Western Australia’s Mining Rehabilitation Fund and Abandoned Mines Program

Sarah Bellamy and Paul West
Department of Mines and Petroleum
Mining Rehabilitation Fund (MRF)
Mechanics of the MRF

• Covers 20,000 Mining Tenements

• Tenement holders must annually report disturbances on their tenement

• Rehabilitation Liability Estimate
  – RLE $50,000 threshold per tenement

• The Fund Contribution Rate – 1%

• Disturbance categories
  – $18k-$50k/ha
  – $2k/ha for land under rehabilitation
The Mining Rehabilitation Fund

- Dedicated resource for abandoned mine sites
- Principal (for any site that is abandoned after 1 July 2014)
- Interest (for sites abandoned before the introduction of the MRF)
- The MRF complements a suite of compliance tools to regulate the industry including Mine Closure Plans
- $90 million in the MRF + $3 million interest ($26 million annually)
11,411 abandoned mines in MINEDEX of which 4956 have been surveyed as part of the Inventory of Abandoned Mine Sites Progress 1999 - 2002 with 192,523 identified abandoned mine features.

A ‘feature’ is one recorded item such as an open pit, a shaft or a costean. Many features may be recorded at one mine site.
Abandoned Mines Program
Pilot sites and Ellendale

- Ellendale Diamond Mine
  (Shire of Derby/West Kimberley)

- Black Diamond Pit Lake
  (Shire of Collie)

- Pro-Force Plant Site
  (Shire of Coolgardie)

- Bulong Tailing Storage Facility
  (City of Kalgoorlie Boulder)

- Elverdton Tailing Storage Facility
  (Shire of Ravensthorpe)
Abandoned Mines Program
Pilot sites and Ellendale

Abandoned mines program
Projects managed under the Abandoned Mines Program

Ellendale Diamond Mine
Unauthorised access to the Ellendale site is prohibited and trespassers will be prosecuted. The site is locked and access is monitored.

Black Diamond Pit Lake
Unstable cliffs, underwater obstacles and poor water quality represent significant safety risks.

Pro-Force Plant Site
Derelict infrastructure, scrap material and unsafe surfaces represent significant safety risks.
Case Study 1: Ellendale Diamond Mine
Ellendale - Hydrocarbon Removal

Removal of approximately:
- 20,000L of waste oil
- 3,500L of oily water and
- 1,500L of coolant
- 1,000L of cooking oil

~$5000 to remove
(removal costs of $0.15/L)
Ellendale - before
Ellendale - after
Ellendale - Industrial Tip Clean-up (before)
Ellendale - Industrial Tip Clean-up
(after)

~$50,000 for all civil works
Tailing Storage Facility Works

- Total Area = 222ha
- Active tailings surface = 202ha
- 2 lifts:
  - 1st lift – 5-10m, Pindan Sands
  - 2nd lift – 1-3m, Tailings
Tailing Storage Facility Works

Good lessons learnt for construction of TSFs in the Kimberley
TSF Works – Rock Beds

Rock beds installed in problematic areas to reduce ponding

Controlled, slow infiltration limits tunnelling
Tailing Storage Facility Works

~$60,000 for TSF civil works
Ellendale...and then it rained and rained

Cyclone Yvonne - 250mm in 48hrs
2 weeks after works were completed

Wettest wet season on record

Assess how TSF stood up in Q3 2017
Case Study 2: Black Diamond
Black Diamond Consultation

Black Diamond Pit Lake

Working Group representatives:
- Shire of Collie
- Department of Lands
- Department of Parks and Wildlife
- Collie Visitor Centre
- Black Diamond Action Group
- adjoining landowners
- DMP

Address:
- safety risks associated with steep southern pit wall
Black Diamond Civil Works

- Remove vegetation and strip topsoil
- Cut and fill into pit lake
- Ensure road drainage excluded from slope
- 26° cut (1:2)
- Coal Seam

Black Diamond Lake

Sandstone
Black Diamond Civil Works
Black Diamond Civil Works
Black Diamond Reshaping
Black Diamond Reshaping
Black Diamond Next Steps

Winter 2017 Revegetation Strategy

- Spray on growth medium to be applied at the end of the month – Dura Veg and WA Hydromulch
- Seed mix (4kg/ha) added to growth medium – Griffin Coal
Black Diamond Next Steps

Winter 2017 Revegetation Strategy

- Seedlings to be planted along shoreline and in western area – OES and Allanson Primary School
- On ground works - completed by 30 June 2017
- Working Group to focus on end land use.
Questions

**MRF enquiries**
Email: mrfenquiry@dmp.wa.gov.au  
Phone: (08) 9222 3162

**Abandoned Mines Team**  
Email: abandonedmines@dmp.wa.gov.au  
Phone: (08) 9222 3402