



Mining Rehabilitation Fund

YEARLY REPORT 2017–18

Black Diamond near Collie was the first pilot project completed under the Abandoned Mines Program.

Highlights of 2017–18

The 2017–18 financial year is the fifth full year of operation for the Mining Rehabilitation Fund (MRF).

On 1 July 2017, the Department of Mines and Petroleum amalgamated with the Department of Commerce to form the Department of Mines, Industry Regulation and Safety (DMIRS). DMIRS manages the MRF in accordance with the *Mining Rehabilitation Fund Act 2012* (MRF Act) and *Mining Rehabilitation Fund Regulations 2013*. Strategic structural planning was undertaken following the establishment of DMIRS. The Mining Rehabilitation Fund is managed within the Resource and Environmental Compliance Division and the Abandoned Mines Program (AMP) is managed within the Geoscience and Resource Strategy Division; all within the Resource and Environmental Regulation Group.

Compliance with reporting requirements continues to be nearly universal and the total contributions received over the 2017–18 financial year brought the balance of the fund to approximately \$122.6 million, including \$6.3 million in interest earned since 1 July 2014.

The reported disturbance data is published yearly on the DMIRS website and is building a valuable data set relating to mining activity in Western Australia.

The department's AMP was established in 2016 and is funded through the MRF. In the 2017–18 financial year, DMIRS continued work at the Pro-Force pilot site and initiated work at two other pilot sites, Bulong and Elverdton. DMIRS initiated an Expression of Interest process for the Ellendale Diamond Mine and ensured primary health and safety risks at the site were managed. In 2018 DMIRS also revoked the declaration of Black Diamond as an abandoned mine site under the MRF Act, which was the first pilot site of the Program.

In 2017–18 the AMP team commenced the development of a robust, transparent and repeatable process for assessing and prioritising abandoned mine features for rehabilitation and/or management through the program.

Background

The introduction of the MRF in 2013 has ensured that the community of Western Australia does not pay for the rehabilitation of mining operations that become abandoned. In addition, interest earned on the fund can be used to rehabilitate historical abandoned mine sites in Western Australia. The MRF was the State's first dedicated and perpetual fund for the rehabilitation and management of historical abandoned mine sites.

Under the MRF Act, holders of mining tenements granted under the *Mining Act 1978* (Mining Act) contribute to a pooled fund by payment of an annual levy. The levy is calculated according to the environmental disturbance on tenements. The money in this fund can be used to rehabilitate abandoned mines after all efforts to recover funds from the tenement holder/operator have been exhausted.

The previous system of applying Unconditional Performance Bonds against tenements as security for compliance with environmental obligations has largely been replaced by the MRF. However, bonds may still be imposed or retained in cases where DMIRS considers there to be a high risk that a tenement holder's rehabilitation liability could revert to the State.

As the MRF is a special purpose account under the *Financial Management Act 2006*, funds must be spent in accordance with the purposes stated in the MRF Act. Under the provisions of the *Financial Management Act 2006*, the Director General of DMIRS is accountable for the management of the MRF.

DMIRS reports on the management of the fund through its Annual Report. In addition, the projected revenue and expenditure for the MRF is considered by the State Government and approved through the State Budget each year.

This report presents the activities and achievements of the MRF in 2017–18, as well as providing an indication of plans for future years.

Activities of the Mining Rehabilitation Advisory Panel

The Mining Rehabilitation Advisory Panel (MRAP) was established in 2013. Its primary purpose is to provide advice to the Director General of DMIRS on matters relating to the fund and associated AMP.

The current members of MRAP (Image 1) appointed for a three-year term from March 2016, are Michael Slight (Chairperson), Phil Scott (Deputy Chairperson), Sally Audeyev, Michelle Rhodes and Donald Burnside.



Image 1. The current members of the Mining Rehabilitation Advisory Panel.
Back row (L-R): Don Burnside, Michael Slight, Phil Scott
Front row (L-R): Michelle Rhodes, Sally Audeyev

Michael Slight is a mining engineer with more than 35 years' operational experience in all phases of mining from feasibility, construction and development, production and expansion through to mine closure.

Phil Scott is an environmental professional with more than 30 years' experience in corporate, resource and environmental management across a broad range of industries.

Donald Burnside is a professional consultant with more than 40 years' experience in agriculture and natural resource management.

Michelle Rhodes is a director of a leading environmental consultancy company and has 22 years' experience in the environmental sector and stakeholder engagement.

Sally Audeyev is a leading environmental lawyer specialising in environmental, indigenous, planning and mining related legislation.

The MRAP meets quarterly to discuss and provide independent advice on a range of matters related to managing the MRF, plus work activities associated with the AMP. During the 2017–18 year MRAP undertook the following key activities:

- Endorsed a recommendation to revoke the declaration of Black Diamond as an abandoned mine, given the completion of works on the pilot site.
- Endorsed the Bulong Project Plan which involves a Preliminary Site Investigation. This marks the beginning of the third pilot program to be managed by the AMP.
- Provided advice and feedback to the policy development and work program for the coming years, including the DMIRS screening and risk assessment project which will ensure prioritisation of future works programs will be based on contemporary datasets.
- Continue to review and develop the processes of the Mining Rehabilitation Advisory Panel.

MRF Lodgement and Reporting

All tenement holders under the Mining Act are required to submit disturbance and rehabilitation data each year for the purposes of calculating the MRF levy. The reporting period (or 'levy period') is aligned with the normal July–June financial reporting period, with tenement holders able to submit data at any time during the reporting period.

In 2017-18 the level of compliance with reporting obligations, under the MRF Act, remained high. 98.68% of all required tenement reports were provided by the due date 30 June 2018 (Figure 1). While slightly lower than the 99.1% figure for 2016–17, the number of reports received was higher. 99.91% of reports had been received by 17 September 2018.

Projected Levy for the 2017–18 Period

To date, levy payments totalling \$30,056,676.22 have been assessed for the 2017–18 period (2016–17 comparative: \$28,914,309.08).

Under the MRF Act, disturbance data can be formally reassessed up to two years from the date of the original assessment. As a result, the final total of levy payments due for a period may vary if the disturbance data is subsequently reassessed (Figure 2).

Enforcement

In July 2018 DMIRS served 279 infringement notices to tenement holders who failed to comply with reporting obligations under the MRF, for the preceding period. Since 2017, with MRF reporting obligations now well established, DMIRS has taken a firmer approach to compliance with its reporting deadlines. This reflects in the higher number of notices served in 2017 and 2018 (which is also affected by a higher number of tenements). As in previous years, however, the majority of the affected tenement holders completed their reporting obligations after these infringement notices were served. By 17 September 2018, DMIRS had withdrawn 264 infringement notices issued in relation to 2017–18 obligations upon receipt of the assessment information. Figure 3 illustrates the changes in enforcement measures since 2014.

Infringement notices are enforced through the State's Fines Enforcement Registry. Revenue from infringement notices is transferred to the State Government's Consolidated Revenue Fund and not retained by the MRF.

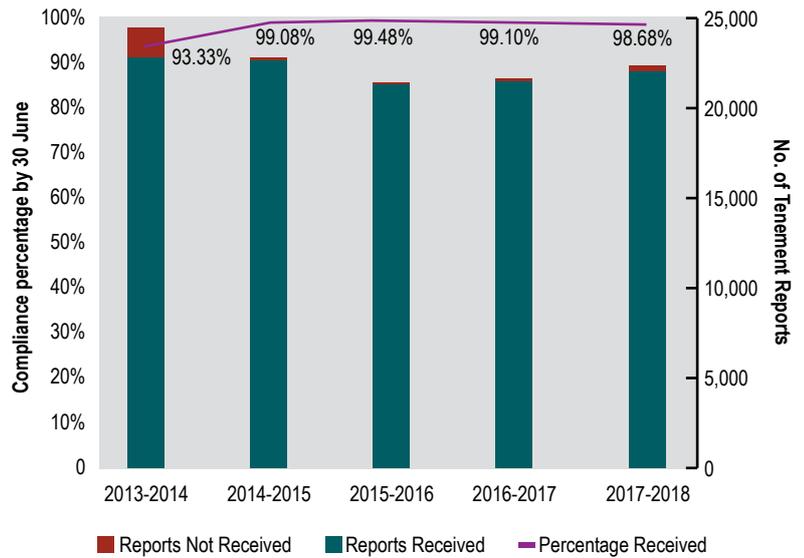


Figure 1: Percentage of tenement reporting obligations met by 30 June for each levy period

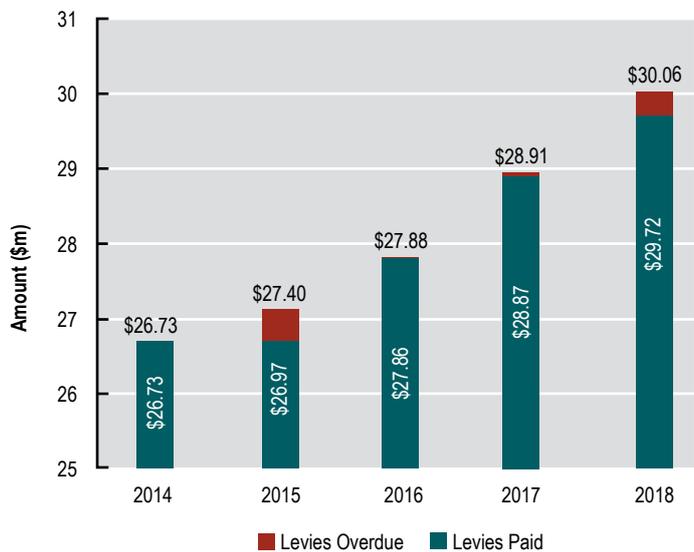


Figure 2: Levies assessed and paid up to and including 21 September 2018

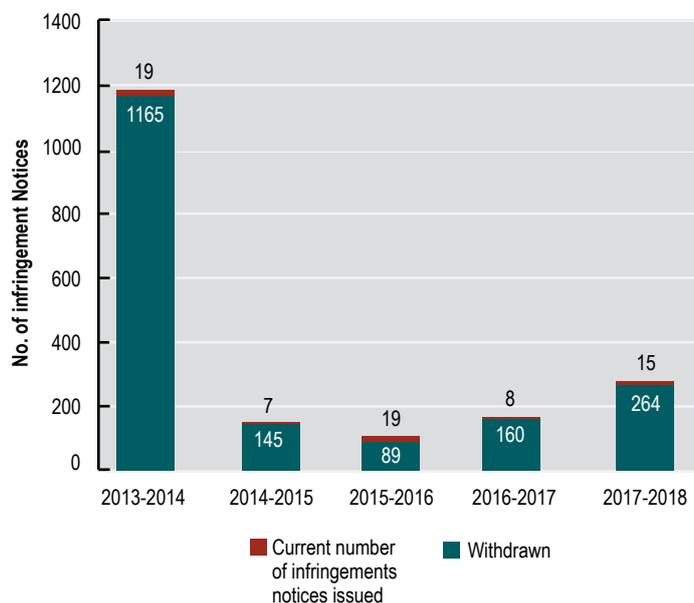


Figure 3: Infringement notices issued for failure to provide Mining Rehabilitation Fund assessment information

MRF Audit Outcomes

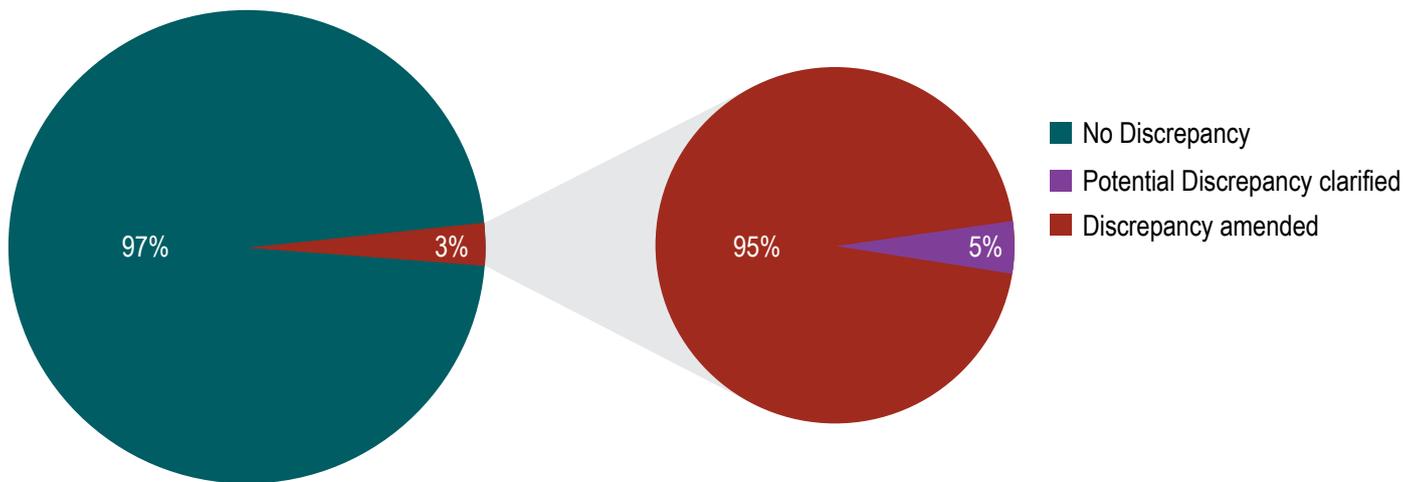


Figure 4. Summary of the audit findings for 43 reports audited in 2017-18

Annual MRF Auditing

Desktop auditing of MRF reports has continued to be undertaken to help ensure that the self-assessed data provided by tenement holders is accurate and reliable.

The annual auditing process also helps to identify any issues with reporting categories. The most frequently misreported disturbance types continued to include tracks/roads, waste rock dumps and mining voids as well as cleared areas such as sand, river-bed and gravel mining.

MRF reports are selected for auditing from the pool of reports lodged in the preceding period. During the 2017–18 period, 57% of audited reports were identified by risk-based selection and 43% by random selection.

During the period a total of 43 MRF reports, representing 4,004 tenements were audited. Of these, 110 tenements (2.74%) were issued with an MRF Direction requesting records and/or further information from the proponent. The vast majority of assessment information submitted for tenements were accurate with 3,894 having no discrepancy, a further five tenements clarified the discrepancy identified on their tenement and 105 tenements required their assessment information to be amended.

Annual MRF Data

The MRF annual disturbance and rehabilitation data collection is considered the most comprehensive publicly available dataset of mine-site activities in Australia. The dataset is published annually on DMIRS' website.

The disturbance and rehabilitation data submitted is across 32 types of disturbance; however it relates only to Mining Act tenements subject to the requirements of the MRF Act. A summary of this year's data reported for each tenement type is provided in Table 1.

As in previous years the data shows that year after year, the area of Land Under Rehabilitation (on which rehabilitation of mining disturbances is under way) has continued to increase. In 2018, the area of 'active' disturbance increased by 5.3% (down from 6.5% in 2017) but the area of land under rehabilitation increased by 5.5%. Again, the proportion of land under rehabilitation has remained fairly constant year-on-year (at approx. 23.5%), despite a notable increase in mining and exploration-related activity in 2018 (Table 1).

While conclusions should be drawn from this data only with caution, the trend cited above may be due to tenement holders maintaining a high rate of progressive rehabilitation, given that the MRF unit rate for rehabilitated areas is significantly less than for disturbed areas and result in lower levy obligations.

Table 1: MRF Summary of Data Reported for the period through to 2017-18.

| | Disturbed Land (ha) | | | | | | | Land Under Rehabilitation (ha) | | | | | | |
|--------------------------|---------------------|----------------|----------------|----------------|--------------------|--------------------|--------------------|--------------------------------|---------------|---------------|---------------|--------------------|--------------------|--------------------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | Change 2015-16 (%) | Change 2016-17 (%) | Change 2017-18 (%) | 2014-15 | 2015-16 | 2016-17 | 2017-18 | Change 2015-16 (%) | Change 2016-17 (%) | Change 2017-18 (%) |
| Exploration Licences | 8,448 | 7,726 | 9,646 | 10,452 | -8.5% | 24.8% | 8.4% | 87 | 36 | 38 | 32 | -58.1% | 5.5% | -16.0% |
| General Purpose Leases | 3,060 | 3,094 | 3,153 | 3,139 | 1.1% | 1.9% | -0.4% | 709 | 811 | 789 | 1,093 | 14.4% | -2.8% | 38.6% |
| Miscellaneous Licences | 11,076 | 11,090 | 11,834 | 12,881 | 0.1% | 6.7% | 8.9% | 708 | 920 | 1,040 | 952 | 30.0% | 13.1% | -8.5% |
| Mining Leases | 86,793 | 89,574 | 94,092 | 98,670 | 3.2% | 5.0% | 4.9% | 33,160 | 32,759 | 34,698 | 36,482 | -1.2% | 5.9% | 5.1% |
| Prospecting Licences | 718 | 643 | 643 | 603 | -10.4% | 0.0% | -6.2% | 84 | 67 | 64 | 67 | -20.5% | -4.6% | 4.9% |
| Retention Leases | 5 | 355 | 373 | 383 | 7713.7% | 5.2% | 2.6% | 0 | 0 | 0 | 0 | N/A | N/A | N/A |
| Total | 110,100 | 112,481 | 119,741 | 126,129 | 2.2% | 6.5% | 5.3% | 34,748 | 34,594 | 36,629 | 38,627 | -0.4% | 5.9% | 5.5% |
| Percentage of Total Area | 76.0% | 76.5% | 76.6% | 76.6% | | | | 24.0% | 23.5% | 23.4% | 23.4% | | | |

Source: Data extracted from the Environmental Assessment and Regulatory System 2, valid as at 23 August 2018. Data rounded to the nearest hectare.

Note: 'Land Under Rehabilitation' does not include all rehabilitation work being undertaken, as it excludes rehabilitation of exploration or prospecting activities conducted under Programmes of Work. For those activities, rehabilitation data is not separately reported and any rehabilitated areas remain a part of 'Disturbed Land' until all approved work (and required rehabilitation) has been completed. Those areas of 'Land Under Rehabilitation' that have been reported on Exploration Licences and Prospecting Licences are likely to relate to other (peripheral) disturbances reported on those tenements. 'Land Under Rehabilitation' also does not include 'Rehabilitated Land' that is considered to have been completed in accordance with closure obligations.

Note: Data will vary from previously reported values as assessment information is eligible for reassessment for a period of up to two years from the date of submission.

Financial Summary

DMIRS reports the performance of the MRF in its Annual Report, which is available on its website. A summary of this information is provided in Table 2. This Yearly Report is an expanded summary to showcase the activities within the MRF and Abandoned Mines Program.

As at 30 June 2018, money in the fund totalled \$122.3million, including \$6.3million in interest earned since 1 July 2014. In accordance with the MRF Act, the interest generated on the fund can be accessed for salaries and operational expenditure to manage the fund and the AMP and pilot projects (see Table 3).

DMIRS administers the MRF as a special purpose account under Section 18 of the *Financial Management Act 2006* in accordance with Section 10 of the *Mining Rehabilitation Fund Act 2012*.

Abandoned Mines Program (AMP)

The AMP, established in 2016, is funded through the MRF and provides a framework for identifying and prioritising the management and rehabilitation of abandoned mines across Western Australia.

Funds from the MRF can be used to rehabilitate mine sites that have become abandoned by companies that have previously paid into the MRF, after all other avenues to ensure rehabilitation have been exhausted. Interest generated from the MRF can be used to rehabilitate legacy abandoned mine features.

Following the creation of the program, four pilot projects were selected to test and develop the AMP's processes and procedures. The four projects are Black Diamond, Pro-Force, Bulong and Elverdton. Work continued on these sites during 2017-18.

Table 2: MRF Financial Summary

| | | 2015-16 Actual | 2016-17 Budget | 2016-17 Actual | 2017-18 Actual | 2018-19 Estimated |
|---|----------------------------|-------------------|-------------------|-------------------|-------------------|----------------------|
| | | \$'000 | \$'000 | \$'000 | \$'000 | \$'000 |
| Opening Balance | | 35,141 | 61,570 | 63,377 | 92,400 | 122,316 |
| Add receipts | | | | | | |
| | Contribution from Industry | 27,098 | 27,000 | 28,348 | 28,653 | 28,000 |
| | Interest Received | 1,175 | 1,510 | 1,654 | 2,223 | 2,794 |
| | Other | 800 | 800 | 16 | N/A | N/A |
| | | 29,073 | 29,310 | 30,018 | 30,876 | 30,794 |
| Less payments | | | | | | |
| | Salaries | N/A | N/A | 163 | 144 | 127 |
| | Operational Expenditure | 837 | 2000 | 832 | N/A | N/A |
| | Other | N/A | N/A | N/A | 516 | 1056 |
| Balance at the end of the period | | 63,377 | 88,880 | 92,400 | 122,316 | 151,927 |

Source: DMIRS Annual Report 2017-18 and DMIRS Financial Accounting Branch

Table 3: Breakdown of sources and applications of funds for Abandoned Mine projects 2017-18

| Project | Levies Collected* \$'000 | Expenditure from MRF Principal \$'000 | Expenditure from MRF Interest \$'000 | Total Expenditure to 30 June 2018 \$'000 |
|------------------------|-----------------------------|---|--|--|
| | | Project Costs | Project Costs | |
| Ellendale Diamond Mine | 819 | 9 | 0 | 9 |
| Black Diamond Pit Lake | 0 | 0 | 6 | 6 |
| Pro-Force Plant Site | 0 | 0 | 0 | 0 |
| Bulong | 0 | 0 | 0 | 0 |
| Total | 819 | 9 | 6 | 15 |

Source: DMIRS, Financial Accounting Branch. Data as at 30 June 2018

* Levies collected in 2013 and 2014

Further work continued at the Ellendale Diamond Mine, in the Kimberley, as part of DMIRS' formal Expression of Interest process, to resume mining operations at the site.

The AMP team also worked on developing a robust, transparent and repeatable process for assessing and prioritising legacy abandoned mine features for rehabilitation and/or management under the program.

Black Diamond Pilot Site

Black Diamond is located within the town of Allanson, approximately five kilometres west of Collie, in the South West of Western Australia.

Black Diamond was mined for coal between the late 1940s and early 1950s by Amalgamated Collieries Pty Ltd. The cessation of mining resulted in the pit filling with water, creating a pit lake. Soon after, Black Diamond became a popular unmanaged recreation area, leading to safety concerns being raised by the local community. To address these concerns, the site was selected by DMIRS to be rehabilitated as a pilot project through the AMP.

The primary safety risk associated with the site was identified as being the vertical southern pit walls which were 6–10m above water level. After consultation with stakeholders, it was agreed work should be undertaken to reduce the public safety risks associated with pit wall failure and people falling, diving and/or jumping into the lake.

An engineering plan was developed to batter down the southern pit wall to a safe angle. The work was completed within budget in the 2016–17 financial year. Revegetation of the batter was then conducted through the distribution of native seed and planting of native tubestock as well as the management of weeds and the spreading of mulch to stabilise topsoil and reduce erosion.

With the primary safety risk associated with the site mitigated, work at Black Diamond was considered complete and, following endorsement by MRAP, the declaration of Black Diamond as an abandoned mine site was revoked under section 9(4) of the MRF Act.

Learnings from completing the Black Diamond project will be used to improve DMIRS processes and procedures for future AMP projects.

Pro-Force Pilot Site

The Pro-Force abandoned mine site is located approximately two kilometres south-east of Coolgardie in Western Australia.

Pro-Force was a former gold processing site that was operated by Pro-Force Mining Contractors Pty Ltd from 1996 to 2004. The site is located adjacent to the Gorge, a public use area and water reserve. Access to the Gorge is unrestricted, with the community and tourists accessing the site from the Coolgardie-Esperance Highway.

The derelict processing plant and other site features had been in situ for more than a decade and were an ongoing public safety concern for the Shire of Coolgardie and the local community. In response to the community concerns, Pro-Force was selected by DMIRS to be rehabilitated as a pilot project.

Removal of old plant and site clean-up was conducted in 2016. During 2017–18, the planting of 100 saplings took place to improve the overall aesthetic of the area. A review of the rehabilitation work conducted at Pro-Force was also undertaken during 2017–18. This review highlighted work that still needed to be completed to effectively manage safety and environmental risks at the site. This work is planned to continue through 2018–19.

Bulong Nickel Tailing Storage Facility Pilot Site

The former Bulong Nickel mining operation is located approximately 40km east of Kalgoorlie. Mining operations commenced on the former tenement in the 1990s with the construction of a tailings storage facility (TSF) and evaporation ponds.

The operating company went into receivership and effectively abandoned the site in 2005. The rehabilitation associated with the mining operations became a state liability after the mining lease expired in 2013. Concerns were raised regarding issues associated with seepage and dust from the TSF potentially escaping into the surrounding environment.

Accordingly, the site was selected as a pilot project for the AMP. In 2014, Unconditional Performance Bonds totalling \$1,708,000 were called-up to enable rehabilitation activities to be undertaken. This money will be used for rehabilitation activities before funds from the MRF are accessed.

During 2017–18, a preliminary project plan was prepared to describe the key project planning elements include scope, objectives and a preliminary work plan. In line with the project plan, a preliminary site investigation including soil and groundwater sampling is being undertaken in 2018–19 to help determine the next stages of the project.

Elverdton Pilot Site

The Elverdton mine site is located approximately 10km south-east of Ravensthorpe. The historic site can be defined as a cluster of abandoned mine features comprising tailings dumps, underground mine shafts, water dams and mine infrastructure. The site sits at the headwaters of the Steere River upstream from the Culham Inlet and Fitzgerald National Park.

Gold and copper mining began in the area during 1899 with major periods of copper ore production between 1901–18 and 1957–71. The site was selected as an AMP pilot project due to community concerns about the movement of uncontained tailings down the Steere River.

During 2017–18, a preliminary project plan was prepared to describe the key project planning elements include scope, objectives and a preliminary work plan. In line with the project plan an initial site inspection is being undertaken in 2018–19 to verify the abandoned mine features on site and update the abandoned mines inventory and site risk assessment.

Ellendale Diamond Mine

Ellendale Diamond Mine is located about 120km east of Derby in the West Kimberley region of Western Australia.

It includes the E4 and E9 pits, waste rock landforms, tailings storage facilities and areas of other infrastructure. Mining commenced at the E9 pit in 2002 and at the E4 pit in 2006. Mining at the E4 pit was suspended and the area entered care and maintenance in 2009. Mining at the E9 pit continued until 2015.

The mining tenements were held by Kimberley Diamond Company NL (KDC) but mining activities ceased at Ellendale in July 2015, when KDC entered into administration. Later that month, creditors voted for the company to be placed into liquidation.

After the mine was closed in 2015, the Minister for Mines and Petroleum created an exemption area under Section 19 of the Mining Act. This section allows the Minister to invite a mining company or consortium to apply for a new mining lease.

DMIRS has been managing the site through the Abandoned Mines Program since then and has undertaken a range of activities within the Ellendale area to minimise the environmental, safety and health risks at the site. The department has continued to focus on ensuring the resource value of the tenements is not diminished and that the site remains a viable option for future responsible resource development.

A process to award tenure to a new tenement holder through an Expression of Interest (EOI) was initiated in August 2018.

AMP team members were also part of a delegation of DMIRS personnel who undertook a site visit of Ellendale on 14 and 15 May 2018. The objective of the site visit was to inspect the area ahead of any EOI related site visits to assess ongoing landform stability and safety.

Abandoned Mine Feature Screening and Risk Assessment Project

The Abandoned Mines Policy, established in 2016, details a framework for the prioritisation and subsequent rehabilitation and/or management of abandoned mine features under the MRF Act.

In 1999, the Geological Survey of Western Australia (GSWA) commenced a project to identify and characterise abandoned mine features throughout Western Australia. The collection of records continued until 2011 and the resulting inventory comprised over 190,000 features.

During 2017–18, the AMP team initiated a project to develop a robust, transparent and repeatable process of prioritising these abandoned mine features that pose a high risk to the community and/or the environment. By prioritising the features, the AMP is then able to systematically rehabilitate and/or manage the features that represent the greatest risk.

The policy requires that features are prioritised with consideration to significant community and environmental risks. Given the large number of records in the GSWA inventory, it was necessary to undertake a high level interrogation of the data using criteria to select features which may represent the

highest potential risk, prior to undertaking a more detailed desktop assessment. The selection criteria considered:

- proximity to environmentally sensitive receptors and populated areas;
- specific feature characteristics that represent a safety or environmental hazard;
- potential for contamination; and
- community and departmental nominated features.

The next phase of the project to be conducted in 2018–19 will include a desktop assessment of the features that are considered high risk and ongoing engagement with stakeholders to obtain new and/or updated information on abandoned mine features. Stakeholder information will be sought to update the existing GSWA inventory to ensure the prioritisation process is as accurate as possible. Furthermore, tools will be developed to allow stakeholders to notify DMIRS of suspected abandoned features. This will ensure that the ongoing prioritisation of features will be conducted on the most up-to-date dataset possible.

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