MANAGING ABANDONED MINES IN QUEENSLAND

Oskar Kadletz
Abandoned Mines Coordinator
Department of Natural Resources and Mines
Queensland Australia
Presentation Overview

Abandoned Mines - Queensland Context
  – History and Distribution

Abandoned Mines Land Program (Queensland)
  – Legislation
  – AMLP Overview

Opportunity and Challenge
Future
Wrap Up
Queensland’s Resources - Mineral, Coal & Petroleum
Abandoned Mines Distribution in Queensland
Queensland Abandoned Mines Statistics

<table>
<thead>
<tr>
<th>TOTAL Number of Sites</th>
<th>15000</th>
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<tbody>
<tr>
<td>No of Sites on State-owned Land</td>
<td>Approx. 3500</td>
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<table>
<thead>
<tr>
<th>Mine Operational Size</th>
<th>Percentage of Sites</th>
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<tbody>
<tr>
<td>Very Small</td>
<td>96%</td>
</tr>
<tr>
<td>Small</td>
<td>3%</td>
</tr>
<tr>
<td>Medium</td>
<td>0.7%</td>
</tr>
<tr>
<td>Large</td>
<td>0.15%</td>
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<tr>
<td>Includes the Major Project Sites</td>
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These statistics are based on the best information currently available. This information is known to be incomplete and should be taken as an indicator only.
Regulation of Mining in Queensland

Mining is regulated under a number of Acts
• These are administered by a number of Departments

Acts administered by the Department of Natural Resources and Mines
• *Mineral Resources Act 1989* (mining tenure and abandoned mines)
• *Mining Quarrying Safety and Health Act 1989* (hard rock mining)
• *Coal Mining Safety and Health Act 1999*
• *Petroleum and Gas (Production and Safety) Act 2004*

Acts administered by the Department of Environment and Heritage Protection
• *Environmental Protection Act 1994*

Acts administered by the Federal Government
• *Environment Protection and Biodiversity Conservation Act 1999*
**The Queensland Definition**

*Under the *Mineral Resources Act 1989*

**abandoned mine** means a site—

(a) where mining or mining exploration activities have been carried out; and

(b) for which no current mining lease or mining claim is granted; and

(c) for which no environmental authority is in force for activities mentioned in paragraph (a) …..carried out under a mining lease or mining claim that is no longer in force.
344A Authorised person to carry out rehabilitation activities

(1) The chief executive may authorise a person to carry out all or any of the following activities (rehabilitation activities) at Land on which an abandoned mine exists—

(a) investigate the condition of the land;
(b) cap a mine shaft;
(c) remove, or make safe, structures or equipment at or near the abandoned mine;
(d) clean up pollution remaining at or near the abandoned mine;
(e) repair erosion, or prevent further erosion, of land or vegetation at or near the abandoned mine;
(f) another activity at or near the abandoned mine to make it safe.
Queensland Abandoned Mines Land Program (AMLP)

The Program is the vehicle for carrying out work on abandoned mine sites, particularly where:

- There is significant public safety or health risk
- There are no further legal avenues to require the company that created the mining disturbance to carry out rehabilitation.
- The site has been formally handed over to the AMLP

The AMLP is administered by the Department of Natural Resources and Mines (DNRM)

- Minerals and Energy Resources Division
  - Statewide Operations
    - Abandoned Mines Unit

The AMLP was established in 2000

- However the first projects date back to the early 1990s

Where there is still financial assurance, the AMLP works with other government agencies including EHP for the best site management outcomes.
AMLP Overview

Aim

- To systematically reduce risks from Queensland’s abandoned mines
  - in consultation with stakeholders.

Risk-prioritised strategy:

- Highest priority is public safety and health
- Address community concerns and complaints

If you can’t do everything, what should you do first?
- Assess Risks
- Address priorities from the highest down

Sub-programs are:

- Ground Truthing and Public Safety Close Out
- Data Collection and Management
- Historic Shaft Repair Programs
- Coal Mining Subsidence Management
  - Administering the Collingwood Park State Guarantee
- Managing Risks and Impacts from Major Abandoned Mine Sites

New Area – Disclaimed Mines
Abandoned Mines Sub program

Ground Truthing and Site Close Out

- Active now for 3 years
- Assessment of known sites close to communities
- Close out of public safety risks
- Up to date information for the Department’s Historic Mine Database
Abandoned Mines Sub program

Ground Truthing Progress

- Green = Sites closed out to date
- Close out works are included in the Annual Works Program
Ground-Truthing Site Assessment

- Field data collection
- Example - bat species habitat assessment (monitoring)
Data Collection and Management

QLD Globe with Abandoned Mines selected

Abandoned Mines Database – HMS
Data Collection and Management

Abandoned mines

About abandoned mines
Definition of abandoned mines and a map of locations of Queensland's abandoned mines.

Abandoned Mine Lands Program (AMLP)
Management, assessment and remediation of historical mine sites.

Report an abandoned mine site
How to report an abandoned mine.

Do it online
Report an abandoned mine site.

Contact us
Email: abandoned.mines@dnrm.qld.gov.au or
Phone: 1300 374 681
Call 100 for emergencies.

Last updated: 6 May 2015

Feedback
Share: 

State of Queensland, 2013

Department of Natural Resources and Mines
Historic Shaft Repair Programs

Ongoing programs in Gympie and Charters Towers

- First Response to make safe
- Then close out works
Collingwood Park mine subsidence

Two subsidence events in former colliery at Ipswich

1988
  – Government repaired / purchased affected houses; including demolition of non-repairable properties

2008
  – Government responded with initial $10M assistance package
  – Legislation for Collingwood Park State Guarantee
  – Ground Monitoring in collaboration with the CSIRO.

The government continues to monitor for technically and economically feasible backfilling solutions

Ground Movement monitoring in collaboration with the CSIRO
  – four seismic monitoring stations
  – three extensometers
  – three piezometers
Coal Mining Subsidence (Ipswich)
State Planning Policy

Provides clarity for local government as it identifies the state interest that must be taken into account.

State Interest—emissions and hazardous activities

Community health and safety, sensitive land uses and the natural environment are protected from potential adverse impacts of emissions and hazardous activities, while ensuring the long-term viability of industrial development, and sport and recreation activities.

Making or amending a planning scheme and designating land for community infrastructure

The planning scheme is to appropriately integrate the state interest by:

1. Locating industrial land uses and major sport, recreation and entertainment facilities in areas that:
   a. Protecting sensitive land uses from the impacts of previous activities that may cause risk to people or property, including:
      (a) former mining activities and hazards (e.g. disused underground mines, tunnels and shafts), or
      (b) former landfill and refuse sites, or
      (c) contaminated land, and
   b. Including requirements for the rehabilitation of extractive industry sites so that the environmental, social and economic values of the land are restored, and
   c. Planning for development involving the storage

2. Protecting community infrastructure, including:
   a. The state interest in protecting community infrastructure from the impacts of previous activities that may cause risk to people or property, including:
      (a) former mining activities and hazards (e.g. disused underground mines, tunnels and shafts), or
      (b) former landfill and refuse sites, or
      (c) contaminated land, and
   b. Including requirements for the rehabilitation of extractive industry sites so that the environmental, social and economic values of the land are restored, and
AML – Managing Major Sites

Managing risks and impacts from large abandoned mine sites – eg Mount Morgan

- Mineralised stockpiles including waste rock and mineral processing residues
- Open shafts, mine pits
- Remnant mine infrastructure and impoundments
- Landform stability
New Issue – Disclaimed Mines

Disclaiming refers to the disclaiming of onerous property under the *Corporations Act 2001* (Commonwealth)

Action can relate to the Mining Tenure, and/or the associated Environmental Authority

Situations where mines that were in care and maintenance and not economic have been disclaimed as part of the receivership and liquidation process.

Chain of Responsibility expansion through amendments to the *Environmental Protection Act 1994*
Quality Closure Planning Reduces Risk

How will rehabilitation costs here be funded?
Opportunity and Challenge

- Remnant Mineral Resources
- Reprocessing of Mineralised Stockpiles?
- Minerals considered a waste when mining originally occurred may become valuable over time
- New Technologies may make reprocessing viable

Abandoned Mines into the future

- Minimise the likelihood of generating more mining legacy sites
- For existing legacy sites, develop innovative solutions
Queensland Wrap Up

Managing abandoned mines in Queensland is challenging because of their distribution, potential site risks and complexity.

As there is no longer any legal link between those who constructed the mine and its management today, it is left to government to address ongoing public safety risks.

Key to developing a good site management and remediation plan is understanding:

- The site and its context
- Its resource potential and commercial opportunities
- Site risks and their management
- The views and aspirations of stakeholders

Key to minimising the likelihood of future abandoned mines is having strong legislative mechanisms for mine closure

- requiring adequate financial assurance
- consider ongoing management requirements post mine closure
THANK YOU