

## 2.6. MINING

Mining is a significant industry in the Mitchell River catchment. It is the oldest non-aboriginal land use in the catchment, having provided benefit to the people of the region for more than 120 years. However, with the benefits have come some costs. Boom towns such as Maytown, Irvinebank and Chillagoe attest to the social cost of early mining operations, as do the cultural battles of the Palmer River Goldfields and the explosive disaster at Mt Mulligan Mine. Despite early setbacks, not least to these the remoteness of the region, mining has flourished and remains a progressive industry. Small scale alluvial and hardrock gold and tin operations have dominated current mining activities in recent times.

In addition to the activities of “small miners”, two large open cut mines exist in the catchment - Mt Carbine Mine and Red Dome Mine. The Mt Carbine mine has ceased operating as a mine, however the waste rock is being processed for road aggregate. Red Dome Mine near Chillagoe is currently decommissioning. The mine is in the process of rehabilitating all areas of disturbance.

The Department of Mines and Energy (DME) regulates environmental performance of the mining industry in Queensland. There are two principal pieces of legislation which enable this - the *Mineral Resources Act 1989 (MRA)* and the *Environmental Protection Act 1994 (EPA)*. The MRA is specific to the mining industry and requires life-of-mine environmental planning through development and submission of Environmental Management Overview Strategy (EMOS) documentation. It also contains provision for lodgement of security deposits to ensure rehabilitation of sites. In contrast, the *EPA* applies to all activities and persons in Queensland and requires licensing of certain prescribed activities, many of which are common place on mine sites. As a result, the environmental performance of mining within the catchment continues to improve.

The environmental management and regulation of the mining industry is set to be transferred from the DME to the EPA. The *MRA* and *EPA* acts will be amended to facilitate this. The timeframe for this transfer is to be complete is by mid 2000.

Mine management issues include waterway and riparian vegetation protection, conflict with other water users, waste rock management and rehabilitation of disturbed sites. Vehicle access and exploration probably cause the most widespread impacts of the mining industry. Some areas of intense mining activity now appear to be a maze of access tracks. Often these tracks allow access to very rugged terrain, which would not have been able to be

accessed before. For graziers these may be viewed as valuable infrastructure for stock management, though intense seasonal rainfall may open these areas to severe degradation if not maintained or rehabilitated. While the mining tenure is current, all requirements for the control of adverse environmental impacts reside with the miner. However, following mining DME may allow certain infrastructure such as water supply dams and access roads to remain. This requires definite written consent of the background landholder who would then assume responsibility for these items.

In recent years, mining activities have largely been restricted to exploration. This has occurred for several reasons, not least of which has been uncertainty surrounding issues of Native Title. Exploration tenure is conditional, requiring adherence to an environmental Code of Conduct and lodgement of a monetary security bond similar to that required for mining leases. Environmental performance in exploration and adherence to the Code is monitored by DME. The EPA will also be responsible for environmental management and regulation of exploration activities.

There are over 3000 historic mining operations in the Mitchell River Catchment. These mines present potential for ongoing environmental impacts and some have been registered as contaminated sites. There are two registers for contaminated land: the Environmental Management Register (EMR) for suspected or likely contaminated sites and the Contaminated Land Register (CLR) for sites with known or proven contamination that require management. Listing sites on either register provides an important future land use planning tool for the community. Landholders who suspect contamination on their properties, whether resulting from historic mining or other activities, should be encouraged to list sites on these registers.

There are many issues to include in management planning for historic mining and mineral processing sites. Many of these sites are contaminated with pollutants, the result of an era in which development was paramount and the environment not an issue. Whilst such an approach would never be acceptable today, communities are proud of their historic mining works and may not wish to have areas changed or rehabilitated. Similarly, any shaft-capping program needs to consider that many of these sites are now the home of bat colonies that would be displaced if the old workings were sealed completely. Indeed, a recent DME, DNR, Landcare and MRWVG risk assessment of derelict mine sites indicates an array of social and environmental issues that need to be considered in the management of these sites.

## MINING

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The mining industry has contributed much to regional development and infrastructure. The environmental performance of the industry continues to improve, environmental standards are comparable to or in

excess of those of any other landuse and today there is little reason for mining to have the poor environmental reputation it has held in the past.



Photo Courtesy DME

***Figure 12 A tailings dam being capped. Environmental management of mine sites is the best it has ever been.***

**Goal:**

*To implement current best management practices  
and to ensure the effective rehabilitation  
and maintenance of past mine sites.*

**Objectives:**

- Increase mine rehabilitation awareness and education
- The development of an Abandoned Mine Site Management Strategy
- Develop uniform regulatory controls for extractive industries
- To improve linkages between DNR, EPA, DME and the MRWMG.

**Strategies:*****Education***

**MM1** Support the development of extension material to improve and increase an awareness of mine rehabilitation and current mining practices.

***Information and Communication***

**MM2** Encourage the demonstration of current best management practices and rehabilitation efforts.

**MM3** Increase information sharing between the mining industry and watershed stakeholders.

***Improving Resource Management***

**MM4** Increase the understanding of water quality in the watershed in relation to downstream effects from mining operations.

***Adopting a Cooperative Approach***

**MM5** Target local mining issues for integration with sub-catchment management plans.

**Outcomes:**

Achievement of these strategies will provide the following outcomes:

- The mining industry operating in the Mitchell River catchment will be knowledgeable in and implementing, current rehabilitation strategies suitable for the catchment's natural processes.
- Information will be shared between stakeholders.
- Strategies addressing local mining issues will be included in sub-catchment planning

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### Strategy MM1

Support the development of extension material to improve and increase an awareness of mine rehabilitation and current mining practices.

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Assess all current education and awareness information and strategies targeting the needs of the mining industry.	DME, MRWVG, Local mining industry	Concise list of information	★	WQ1 LD1 CH1
Prepare extension material to explain the requirements and intentions of EMOS and Environmental Protection Act 1994 to the public.	DME, EPA, MRWVG	1 newspaper article/year Fact sheets	★	
Encourage and develop promotional material on local mining industry's rehabilitation efforts.	DME MRWVG, Local mining industry, media	Key timing of articles	★	MM2
Display and distribute extension material to mining industry and interested community members at field days and media events.	DME MRWVG, Local mining industry		★★	MM2 MM5

### Strategy MM2

Encourage the demonstration of current best management practices and rehabilitation efforts.

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Identify all funding options at both State and Federal levels and existing incentives available for rewarding and promoting best management practices.	DME, MRWVG, RAP	Database of funding sources	★★	
Establish a trial/demonstration site for mine rehabilitation (considering access to site by users ie: school, industry, tourists)	DME, MRWVG, Mining industry, Educational institutions Consultants		★★★	MM5
Develop field training workshops	MRWVG, DNR, DME		★	MM6
Develop a data base of mine sites and rehabilitation efforts, noting successes, failures and implications	DME, DNR, MRWVG, EPA, Unis, Consultants	Concise database	★★	

### Strategy MM3

Increase information sharing between mining industry and watershed stakeholders.

Actions	Stakeholders	Performance Indicators	Priority	Cross Reference to
Encourage the mining industry to share knowledge of best management practices with the public	DME, Industry reps, Consultants		★★	MM1
Conduct regional forums to discuss new innovations, management planning, ideas etc	MRWVG, DME, EPA, Supporting industry reps. Consultants	1 per year	★★	MM1 MM2
Establish information networks between key stakeholders, identifying skills/roles/expertise in mining issues	MRWVG, DME, DNR, EPA, Consultants		★	MM5

#### Priorities Achieved By:

★ 1 - 2 years

★★ 2 - 3 years

★★★ 3 - 5 years

**Strategy MM4**

Increase the understanding of water quality in the watershed in relation to downstream effects from mining operations

<b>Actions</b>	<b>Stakeholders</b>	<b>Performance Indicators</b>	<b>Priority</b>	<b>Cross Reference to</b>
Investigate contamination as a result of derelict mine sites.	DME, DNR EPA, MRWVG		★	WQ2 MM2
Investigate the use bio-accumulators as indicators of contamination in the Mitchell River system.	DME, EPA, Unis, DNR	Reports identifying key indicators	★★	
Initiate further studies as identified by existing reports.	MRWVG, Unis, CSIRO	Implementation of key recommendations	★★	

**Strategy MM5**

Target local mining issues for integration with sub-catchment management plans.

<b>Actions</b>	<b>Stakeholders</b>	<b>Performance Indicators</b>	<b>Priority</b>	<b>Cross Reference to</b>
Identify current and potential mining related issues involving community and industry	MRWVG, DME, EPA, DNR, Lgov, Grazing Ass, Tourism bodies, Mining, industry, Indig. groups	Database of issues	★	MM4 MM3
Workshop strategies, solutions and actions to be included in sub-catchment management plans.	MRWVG, DME, EPA, DNR, Lgov, Grazing Ass, Tourism bodies, Mining, industry, Indig. groups	Initial series of workshops, action lists, follow up workshops	★★	MM1 MM2 MM3 MM4

**Priorities Achieved By:**

★ 1 - 2 years

★★ 2 - 3 years

★★★ 3 - 5 years