1) kilometre of Sheppersons Lane, comprising the balance area of gravel pavement, to the access point to the site.

The design of the above works shall be prepared by a Registered Civil Engineer and shall be submitted to the Shire Engineer for approval prior to commencement of construction. The Registered Civil Engineer shall certify that the works have been constructed in accordance with the approved plans.

In lieu of the above works, Council may accept a contribution of $150,000.00 with the works then to be carried out by Council."

and substituting therefor the following condition:

"1. The applicant shall carry out the following external roadworks to the satisfaction of the Shire Engineer -

(i) Upgrade the intersection of

Sheppersons Lane and Kin Kin Road to the requirements of the Main Roads Department to which the Council will contribute the sum of $4,000.00;

(ii) Upgrading on the existing timber bridge within Sheppersons Lane following completion of an Engineer's investigation to a standard required for quarry generated traffic;

(iii) Widen and upgrade Sheppersons Lane from the intersection with Kin Kin Road to the access point to the site using selected gravel fill or material approved by the Shire Engineer from the quarry site;

(iv) All the above works to be completed prior to the quarry commencing operations.

The design of the above works shall be prepared by a registered Civil Engineer and shall be submitted to the Shire Engineer for approval prior to commencement of construction. The registered Civil Engineer shall certify that the works have been constructed in accordance with the approved plans.

L.S.

B. By deleting condition 4 thereof.

C. By deleting from condition 10 thereof the