Queensland Government

Department of
Environment and Heritage Protection

01-SEP-2014

To: Gelden Enterprises Pty Ltd
C/- PO Box 1649
AITKENVALE QLD 4814

Attention: Denis Lapico Email: admin@securefencing.com.au

Our reference: 420619

Application details

I refer to the application that was received by the administering authority on 25-AUG-2014.

Land description: EPM19451.

Decision

Your application has been approved and your environmental authority (reference EPSX02460814) is attached.

Should you have any further enquiries, please contact Margaret Jones on telephone 1300 130 372 (Option 4).

Yours sincerely

	01/09/2014
Signature	Date

Jodie Brackenbury
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enclosed

Permit - environmental authority (reference EPSX02460814)

Margaret Jones
Permit and Licence Management
Department of Environment and Heritage Protection
GPO Box 2454
BRISBANE QLD 4001
Phone: 1300 130 372
Fax: (07) 3330 5875
Email: palm@ehp.qld.gov.au
Website **www.ehp.qld.gov.au**
ABN 46 640 294 485

Permit[1]

Environmental Protection Act 1994

Environmental authority

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Permit[1] number: EPSX02460814

Environmental authority takes effect on 01-SEP-2014.

The anniversary date of this environmental authority remains 25th October. An annual return and the payment of the annual fee will be due each year on this day.

Environmental authority holder(s)

Name	Registered address
Gelden Enterprises Pty Ltd	4/324 Bayswater Road GARBUTT QLD 4814

Environmentally relevant activity and location details

Environmentally relevant activity(ies)	Location(s)
Mining - EPM	EPM19451

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental authority as to the scale, intensity or manner of carrying out an ERA, then the conditions prevail to the extent of the inconsistency.

An environmental authority authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the authority specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

[1] Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

Contaminated land

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.

Signature

01/09/2014

Date

Jodie Brackenbury
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Margaret Jones
Permit and Licence Management
Department of Environment and Heritage Protection
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BRISBANE QLD 4001
Phone: 1300 130 372
Fax: (07) 3330 5875
Email: palm@ehp.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of environmental authority

The conditions of approval for this environmental authority are standard conditions contained within the attached document(s) entitled:

- Code of environmental compliance for exploration and mineral development projects *Version 1.1*

END OF PERMIT

Code of environmental compliance

Exploration and mineral development projects

This code of environmental compliance (code) has been made under of the Environmental Protection Regulation 2008. It contains the standard environmental conditions approved by the Minister, under section 549 of the Environmental Protection Act 1994*, for carrying out an environmental authority for a mining exploration or mineral development project which meets the prescribed eligibility criteria in schedule 3A of the Environmental Protection Regulation 2008.*

Code of environmental compliance for exploration and mineral development projects

Version 1

ABN 46 640 294 485

Great state. Great opportunity.

Queensland Government

Environmental Protection Act 1994 - changes as at 31 March 2013

The criteria outlined in section 2 of the code are not current and should not be used. The criteria, referred to as eligibility criteria from 31 March 20013, for determining whether an exploration and mineral development project can be considered a standard environmental authority have been set out below. The following eligibility criteria are found in schedule 3A of the Environmental Protection Regulation 2008:

a) the mining activity does not, or will not, at any one time, cause more than 10ha of land to be significantly disturbed;

b) the mining activity is not, or will not be, carried out in a category A environmentally sensitive area or a category B environmentally sensitive area;

c) the mining activity is not, or will not be, carried out under an environmental authority under which either of the following is, or is to be, authorised—

   i. an environmentally relevant activity to which a section of schedule 2 applies and for which there is an aggregate environmental score;

   ii. a resource activity, other than a mining activity, that is an ineligible ERA;

d) the mining activity is not, or will not be, carried out in a wild river area, unless—

   i. the mining activity is authorised under an environmental authority for a mining activity relating to a mining claim, an environmental authority for a mining activity relating to an exploration permit or an environmental authority for a mining activity relating to a mineral development licence; or

   ii. the mining activity involves alluvial mining and is, or will be, carried out at a place that is not in a wild river high preservation area, wild river nominated waterway or wild river special floodplain management area; or

   iii. the mining activity involves clay pit mining, dimension stone mining, hard rock mining, opal mining or shallow pit mining and is, or will be, carried out at a place that is not in a wild river high preservation area or wild river special floodplain management area.

A nominated waterway means a nominated waterway under the *Wild Rivers Act 2005*.

e) the mining activity does not, or will not, at any one time, cause more than 5000m^2 of land to be disturbed at a campsite;

f) no more than 20m^3 of any substance is, or will be, extracted from each kilometre of a riverine area affected by the mining activity in a year.

Any new mining activity commencing from 31 March 2013 that meets the eligibility criteria outlined above and that can meet all of the standard conditions can apply for a standard approval to carry out this activity. The conditions that apply to the standard approval will be the standard conditions.

From 31 March 2013, the standard environmental conditions of this code are taken to be the standard conditions for the mining activity until new standard conditions are developed.

Where the mining activity cannot meet all the standard conditions of this code, a variation application for an environmental authority can be made. The environmental authority will include the standard conditions and any variation that is approved by the administering authority.

Information on applying for an approval is at www.business.qld.gov.au.

In the near future, the department will be developing a contemporary set of eligibility criteria and standard conditions that reflects changes to standards of environmental management required for mining activities and more recent legislation implementation.

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1.0 INTRODUCTION

Note: The key terms and/or phrases used in this Code are *highlighted in italics* followed by an (*). They are defined in Section 4.

Mineral exploration activities are authorised by Exploration Permits and Mineral Development Licences issued under the *Mineral Resources Act 1989.* An Exploration Permit allows the holder to take action to determine the existence, quality and quantity of minerals by:

- prospecting;
- using instruments, vehicles, vessels, machinery and equipment and techniques appropriate to determine the existence of any mineral;
- sampling and testing of material to determine its mineral bearing capacity or properties of mineralisation; and
- carrying out other operations the Minister approves.

A Mineral Development Licence entitles the holder to carry out:

- geological, geophysical and geochemical programs and other work reasonably necessary to evaluate the potential for development of any mineral occurrence that has possible economic potential;
- mining feasibility studies;
- metallurgical testing;
- environmental studies;
- marketing studies;
- engineering and design studies; and
- other activities the Minister considers appropriate.

The regulation of environmental management for an Exploration Permit or a Mineral Development Licence is via an *Environmental Authority** issued under the *Environmental Protection Act 1994*. An exploration or mineral development project that is considered to present a low risk of causing S*erious Environmental Harm** under the *Environmental Protection Act 1994* will be assessed as a *Standard Mining Activity**. A standard mining activity is an Environmentally Relevant Activity* under the *Environmental Protection Regulation 1998* and will therefore require an environmental authority.

This Code of Environmental Compliance has been developed for standard mining activities that include an Exploration or a Mineral Development activity that, to the satisfaction of the administrating authority, complies with all relevant criteria listed in schedule 1A of the Environmental Protection Regulation 1998.

About this Code

The Code of Environmental Compliance:

- provides the criteria used to determine the level of environmental management required for exploration or mineral development projects (see section 2);
- sets the environmental performance requirements as environmental conditions, which will be the compliance requirements of an environmental authority issued for standard exploration and mineral development projects (see section 3);

- provides advisory notes on how to achieve compliance with the standard conditions. These are not compliance requirements and are contained in the boxes associated with the relevant standard environmental condition; and
- provides definitions of terms used in this code (see section 4);
- provides references to Technical Guidelines for information on best practice environmental management (see section 5).

Additional Conditions

The holder of the environmental authority may apply for additional conditions at any time. The request must be made on the *Approved Form** and the applicant must supply enough information to allow the *Administering Authority** to decide whether or not to impose the additional condition/s.

The administering authority may set additional conditions on the environmental authority. The administering authority may only set additional conditions as long as the exploration or mineral development project remains a standard mining activity. In deciding whether to set an additional condition, the administering authority must comply with any relevant *Environmental Protection Policy** and consider the *Standard Criteria**.

If an application for an additional condition is granted, the additional condition will override the relevant criteria (see section 2) or standard environmental condition (see section 3) and the activity will remain a standard mining activity in accordance with section 151 of the *Environmental Protection Act 1994*.

Compliance Requirement

The compliance requirements of a standard environmental authority issued under the *Environmental Protection Act 1994* for a standard mining activity are the standard environmental conditions in this code, plus any additional conditions. Failure to comply with the standard environmental conditions, or any additional conditions, is a breach of the environmental authority and the holder is liable to various compliance enforcement actions under the *Environmental Protection Act 1994*. Refer to section 430 of the *Environmental Protection Act 1994* - 'offence to contravene condition of environmental authority'.

Public Notification

Following assessment of the application for an environmental authority for a standard exploration or mineral development project, the application and the decision on the level of assessment will be publicly notified, but will not be subject to objection. The explorer will continue to notify land owners of entry to land as required under the Mineral Resources Act 1989.

For More Information on this Code

Contact the District Manager at the Environmental Protection Agency or the Mining Registrar at the Department of Mines and Energy at the following locations.

Environmental Protection Agency
EPA Advisory Service - 1800 501087
Brisbane and Toowoomba - (07) 3224 6161
Maryborough and
Rockhampton - (07) 4936 0511
Mackay and Emerald - (07) 4982 4555
Townsville- (07) 4722 5350
Mt Isa- (07) 4744 7888
Cairns - (07) 4046 6730

Department of Mines And Energy
Brisbane (Spring Hill) - (07) 3227 1972
Quilpie – (07) 4656 1266
Emerald - (07) 4982 4011
Winton – (07) 4657 1727
Mt Isa – (07) 4747 2103
Mareeba – (07) 4092 4211
Charters Towers - (07) 4787 1266
Townsville – (07) 4760 7406
Georgetown – (07) 4062 1204
Rockhampton – (07) 4938 4440

2.0 CRITERIA FOR DETERMINING THE LEVEL OF ASSESSMENT

The following criteria found in schedule 1A of the Environmental Protection Regulation 1998*,* are used to determine the level of assessment required for an application for an environmental authority for a standard exploration or mineral development project.

(1) the mining activities do not, or will not, cause more than 10 ha of any land to be *Significantly Disturbed** at any one time;

(2) no more than 5000 m^2 are disturbed at any campsite at any one time;

(3) no more than 20 m^3 of any substance is extracted from each kilometre of any riverine area in any one year;

(4) the mining activities are not, or will not be, carried out in a category A or B *Environmentally Sensitive Area*;*

(5) the mining activities do not include a level 1 environmentally relevant activity.

If an application for an environmental authority does not meet the assessment level criteria, it could be approved as a standard mining activity provided the environmental impact is no greater than the environmental impact of activities allowed under an environmental authority of the same type that does meet the criteria. For example, an application for a standard mining activity proposing a significant disturbance of greater than 10ha, could be granted a standard environmental authority as long as the applicant can demonstrate that the significant disturbance will have no greater environmental impact than a project that can operate within the 10ha limit.

3.0 STANDARD ENVIRONMENTAL CONDITIONS

3.1 GENERAL CONDITIONS

Financial Assurance

Condition 1

The holder of a new *Environmental Authority must submit the required amount of *Financial Assurance** to the administering authority prior to carrying out any activities on the mining tenement. If the activities being carried out by the holder of the environmental authority are altered so as to cause a change in the category of total area of disturbance shown in Form 3, Schedule of Rehabilitation Costs, the holder of the environmental authority must submit an application to amend their financial assurance to the administering authority. If an application is lodged to transfer the environmental authority to another person or company, the proposed transferee must submit the required financial assurance prior to the transfer taking effect.**

Note 1 - Financial assurance must be calculated in accordance with Form 3, Schedule of Rehabilitation Costs.

Note 2 - Section 292 of the Environmental Protection Act 1994 requires that the holder of the environmental authority gives the administering authority a financial assurance in a form acceptable to the administering authority. When necessary, the holder of the environmental authority must submit an application to amend their financial assurance under section 294 of the Environmental Protection Act 1994. The holder of the environmental authority must lodge a single financial assurance with the District Mining Registrar, Department of Natural Resources and Mines . The financial assurance will consist of two components:

(i) An amount to cover the potential costs of rehabilitation of areas disturbed by mining activities (ie. Environmental Protection Agency component); and

(ii) An amount to cover the potential costs of restoring property improvements disturbed by mining activities and the failure of the tenure holder to pay rents and royalties (ie. Department of Mines and Energy component).

Land Disturbance

Condition 2

The holder of the environmental authority must ensure that the area and duration of disturbance to land and vegetation is minimised. Not more than 1000m^2 can be disturbed at any one location, excluding campsites.

Note 3 – To minimise the area and duration of disturbance to land and vegetation the following measures or similar measures can be used:

- avoid disturbing large and/or mature trees;
- select specific trees to be cleared and avoid causing damage to surrounding vegetation;
- where practical leave the rootstock intact to promote regeneration and regrowth.

Note 4 – Before carrying out activities on the tenement refer to the Technical Guideline ‘Good Relations with Landowners’ and the Department of Mines and Energy Code of Conduct, ‘Procedure for Sound Landholder/Explorer Relations’.

Air Quality

Condition 3

The holder of the environmental authority must not cause an *Unreasonable Release of dust**.

Note 5 – To prevent causing an unreasonable release of dust the following measures or similar measures can be used:

- altering work practices to avoid or minimise the generation of dust;
- scheduling activities for times when they will have least impact;
- spraying water on roads and tracks;
- revegetating disturbed areas as soon as practicable;
- leaving or creating wind breaks or screening; and
- installing pollution control equipment (e.g. fitting bag filters or a cyclone to dust generating equipment).

Noise Emissions

Condition 4

The holder of the environmental authority must not cause an *Unreasonable Noise at a *Noise Sensitive Place.***

Note 6 - To prevent causing unreasonable noise at a noise sensitive place the following measures or similar measures can be used:

- construct and maintain noise barriers and enclosures around noisy equipment or along the noise transmission path;
- implement noise reduction measures at noise sensitive places;
- provide and maintain low noise equipment;
- carry out routine maintenance on fans to minimise bearing noise; and
- repair or replace defective mufflers of vehicles and plant with suitable effective mufflers; limit the hours of operation of the project to between the hours of 7am to 6pm Monday to Saturday.

Note 7 - If aircraft are being used for mining activities operate them so as to minimise disturbance to livestock (eg. helicopters).

Erosion And Sediment Control

Condition 5

The holder of the environmental authority must design, install and maintain adequate banks and/or diversion drains to minimise the potential for storm water runoff to enter disturbed areas.

Condition 6

The holder of the environmental authority must design, install and maintain adequate erosion and sediment controls wherever necessary to prevent erosion of disturbed areas and sedimentation of any *Watercourse*, Waterway*, Wetland or *Lake*.***

Note 8 - When designing and constructing sediment ponds refer to the "Engineering Guidelines for Queensland Construction Sites" Soil Erosion and Sediment Control.

Note 9 – Regularly clean out sediment traps, ponds and drains and maintain them in effective working order, until erosion stability has been achieved in disturbed areas.

Note 10 – The capacity of sediment traps, ponds, drains and banks should not be reduced below 70% of their design capacity.

Topsoil and Overburden Management

Condition 7

The holder of the environmental authority must ensure that *Topsoil is removed and stockpiled prior to carrying out any mining activity. Prevent or minimise the mixing and erosion of topsoil and *Overburden** stockpiles.**

Note 11 - To separate topsoil and overburden and to prevent or minimise the erosion of these stockpiles the following measures or similar measures can be used:

- identify topsoil and overburden layers before stripping topsoil;
- store topsoil and overburden in separate stockpiles;
- install silt fences or bunding around the stockpiles;
- where practical reuse topsoil stockpiles within 12 months;
- establish and maintain a temporary cover crop on stockpiles; and
- limit the height of topsoil stockpiles to 2 metres.

Hazardous Contaminants

Condition 8

The holder of the environmental authority must plan and conduct activities on site to prevent any potential or actual release of a *Hazardous Contaminant*.*

Note 12 - Section 442 of the *Environmental Protection Act 1994* makes it an offence to release a prescribed contaminant. A prescribed contaminant is a contaminant prescribed by an Environmental Protection Policy.

Note 13 - Section 443 of the *Environmental Protection Act 1994* makes it an offence to cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance.

Condition 9

The holder of the environmental authority must ensure that spills of hazardous contaminants are cleaned up as quickly as practicable. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such contaminants to any watercourse, waterway, groundwater, wetland or lake.

Note 14 - If a mining tenement becomes Significantly Disturbed Land* because it is contaminated land, it ceases to be significantly disturbed land if a Suitability Statement* is issued for the land. Refer to section 384 of the *Environmental Protection Act 1994*.

Note 15 - A Site Management Plan* approved under part 413 of the *Environmental Protection Act 1994* may be required by the administrating authority for sites recorded on the Environmental Management Register* or Contaminated Land Register*. Such sites may include acid producing overburden stockpiles and tailings dams containing acid producing wastes.

Condition 10

The holder of the environmental authority must, where practical, separate acid producing waste rock from benign waste rock.

Condition 11

The holder of the environmental authority must dispose of acid producing waste rock in an excavation or pit and backfill as soon as practical. Backfill the excavation or pit containing acid producing waste rock with benign, low permeability material and seal the excavation or pit with a compacted capping layer at least 1m thick.

Note 16 -The owner or occupier of a mining tenement must notify the administering authority if they become aware that a Notifiable Activity* listed in schedule 3 of the *Environmental Protection Act 1994*, is being carried out on the land within 30 days, by giving notice to the administering authority in the approved form. For example, an exploration or mineral development project that generates waste materials that contain hazardous contaminants, must notify the administrating authority that this activity is being carried out. Refer to section 371 of the *Environmental Protection Act 1994*.

Note 17 - For detailed information on the management of acid mine waste material refer to the "Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland", Part B, 'Assessment and Management of Acid Drainage' and the 'Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland'.

Nature Conservation

Condition 12

The holder of the environmental authority must prevent the spread of *Declared Plants by ensuring that all vehicles and machinery are adequately cleaned before taking the vehicles and machinery out of a *Declared Plant Area*.***

Note 18 - Sections 23 (b) and 29 (b) of the Mineral Resources Regulation 1990 requires that - every precaution be taken to ensure there is no dispersal of parthenium weed or the seed of any other declared plant within the meaning of the Rural Lands Protection Act 1985 as a result of mining activities or as a result of access to the area of the mining tenement.

Note 19 – The Department of Agriculture, Fisheries and Forestry provided Pest Facts sheets for declared plants in Queensland and clean down procedures for vehicles and machinery working in declared plant areas. For advice on declared plant areas contact the Department of Agriculture, Fisheries and Forestry or your local Council.

Condition 13

The holder of the environmental authority must not carry out activities in a category A or B Environmentally Sensitive Area. Activities involving machinery must not be carried out within 1km of a category A environmentally sensitive area or within 500m of category B environmentally sensitive area. Prior to carrying out activities in a category C environmentally sensitive area, consult with the relevant administering authority and the Environmental Protection Agency. If it is determined through the consultation that additional conditions are necessary, the holder must comply with those conditions.

Note 20 – Refer to Appendix A - Environmentally sensitive Areas.

Condition 14

The holder of the environmental authority must not carry out activities within 100m of a *Historical*, *Archaeological* or *Ethnographic* site.

Note 21 – With regard to cultural heritage issues refer to the Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987 and the Queensland Heritage Act 1992 . Prior to carrying out any activities on the mining tenement, the holder of the environmental authority should consult with the administrating authority if a site has the potential to be designated as a historical, archaeological or ethnographic site.

Other Level 2 Environmentally Relevant Activities

Condition 15

The holder of the environmental authority must not carry out the following Level 2 Environmentally Relevant Activities (ERA) on the mining tenement:

- **ERA (7) Chemical Storage - storage of chemicals (other than crude oil, natural gas and petroleum products) including ozone depleting substances, gases or dangerous goods under the dangerous goods code in containers with a design storage volume of more than 10m^3 but less than 1000m^3;**
- **ERA (76) Incinerating waste – operation of a waste incineration facility for incinerating ¬**
  - **a) vegetation;**
  - **b) clean paper or cardboard;**
- **ERA (77) Battery Recycling - operation of a facility for receiving and recycling or reprocessing any kind of battery; and**
- **ERA (80) Tyre Recycling - operation of a facility for receiving and commercially recycling or reprocessing tyres (other than retreading tyres).**

3.2 ACTIVITY BASED CONDITIONS

Roads And Tracks

Condition 16

The holder of the environmental authority must consult with the *Landowner prior to establishing any new roads and tracks.**

Note 22 - Refer to the Technical Guidelines when planning and constructing all new roads and tracks.

Note 23 - Repair all damage to existing private roads and tracks resulting from mining activities, so that they are as trafficable as they were prior to any damage.

Condition 17

When constructing new roads and tracks, the holder of the environmental authority must ensure that the area and duration of disturbance to land, vegetation and watercourses is minimised.

Note 24 - When planning and constructing new roads and tracks the following measures or similar measures can be used to minimise the area and duration of disturbance of land, vegetation and watercourses:

- wherever possible use or upgrade existing roads and tracks;
- construct roads and tracks along natural grades;
- minimise the width of roads and tracks;
- minimise the number of crossings in riverine areas;
- construct crossings in riverine areas in a stable section of the bed;
- avoid constructing roads or tracks that run straight down the bank to the crossing;
- do not disadvantage other users of existing public roads & tracks;
- construct a bed level causeway, a culvert or a bridge where natural bed conditions within a watercourse will not carry the intended traffic load or where crossing of the bed will generate a significant increase in turbidity;
- minimise the number of cuts and fills in riverine areas;
- position cuts and fills in riverine areas to minimise risk of erosion from subsequent flood events;
- position crossings to prevent flow being directed towards the banks and provide erosion resistance to the bed and banks downstream of a crossing for a distance equal to the width of the normal flow channel;
- do not create any downstream or upstream drops at the lip of culverts or causeways;
- regularly clean out culverts, bridges and causeways to prevent flow being impeded or redirected; and
- construct in-stream crossings outside of main fish migration periods.

Campsites

Condition 18

The holder of the environmental authority must consult with the landowner prior to establishing any *Campsites*.

Condition 19

When establishing a campsite, the holder of the environmental authority must ensure that the area and duration of disturbance to land, vegetation and watercourses is minimised.

Note 25 - When establishing and maintaining campsites the following measures or similar measures can be used to minimise the area and duration of disturbance to land, vegetation and watercourses:

- locate campsites at least 100m from any riverine areas;
- only disturb the minimum area necessary for the safe functioning of the campsite;
- install an appropriate human waste disposal facility (e.g. portable self contained toilets, pit toilets, septic tanks);
- use absorption trenches, transpiration beds or spray irrigation to dispose of grey water; and
- locate all disposal areas at least 100m distance from any watercourse, waterway, groundwater recharge area, wetland or lake.

Note 26 – With regard to the on site management of water refer to the Environmental Protection (Water) Policy 1997.

Waste Management

Condition 20

The holder of the environmental authority must not directly or indirectly release waste from the project area to any watercourse, waterway, groundwater, wetland or lake.

Note 27 - When managing waste materials the following strategy should be adopted:

- avoid creating excess waste;
- reuse waste materials;
- recycle waste;
- create and utilise energy from waste;
- treat waste; and
- dispose of waste (e.g. provide rubbish containers on site).

Note 28 - Where practicable take all *General Waste** to a *Licensed General Waste Disposal Facility**.

Condition 21

The holder of the environmental authority must not dispose of more than 50 tonnes of *General Waste on the mining tenement per year.**

Note 29 -The holder of the environmental authority may bury up to 50 tonnes of general waste on the mining tenement per year. When burying general waste the following measures or similar measures should be used:

- locate the waste pit so as to ensure that the waste will not contaminate any watercourse, waterway, groundwater, wetland or lake;
- divert stormwater runoff from entering the pit;
- crush drums and other containers to reduce the volume of waste;
- make the pit safe and protect it from scavengers;
- backfill the pit when the level of rubbish in the pit is not less than 1m below the surface; and
- sufficiently overfill the pit to allow for settlement.

Note 30 – The holder of the environmental authority may dispose of limited regulated waste to a licensed general waste disposal facility provided the annual volume of limited regulated waste does not exceed 10% of the annual volume of general waste (e.g. tyres).

Service, Maintenance and Storage Areas

Condition 22

The holder of the environmental authority must not directly or indirectly release fuels, oils, lubricants or other contaminants to any watercourse, waterway, groundwater, wetland or lake.

Note 31 - To prevent the direct or indirect release of fuels, lubricants or other contaminants to any watercourse, waterway, groundwater, wetland or lake the following measures or similar measures can be used:

- maintain all refuelling equipment in good working order;
- use groundsheets or drip trays to capture spillage during maintenance of machinery and vehicles;
- locate all fuel storages within an impermeable bund;
- ensure all liquid containment, including fuel tank bunds and process water ponds, have a volume at least equal to the design volume plus an additional 10% of that volume; and
- where practical, undertake all refuelling and routine maintenance of vehicles within designated service areas

Condition 23

The holder of the environmental authority must ensure that all chemical, fuel and oil storage facilities less than 10 000L on a mining tenement, must be designed and operated in accordance with Australian Standard 1940 – 'The storage and handling of flammable and combustible liquids', Section 2, Minor Storage.

Condition 24

The holder of the environmental authority must ensure that:

(1) all chemical, fuel and oil storage facilities of more than 10 000 L on a mining tenement, must be bunded to contain at least one hundred percent of the volume of the largest container, plus twenty-five percent of the storage capacity of the largest container up to a maximum of 10,000 L, together with ten percent of the storage capacity beyond 10, 000 L; and

(2) the facility must be operated and maintained in accordance with the Australian Standard 1940 – "The Storage and Handling of flammable and combustible liquids".

Drilling, Excavating and Sampling

Condition 25

The holder of the environmental authority must ensure:

- **all marker pegs are marked with contrasting colour so as to be clearly visible;**
- **all marker pegs are removed from the tenement at the completion of exploration activities;**
- **all permanent markers (example, concrete plugs or steel plates) are installed at ground level and made safe.**

Condition 26

When drilling, excavating or sampling, the holder of the environmental authority must ensure that the area and duration of disturbance to land and vegetation is minimised.

Note 32 - When drilling, excavating or sampling the following measures or similar measures can be used to minimise the area and duration of disturbance to land and vegetation:

- consider seasonal influences, such as rainfall before excavating or establishing a drill site;
- construct drill pads no larger than necessary to safely accommodate the drilling rigs and ancillary equipment;
- use excavators or backhoes wherever possible in preference to bulldozers; and
- use drilling fluids and other process fluids which are non-toxic.

Note 33 - Prior to working in riverine areas refer to the "Technical Guidelines for the Environmental Management of Mining and Exploration in Queensland", Part B, "Exploration and Mining in Watercourses".

Note 34 - Install and maintain adequate warning signs, fences and rock bunds to exclude people, livestock and native animals from excavations and shafts.

Note 35 - Provide safe access to water for livestock and native animals by:

- providing hard surfaces around water storage areas; and
- fencing off any soft areas around the edge of water storage areas.

Condition 27

The holder of the environmental authority must not drill, excavate or clear vegetation:

- **in standing waters, wetlands or lakes; or**
- **on the sloped banks or within 3m of the top of the bank or 5m of the toe of the bank; or**
- **within, or on the levee banks of the normal flow channel.**

Note 36 -For representative diagrams that define the different landform elements that make up a watercourse refer to Figure 1 - Cross Section Through a Watercourse and Figure 2 – Plan View of a Watercourse.

Condition 28

The holder of the environmental authority must not directly or indirectly release wastewater to any watercourse, waterway, groundwater, wetland or lake.

Note 37 - To prevent the direct or indirect release of waste water to any watercourse, waterway or groundwater, wetland or lake the following measures or similar measures can be used:

- where practical recycle all waste water (e.g. recycle waste water for drilling water);
- use waste water for dust suppression;
- discharge waste water onto benign overburden or waste rock heaps for absorption; and
- discharge wastewater to an evaporation pond.

Note 38 - With regard to the on site management of water refer to the Environmental Protection (Water) Policy 1997.

Exploration drill holes

Condition 29

The holder of the environmental authority must decommission all non-artesian drill holes, apart from those still required for monitoring purposes as soon as practical, but no later than 6 months after the hole was drilled by undertaking the following actions:

- **where practical dispose of all unused drill chips to the hole or to a sump pit and;**
- **cap the hole at a depth that is appropriate for the previous land use of the area (unless the land owner stipulates a future use which requires the cap to be placed deeper); and**
- **backfill the hole above the cap with soil or material similar to the surrounding soil or material.**

Note 39 - The following depths are considered as appropriate for capping:

- surface level in rock outcrops; and
- at least 1 metre below the surface on land used for cropping; and
- at least 300 mm below the surface on other land.

Condition 30

The holder of the environmental authority must isolate non-artesian aquifers where a drill hole intersects more than one water bearing strata by casing or plugging the hole as soon as practical after the hole is no longer required, but no later than 2 months after the hole was drilled, apart from those holes that are still required for monitoring purposes if:

- **the flow difference between aquifers exceeds 500 L/hour; and**
- **the difference in electrical conductivity of water is greater than 10% of the lower value.**

Condition 31

Conditions 29 and 30 do not apply to a non-artesian exploration drill hole if:

- **the land owner and the explorer have agreed that it should be left for conversion to a water bore; and -the**
- **landowner gives a written undertaking to accept responsibility for the hole; and**
- **the details of the agreement and the drill hole (such as its GPS location and the drill logs showing the water bearing strata and flow rates) are provided to the Department of Natural Resources within 30 days of the land owner giving the undertaking; and**
- **the hole is temporarily capped so as to prevent possible ingress of surface waters and associated sediments and pollutants.**

Note 40 - Drill holes that are to be converted to a water bore must be done so by a licensed water bore driller.

Condition 32

The holder of the environmental authority must ensure that exploration drill holes that strike artesian flows of water that exceeds 500 L/hour for seven days must be either:

(1) **decommissioned as soon as practical, but no later than 1 month after the hole was drilled, apart from holes that are still required for monitoring or evaluation purposes. Refer to Report No. SW4 – "Minimum Construction Requirements for Water Bores in Australia", (ARMCANZ 1997); or**

(2) **capped to allow for future conversion into a controlled artesian bore by a licensed water bore driller; or**

(3) **converted into a controlled artesian bore by a licensed water bore driller, provided that:**

  (a) **the land owner has undertaken in writing to accept responsibility for the drill hole; and**

  (b) **the explorer provides details of the agreement and the drill hole to the Department of Natural Resources within 30 days of obtaining the landowner's agreement.**

Note 41 - Provisions apply under the Water Act 2000 with respect to the utilisation of ground water from boreholes in Proclaimed Areas (which include all Artesian Basin areas) and the rehabilitation of boreholes.

Condition 33

The holder of the environmental authority must ensure that exploration drill holes that are to be retained for future mineral resource evaluation purposes are cased and capped. Holes to be retained for more than three years must be capped with steel casing and appropriately identified.

Gridlines and Geophysical Surveys

Condition 34

The holder of the environmental authority must plan and determine the final position of gridlines and geophysical lines in consultation with the landowner.

Condition 35

When constructing gridlines and geophysical lines, the holder of the environmental authority must ensure that the area and duration of disturbance to land and vegetation is minimised.

Note 42 - When constructing gridlines and geophysical lines the following measures or similar measures can be used to ensure that the area and duration of disturbance to land and vegetation is minimised:

- conduct surveying of gridlines on foot;
- use existing gates, tracks, roads and seismic lines;
- before deciding on the location of new seismic lines, record the location of all underground or surface pipelines, cables, power lines, etc. and avoid these areas;
- in planning for drilling and sampling activities, where possible, ensure the activities occur at least 100m from riverine areas;
- construct seismic lines that do not exceed the width necessary to safely undertake the survey;
- use Global Positioning Systems (GPS), or other techniques, to reduce the need for line of sight clearing;
- maintain buffer widths of at least 25m between all disturbed areas;
- minimise the use of bulldozers and excavators when cutting gridlines and/or seismic lines; and
- notify landowners at least 24 hours prior to detonating seismic explosives.

Monitoring, Reporting and Emergency Response Procedures

Condition 36

The holder of the environmental authority must record and notify the administering authority of any emergency or incident which demonstrates non-compliance with the Standard Environmental Conditions.

Note 43 - A notification of any emergency or incident which demonstrates non-compliance to the standard environmental conditions cannot be used in evidence in any further action taken by the administrating authority as a result of the notification.

Note 44 - To demonstrate ongoing compliance with the standard environmental conditions, the holder complete Form 1, 'Monitoring and Record Keeping Summary' and establish programs to monitor project activities and maintain monitoring records for review by the administrating authority.

Note 45 -To demonstrate compliance complete Form 2, 'Emergency Response Table'. Provide and maintain appropriate emergency response equipment and inform all operational personnel, contractors and visitors of emergency procedures.

Note 46 - Observe the provisions and regulations under the *Fire and Rescue Authority Act 1990* and the *Mines Regulation Act 1985.*

Rehabilitation

Condition 37

In *Riverine Areas, the holder of the environmental authority must complete the *Rehabilitation Processes** on all areas disturbed by mining activities, apart from those areas currently being utilised for mining activities, as soon as practical and prior to the onset of the wet season.**

Note 47 -Condition 37 is to ensure that there is adequate erosion protection in riverine areas prior to the onset of the wet season. In Queensland the wet season is generally considered to be from November to April each year.

Condition 38

For all other areas on the mining tenement, the holder of the environmental authority must complete the rehabilitation processes on all areas disturbed by mining activities, apart from those areas currently being utilised for mining activities, as soon as practical and at least within six months of the completion of works in those areas.

Note 48 – Where practical undertake progressive rehabilitation wherever possible.

Condition 39

The holder of the environmental authority must backfill all excavations, drill holes or sampling sites as soon as practical following the completion of exploration activities.

Condition 40

Condition 39 does not apply to any excavations, drill holes or sampling sites that are to remain after the completion of exploration activities, by agreement with the land owner.

Condition 41

The holder of the environmental authority must rehabilitate areas disturbed by mining activities to a stable landform similar to that of surrounding undisturbed areas.

Note 49 - When rehabilitating disturbed areas refer to the "Technical Guidelines for the Environmental Management of Mining and Exploration in Queensland", Part D, 'Geo-technical Slope Stability'.

Condition 42

The holder of the environmental authority must spread seeds or plant species that will promote vegetation of a similar species and *Density of Cover to that of the surrounding undisturbed areas or vegetation that is appropriate for providing erosion control and stabilisation of the disturbed areas**.

Note 50 - To revegetate disturbed areas the following measures or similar measures can be used:

- for areas which have become compacted during the project, break up the soil surface to a depth
- that is suitable for establishing vegetation; and
- spread stockpiled topsoil over disturbed areas to a depth that is suitable as a rooting medium for
- the revegetation process; and
- provide suitable nutrient conditions for planting by using fertiliser if necessary; and
- collect and store native seeds to be used in rehabilitation.

Note 51 **-**When revegetating disturbed areas, the holder of the environmental authority should plant native species endemic to the area and location in the landscape (e.g. if clearing has occurred in a riverine area, revegetate the disturbed area using local riverine species).

Note 52 - Vegetation used to provide erosion protection and stabilise disturbed areas in the short term should be comprised of sterile, short-lived species (e.g. a cover crop). However, the long term aim of revegetating any disturbed area is to establish a stable vegetation community that is similar to that of the surrounding undisturbed areas or endemic species.

Note 53 - The environmental authority holder is not liable for rehabilitating disturbed areas that existed prior to the grant of the tenure unless those areas are disturbed during the term of the tenure.

Condition 43

For any *Mine Infrastructure to remain after all mining activities have ceased, the holder of the environmental authority must obtain the written agreement of the land owner stating they will take over responsibility for that infrastructure.**

Condition 44

The holder of the environmental authority must complete rehabilitation of disturbed areas to the satisfaction of the administrating authority.

Note 54 - Condition 44 is a requirement of the *Environmental Protection Act 1994*. The environmental authority holder must submit a *Final Rehabilitation Report* (FRR) and an *Environmental Audit Statement* (EAS) prior to the cancellation or expiry of the mining tenement. The surrender of the environmental authority will not be granted until the administrating authority has accepted the FRR and the EAS.

4.0 DEFINITIONS

Administrating authority - Means

(a) for a matter, the administration and enforcement of which has been devolved to a local government under section 514 of the *Environmental Protection Act 1994*; or

(b) for all other matters - the Chief Executive of the Environmental Protection Agency; or

(c) another State Government Department, Authority, Storage Operator, Board or Trust, who's role is to administer provisions under other enacted legislation (e.g. Department of Natural Resources who licence referable dams under the Water Act 2000).

Annual exceedence probability (AEP) -For a given rainfall event the AEP is the probability that the event will be exceeded within a one year period. The AEP is usually expressed as a one in 'n' (years) or a percentage.

Approved form - Means a form approved by the administrating authority.

Archaeological site - A site that has physical evidence of the past, which has the potential to increase our knowledge of earlier human occupation, activities and events.

Artesian drill hole - An exploration drill hole from which water freely flows at a rate of greater than 500 L/hour for at least 7 days after being drilled.

Banks -The feature which confines major flows within a watercourse. They are steeper than a terrace and are generally of a slope greater than 1:1 on outer bends. Refer to Figure 1 – Cross Section through a Watercourse.

Bund - (a) An earth mound or similar structure (e.g. a concrete block wall), whether impervious or not, constructed to contain spilled material (e.g. petrol, diesel, oil etc); or

• (b) a structure to prevent or reduce soil erosion.

Campsite -The area encompassing any dwelling, amenities (e.g. toilet block, power generator), sewage or general waste disposal facility and includes the office area and vehicle parking areas associated with a temporary or permanent mining camp.

Contaminant - The *Environmental Protection Act 1994* defines, under Section 11, a contaminant as:

(a) a gas, liquid or solid; or

(b) an odour; or

(c) an organism (whether alive or dead), including a virus; or

(d) energy, including noise, heat, radioactivity and electromagnetic radiation; or

(e) a combination of contaminants.

Contamination -Section 10 of the *Environmental Protection Act 1994* defines contamination of the environment as the release (whether by act or omission) of a contaminant into the environment.

Contaminated land -Schedule 3 of the *Environmental Protection Act 1994* defines contaminated land as land contaminated by a hazardous contaminant. (See below for a definition of hazardous contaminant.)

Contaminated land register - Means the register kept by the administrating authority under section 541 of the *Environmental Protection Act 1994*.

Contour banks -Are mounds of earth constructed along the contours of the land to reduce the amount and velocity of run-off down the slope.

Costeaning -The digging of a trench or pit across the seam or ore body for exposing, sampling and mapping of the ore body.

Culvert -A covered channel, or a pipe of large diameter conveying water below ground level. Also applies to a tunnel through which water is pumped or permitted to flow.

Declared plant area - Areas designated by the Department of Natural Resources or Local Government as areas infested with plants declared under section 69 of the *Rural Lands Protection Act* 1985 (section 70 (3) lists the categories of declared plants).

Declared plant - A plant that has been declared under the *Rural Lands Protection Act 1985*.

Density of cover -In reference to trees and/or shrubs, it means the number of trees or shrubs in a specified area (e.g. 50 trees per square kilometre). With reference to understorey plant species (e.g. grasses and forbs), it means the percentage of surface area covered by a particular species.

Designated service area -Is a nominated site, selected and managed to minimise contamination of land or water, where the majority of services or maintenance of machinery or plant is to be conducted.

Disturbed -Any area that has had its natural state altered by the action or interference of carrying out an activity associated with the exploration project.

Environment -Section 8 of the *Environmental Protection Act 1994* defines the environment as:

(a) ecosystems and their constituent parts, including people and communities; and

(b) all natural and physical resources; and

(c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and

(d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).

Environmental audit statement - Verifies the accuracy of the final rehabilitation report and identifies any residual financial assurance requirements.

Environmental authority - Means a licence or approval issued by the administrating authority under the *Environmental Protection Act 1994*.

Environmental management register - Means the register kept by the administrating authority under section 541 of the *Environmental Protection Act 1994*.

Environmental nuisance - Section 15 of the *Environmental Protection Act 1994* defines

environmental nuisance as “unreasonable interference or likely interference with an environmental value” caused by:

(a) noise, dust, odour, light; or

(b) an unhealthy, offensive or unsightly condition because of contamination; or

(c) another way prescribed by regulation. (e.g. unreasonable noise or dust emissions)”

Environmental protection policy - Means an environmental protection policy approved under chapter 2 of the *Environmental Protection Act 1994*.

Environmental relevant activity - Means an activity prescribed by regulation as an environmental relevant activity.

Environmentally sensitive areas - Refers to locations, however large or small, that have environmental values that contribute to maintaining biological diversity and integrity, have intrinsic or attributed scientific, historical or cultural heritage value, or are important in providing amenity, harmony or sense of community. Refer to Appendix A.

Environmental value - Section 9 of the *Environmental Protection Act 1994* defines an environmental value as:

(a) a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety; or

(b) another quality of the environment identified and declared to be an environmental value under an Environmental Protection Policy or Regulation (e.g. water suitable for swimming in or drinking)

Ethnographic site - An archaeological site of particular importance to the study of a cultural group.

Final rehabilitation report - Means a final rehabilitation report prepared under chapter 5, part 10, division 2, subdivision 2 of the *Environmental Protection Act 1994*. The report assesses the extent to which the standard environmental conditions and any additional conditions of the environmental authority have been met.

Financial assurance - Means a security deposit, either cash or a bank guarantee, that is held by the administrating authority to cover the potential:

(a) costs to rehabilitate areas disturbed by mining activities; and

(b) costs to restore property improvements disturbed by mining activities; and

(c) failure of the tenure holder to pay rents and royalties.

Flood flow channel - For a representative drawing of a flood flow channel refer to Figure 1'Cross Section Through a Watercourse' and Figure 2 – 'Plan View of a Watercourse'.

General waste -Schedule 9 of the Environmental Protection Regulation 1998 defines general waste as "means waste other than regulated waste". Waste rock, overburden and the contents of tailings dams are not included in the definition of general waste for the purposes of these conditions.

Guidelines for livestock drinking water - Recommended water quality guidelines for livestock drinking water. Refer to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 1992.

Hazardous contaminant -Schedule 3 of the *Environmental Protection Act 1994* defines a

hazardous contaminant as "a contaminant that, if improperly treated, stored, disposed of or otherwise managed, is likely to cause serious or material environmental harm because of:

(a) its quantity, concentration, acute or chronic toxic effects, carcinogenicity, teratogenicity, mutagenicity, corrosiveness, explosiveness, radioactivity, flammability; or

(b) its physical, chemical or infectious characteristics (e.g.: spills of mercury, cyanide, petrol, diesel or oil)".

Historical site -A site containing objects from the past that allows the study of the way people lived and worked at that place in the past.

Infrastructure -Project infrastructure includes roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, pipelines, powerlines, airstrips, helipads etc, which are constructed or installed specifically for the project.

Lake -A natural or artificial body of water, either permanent or intermittent.

Landowner -Schedule 3 of the *Environmental Protection Act 1994* defines the owner of the land as –

1. The **"owner"** of land is—
   (a) for freehold land—the person recorded in the freehold land register as the person entitled to the fee simple interest in the land; or
   (b) for land held under a lease, licence or permit under an Act—the person who holds the lease, licence or permit; or
   (c) for trust land under the *Land Act 1994*—the trustees of the land; or
   (d) for Aboriginal land under the *Aboriginal Land Act 1991*—the persons to whom the land has been transferred or granted; or
   (e) for Torres Strait Islander land under the *Torres Strait Islander Land Act 1991*—the persons to whom the land has been transferred or granted; or
   (f) for land for which there is a native title holder under the Commonwealth Native Title Act— each registered native title party in relation to the land.
2. Also, a mortgagee of land is the owner of the land if—
   (a) the mortgagee is acting as a mortgagee in possession of the land and has the exclusive management and control of the land; or
   (b) the mortgagee, or a person appointed by the mortgagee, is in possession of the land and has the exclusive management and control of the land.

Licensed general waste disposal facility -A site authorised by the administrating authority to receive general waste or limited regulated waste (e.g. a rubbish dump).

Limited regulated waste -Schedule 9 of the *Environmental Protection Regulation 1998*, defines limited regulated waste. The only limited regulated wastes relevant to mining projects are asbestos and tyres.

Material environmental harm - Section 16 of the *Environmental Protection Act 1994* defines material environmental harm as:

(1) material environmental harm is environmental harm (other than environmental nuisance)
   (a) that is not trivial or negligible in nature, extent or context; or
   (b) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount but less than the maximum amount; or
   (c) that results in costs of more than the threshold amount but less than the maximum amount being incurred in taking appropriate action to
      i. prevent or minimise the harm; and
      ii. rehabilitate or restore the environment to its condition before the harm.

In this section

"maximum amount" means the threshold amount for serious environmental harm.

"threshold amount" means $5 000 or, if a greater amount is prescribed by regulation, the greater amount.

Mine -Section 6A of the *Mineral Resources Act 1989*, defines mining as –

(1) **"Mine"** means to carry on an operation with a view to, or for the purpose of

(a) winning mineral from a place where it occurs; or

(b) extracting mineral from its natural state; or

(c) disposing of mineral in connection with, or waste substances resulting from, the winning or extraction.

(2) For subsection (1), extracting includes the physical, chemical, electrical, magnetic or other way of separation of a mineral.

(3) Extracting includes, for example, crushing, grinding, concentrating, screening, washing, jigging, tabling, electro winning, solvent extraction electro winning (SX-EW), heap leaching, flotation, fluidised bedding, carbon-in-leach (CIL) and carbon-in-pulp (CIP) processing.

(4) However, extracting does not include

(a) a process in a smelter, refinery or anywhere else by which mineral is changed to another substance; or

(b) testing or assaying small quantities of mineral in teaching institutions or laboratories, other than laboratories situated on a mining lease; or

(c) an activity, prescribed under a regulation, that is not directly associated with winning mineral from a place where it occurs.

(5) For subsection (1), includes the disposal of tailings and waste rock.

(6) (6)A regulation under subsection (4)(c) may prescribe an activity by reference to the quantities of minerals extracted or to any other specified circumstances.

Native vegetation - Vegetation that occurs naturally in a certain area.

Noise sensitive place -Means any of the following places –

(a) a dwelling;

(b) a library, childcare centre, kindergarten, school, college, university or other educational institution;

(c) a hospital, surgery or other medical institution;

(d) a protected area or an area identified under a conservation plan as a critical habitat or an area of major interest, under the *Nature Conservation Act 1992*;

(e) a marine park under the *Marine Parks Act 1982*; and

(f) a park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment).

Normal flow channel - For a representative drawing of a normal flood flow channel of a water course refer to Figure 1- 'Cross Section Through a Watercourse' and Figure 2 - 'Plan View of a Watercourse'.

Notifiable activity - Means an activity in schedule 2 of the *Environmental Protection Act 1994*.

Outer bends -For a representative drawing of an outer bend of a watercourse refer to Figure 1– "Cross Section Through a Watercourse" and Figure 2 – "Plan View of a Watercourse".

Overburden -Material overlying a mineral ore deposit, up to but not including the topsoil.

Referable dam -The *Water Resources Act 1989* defines referable dams as

(a) works or proposed works that include or would include a barrier whether permanent or temporary that does or could or would impound, divert or control water, which barrier

  (i) is more than 8 m in height and has a storage capacity of more than 500 ML; or

  (ii) is more than 8 m in height and has a storage capacity of more than 250 ML and a catchment area that is more than 3 times its maximum surface area or full supply level;

(b) works

  (i) that consist of or include or would consist of or include a barrier whether permanent or temporary that does or could or would impound, divert or control water or hazardous waste, other than a barrier defined in paragraph (a);

  (ii) other than a barrier whether permanent or temporary that does or could or would impound, contain, divert or control hazardous waste; declared by the chief executive by notification published in the gazette to be a referable dam by reason of the danger to life or property that could or would eventuate upon the collapse or failure of or the escape of hazardous waste from those works and includes the storage areas created by the works but does not include a tank constructed of steel or concrete or a combination of those materials.

The term does not include a weir, other than a weir that has a variable flow control structure on the crest of the weir.

Regulated waste -Schedule 9 of the *Environmental Protection Regulation 1998* defines regulated waste as non-domestic waste mentioned in schedule 7 (whether or not it has been treated or immobilised), and includes

for an element - any chemical compound containing the element; and

anything that has contained the waste.

(e.g. Regulated waste commonly generated from mining projects include tyres, oils, cyanide, mercury and batteries)

Rehabilitation processes - The measures and actions taken to achieve rehabilitation outcomes, including any or all of the following:

- removing all unwanted infrastructure;
- backfilling mine excavations (e.g. pits) and capping drill holes;
- reshaping the land surface to a stable landform similar to that of surrounding undisturbed areas;
- spreading of topsoil;
- spreading seed or planting seedlings to promote revegetation;
- benching ridge cuts and removing any overhanging material.

Riverine area -Refers to the land adjoining and associated with watercourses, including the bed, banks, adjoining terraced land and riparian vegetation. Refer to Figure 1 – “Cross Section Through a Watercourse”.

Sediment pond - A bunded or excavated structure used to contain and settle waterborne sediment running off disturbed areas.

Sediment trap - A device used to filter waterborne sediment running off disturbed areas. May include silt fences, hay bales or grassed strips.

Serious environmental harm - Section 17 of the *Environmental Protection Act 1994* defines serious environmental harm as

(1) environmental harm (other than environmental nuisance)

(a) that causes actual or potential harm to environmental values that is irreversible, of a high impact or widespread; or

(b) that causes actual or potential harm to environmental values of an area of high conservation value or special significance; or

(c) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount; or

(d) that results in costs of more than the threshold amount being incurred in taking appropriate action to

(i) prevent or minimise the harm; and

(ii) rehabilitate or restore the environment to its condition before the harm.

In this section - **"Threshold amount"** means $50 000 or, if a greater amount is prescribed by regulation, the greater amount.

Significantly disturbed land - Land is significantly disturbed if –

(a) it is contaminated land; or

(b) it has been disturbed and human intervention is needed to rehabilitate it.

Significantly disturbed land includes:

- areas where soil has been compacted, removed, covered, exposed or stockpiled;
- areas where vegetation has been removed or destroyed to an extent where the land has been made susceptible to erosion; (vegetation & topsoil)
- areas where land use suitability or capability has been diminished;
- areas within a watercourse, waterway, wetland or lake where mining project activities occur;
- areas submerged by tailings or hazardous contaminant storage and dam walls in all cases;
- areas under temporary infrastructure. Temporary infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after mining has ceased; or
- areas where land has been contaminated.

However, the following areas are <u>not</u> included:

- areas off lease (e.g. roads or tracks which provide access to the mining lease);
- areas previously significantly disturbed which have achieved the rehabilitation outcomes;
- by agreement with the EPA, areas previously significantly disturbed which have not achieved the rehabilitation objectives due to circumstances beyond the control of the mine operator (such as climatic conditions);
- areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dams, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner. The agreement to leave permanent infrastructure must be recorded in the Landowner Agreement and lodged with the EPA;

- disturbances that pre-existed the grant of the tenure unless those areas are disturbed during the term of the tenure.

Site management plan - Means a site management plan approved under chapter 7, part 8 of the *Environmental Protection Act 1994*.

Standard criteria - Are defined in schedule 3 of the *Environmental Protection Act 1994*.

They are:

(a) the principles of ecological sustainable development; and

(b) any applicable environmental protection policy; and

(c) any applicable Commonwealth, State or local government plans, standards, agreements or requirements; and

(d) any applicable environmental impact study, assessment or report; and

(e) the character, resilience and values of the receiving environment; and

(f) all submissions made by the applicant and interested parties; and

(g) best practice environmental management; and

(h) financial implications; and

(i) the public interest; and

(j) any applicable site management plan; and

(k) any other matter prescribed under a regulation.

Standard environmental conditions - For an environmental authority, means the standard environmental conditions approved for the authority under section 549 of the *Environmental Protection Act 1994*.

Standard mining activity - Means a mining activity decided to be a standard activity under section 151 of the *Environmental Protection Act 1994*.

Suitability statement - The *Environmental Protection Act 1994* defines a suitability statement as :

for land, means a statement about the uses and activities for which the land is suitable.

Technical guidelines - Guidelines that indicate best practice environmental management.

Topsoil - The surface layer of a soil profile, which is usually more fertile, darker in colour, better structured and supports greater biological activity than underlying layers. The surface layer may vary in depth depending on soil forming factors, including parent material, location and slope, but generally is not greater than about 300mm in depth from natural surface.

Unreasonable noise - Section 18 of the Environmental Protection (Noise) Policy 1997 defines unreasonable noise as - noise that

(a) causes unlawful environmental harm; and

(b) is unreasonable, having regard to the following matters:

(i) its characteristics;

(ii) its intrusiveness;

(iii) the time at which it is made;

(iv) where it can be heard;

(v) other noises ordinarily present at the place where it can be heard; and

(c) is not declared to be reasonable in Schedule 2 of the Environmental Protection (Noise) Policy 1997 'Reasonable Noise Levels'.

Unreasonable release -of a contaminant to the air environment, means a release of odours, dust, smoke or other atmospheric contaminants, that:

(a) cause unlawful environmental harm; and

(b) is unreasonable having regard to the following matters:

(i) its characteristic;

(ii) its intrusiveness;

(iii) other releases of contaminants at the place affected by the release;

(iv) where the effect of the release of the contaminants can be noticed; or

(v) the order in which the person releasing the contaminant started to carry out the activity from which the release is made and persons affected by the release started to carry out other activities that may be affected by the release of the contaminant.

Watercourse - Means a river, creek or stream in which water flows permanently or intermittently in a visibly defined channel (natural, artificial or artificially improved) with clear bed and banks and evidence of biological dependence.

Waterway - A naturally occurring feature where surface water runoff normally collects, such as a clearly defined swale or gully, but only flows in response to a local rainfall event.

Wetland - Are areas of permanent or periodic/intermittent inundation, whether natural or artificial, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed 6m. Wetlands typically include areas such as lakes, swamps, marshes, estuaries or mudflats.

5.0 TECHNICAL GUIDELINES

Australian Standard 1940 - The storage and handling of flammable and combustible liquids. Standards Australia (1993).

Australian Water Quality Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Environment and Conservation Council (1992).

Commonwealth Best Practice Environmental Management in Mining Guidelines, Environment Australia.

Dredging, Extraction and Spoil Disposal, Fish Habitat Management Operational Policy: FHMOP 004, Department of Primary Industries (1998).

Farm Water Supplies Design Manual, Department of Primary Industries, (1992).

Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland, Department of Natural Resources (1998).

Soil Erosion and Sediment Control - Engineering Guidelines for Queensland Construction Sites, The Institution of Engineers, Australia, Queensland Division (1996).

Technical Guidelines for Environmental Management of Exploration and Mining, Department of Mines and Energy, Queensland, 1995.

The Conservation Status of Queensland's Bioregional Ecosystems, Environmental Protection Agency (1999).

6.0 RELEVANT LEGISLATION

State Legislation (published by Go Print, Queensland):

Aboriginal Lands Act 1991

Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987

Environmental Protection Act 1994

Environmental Protection Regulation 1998

Fire and Rescue Authority Act 1990

Fisheries Act 1994

Land and Resources Tribunal Act 1999

Land Act 1994 Mineral Resources Act 1989

Mineral Resources Regulation 1990

Mines Regulation Act 1985

Nature Conservation Act 1992

Queensland Heritage Act 1992

Torres Strait Islander Land Act 1991

Water Act 2000

Water Resources Act 1989

Commonwealth Legislation:

Native Title Act 1993

Environment Protection and Biodiversity Conservation Act 1999

APPENDIX A - ENVIRONMENTALLY SENSITIVE AREAS

Category A - Environmentally Sensitive Areas

LAND AREA CLASSIFICATION	ADMINISTERING LEGISLATION	AMINISTRATING AUTHORITY
National Parks (Scientific); National Parks; National Parks (Aboriginal Land); National Parks (Torres Strait Islander Land); National Parks (Recovery);and Conservation Parks	Nature Conservation Act 1992	Environmental Protection Agency
Wet Tropics	Wet Tropics World Heritage Protection and Management Act 1993	Wet Tropics Management Authority
Restricted Areas (includes Constructed Water Reservoirs)	Mineral Resources Act 1989	Department of Mines and Energy
Great Barrier Reef Marine Park Region	Great Barrier Reef Marine Park Act 1975 (Cwlth)	Great Barrier Reef Marine Park Authority
Marine Parks (other than general use zones)	Marine Parks Act 1982 (Qld)	Environmental Protection Agency

Category B - Environmentally Sensitive Areas

LAND AREA CLASSIFICATION	ADMINISTERING LEGISLATION	ADMINISTRATING AUTHORITY
Coordinated Conservation Areas; Wilderness Areas; World Heritage Management Areas; International Agreement Areas; An area of Critical Habitat or Major Interest identified under a Conservation Plan; Areas subject to an Interim Conservation Order; and Forest Reserves.	Nature Conservation Act 1992	Environmental Protection Agency
An area subject to following conventions: (a) Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 23 June 1979); (b) Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar, 2 February 1971); and (c) Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, 16 November 1972).	International Conventions	Environmental Protection Agency
General Use Zones of a Marine Park	Marine Parks Act 1982	Environmental Protection Agency
An Area to the Seaward Side of the Highest Astronomical Tide	Nil	Environmental Protection Agency
Place of Cultural Heritage Significance; Protected Area; Registered Places; and Restricted Zone.	Queensland Heritage Act 1992 Queensland Heritage Act 1992	Environmental Protection Agency
Designated Landscape Area (other than the area known as the 'Stanbroke Pastoral Holding'	Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987	Environmental Protection Agency

Category B - Environmentally Sensitive Areas (continued)

LAND AREA CLASSIFICATION	ADMINISTERING LEGISLATION	ADMINISTRATING AUTHORITY
Feature Protection Area, State Forest Park or a Scientific Area	Forestry Act 1959	Department of Natural Resources
Fish Habitat Area; and A place in which a Marine Plant is situated	Fisheries Act 1994	Department of Primary Industries
Endangered Regional Ecosystems; and An area of High Nature conservation Value	Nil	Environmental Protection Agency

Category C - Environmentally Sensitive Areas

LAND AREA CLASSIFICATION	ADMINISTERING LEGISLATION	ADMINISTRATING AUTHORITY
Nature Refuges; and Resource Reserves	Nature Conservation Act 1992	Environmental Protection Agency
Declared Catchment Areas; Declared Irrigation and Irrigation Project Areas; and Water Reservoirs and Drainage Areas.	Water Act 2000, various Water Board Acts	Department of Natural Resources and/or Relevant Storage Operator or Board
River Improvement Areas	River Improvement Trust Act 1940	Department of Natural Resources and the Relevant River Trust
Designated Landscape Area (e.g. Stanbroke Pastoral Holding)	Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987	Environmental Protection Agency
Historic Mining Sites	Nil (Inter Departmental Notifications)	Environmental Protection Agency and the Department of Mines and Energy
State Forest or Timber Reserves	Forestry Act 1959	Department of Natural Resources
DPI Research Sites	Nil (Inter Departmental Agreement)	Department of Primary Industries
Critical Areas and Public Purpose Reserves	Land Act 1994	Department of Natural Resources
Areas under Coastal Management Plans and Control Districts	Coastal Protection and Management Act 1995	Environmental Protection Agency
An area subject to a State Planning Policy that the policy declares is in need of environmental protection.	Integrated Planning Act 1997	Environmental Protection Agency
Erosion Prone Areas and Coastal Management Control Districts	Beach Protection Act 1968	Environmental Protection Agency
Areas of land occupied by the Bureau of Sugar Experiment Stations to conduct research	Sugar Industry Act 1999	Department of Primary Industries

APPENDIX B – FORMS

FORM 1 Monitoring and Record Keeping Summary

MONITORING AND RECORD KEEPING SUMMARY

Environmental Authority No:
Project No:
Term of Plan (yrs):
Commencement Date

Data and Information	Method Of Record Keeping To Be Used				Frequency
	site plans	journal	photographs	Other	
Topsoil stripping and stockpiling (e.g. record topsoil stockpiles, location and age)					
Area disturbed and rehabilitation (e.g. map of the area of disturbance and photos of rehabilitation)					
Pre and post-mine landform (e.g. record photographs of the area prior to and following mining)					
Water discharge quality (e.g. note colour of discharge water from sediment dams)					
Dam maintenance (e.g. record of dam maintenance such as sediment removal)					
Record of complaints (e.g. air, noise, tracks etc) (e.g. record in journal any complaints received by adjoining land owner, actions taken and the outcomes of the action)					

Site specific conditions (e.g. record of monitoring to demonstrate compliance with any site specific conditions)		
Remediation of contaminated land (e.g. record of current and remediated contaminated land)		
Waste Management (e.g. record of waste taken to a regulated waste collection depot)		
Rehabilitation quotes, estimates and actual costs		
Others – relevant to performance category		

FORM 2 Emergency Response Table

Emergency situation	**Who to contact in case of emergency situation occurring**	**Equipment required to be kept and maintained on site**	**Procedure to be followed in case of emergency situation occurring**
Hydrocarbon spill causing serious or material environmental harm			
Chemical spill causing serious or material environmental harm			
Other			

FORM 3 Schedule of Rehabilitation Costs

TOTAL AREA OF DISTURBANCE	REHABILITATION TYPES	
	LOW RISK Simple straightforward rehabilitation. Successful rehabilitation of analogous sites has previously been achieved	**HIGH RISK** Difficult rehabilitation (e.g. dispersive soils, steep topography, remoteness, sensitive areas, etc.)
Category 1 — Less than 1 hectare	$2,500	$5,000
Category 2 — 1 to 4 hectares	$10,000	$20,000
Category 3 — 4 to 10 hectares	$20,000	$40,000

Notes: The final assurance for each category are based on rehabilitating the maximum area in that category (e.g. financial assurance for 1 to 4 hectares is based on the cost of rehabilitating 4 hectares). The Financial Assurance for environmental authority with additional conditions attached allow that the operator to disturb more than 10ha, will be calculated using the above schedule with the additional area of disturbance calculated according to the relevant category. For example, the financial assurance for 18ha of low risk disturbance will be $40,000 (i.e. $20,000 for the first 10ha and another $20,000 for the extra 8ha because it is also in category 3).

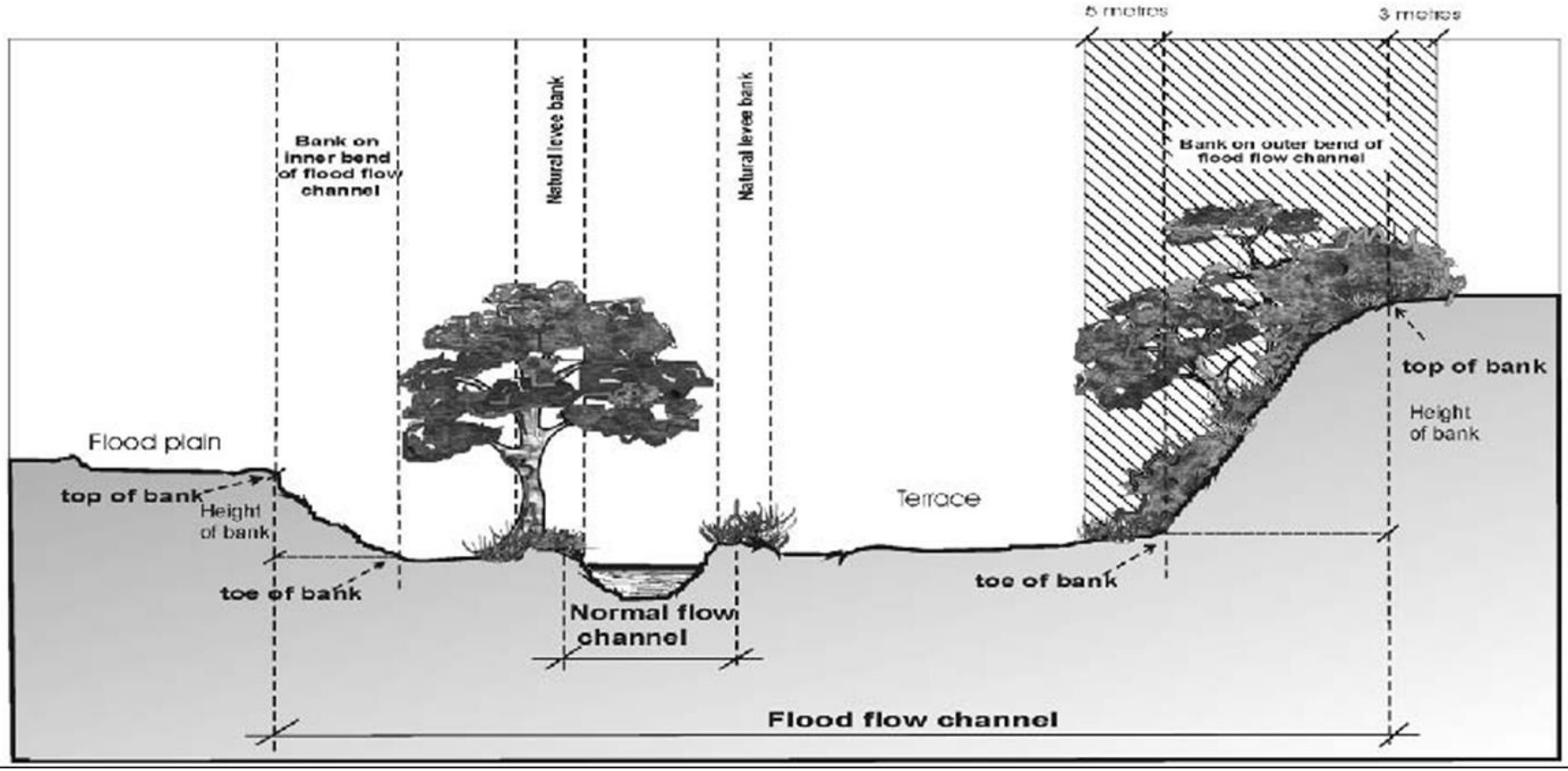
Figure 1

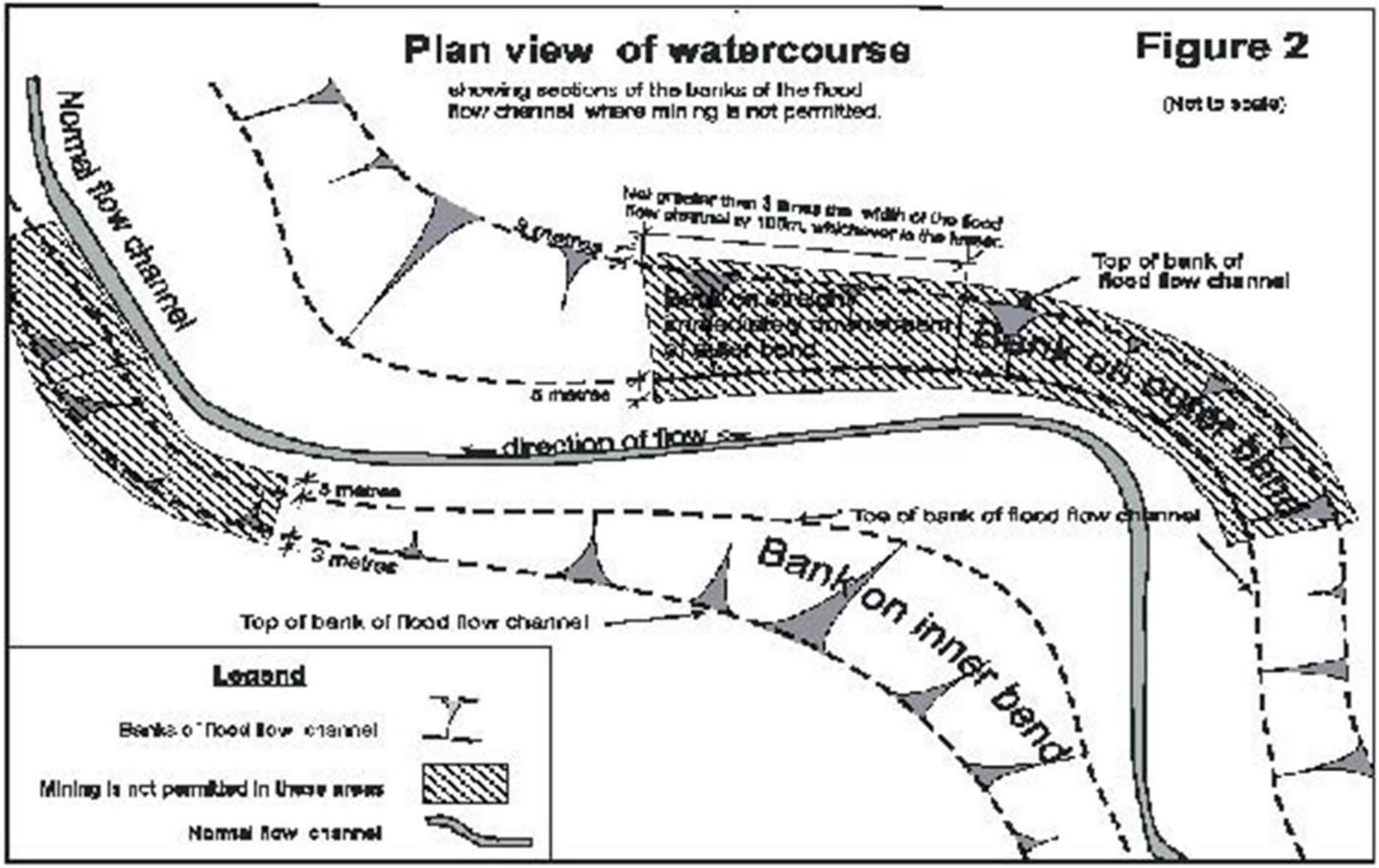
(not to scale)

Cross section through a watercourse

showing sections of the banks of the flood flow channel where mining is not permitted.

Mining is not permitted in the areas shown as




Plan view of watercourse
Figure 2
showing sections of the banks of the flood flow channel where mining is not permitted.
(Not to scale)
Normal flow channel
Top of bank of flood flow channel
Bank on outer bend
direction of flow
5 metres
3 metres
Top of bank of flood flow channel
Bank on inner bend
Top of bank of flood flow channel
Legend
Banks of flood flow channel
Mining is not permitted in these areas
Normal flow channel