

Review of the Mining Rehabilitation Fund

Report prepared for the Minister for Mines and Petroleum

3 April 2024



Prepared for Department of Energy, Mines, Industry Regulation, and Safety

Marsden Jacob Associates Pty Ltd

ABN 66 663 324 657

ACN 072 233 204

e. economists@marsdenjacob.com.au

t. 03 8808 7400

Office locations

Melbourne

Perth

Sydney

Brisbane

Authors

Alex Marsden	Associate Director
Philippa Short	Principal
Ram Chandrasekaran	Consultant
Dr Kate Riddell	Principal

LinkedIn: Marsden Jacob Associates

www.marsdenjacob.com.au

Acknowledgements

Marsden Jacob consulted widely for this report. We would like to acknowledge and thank all the people we engaged with during this project. The report is better for your input. All final recommendations and views in this report are attributable to Marsden Jacob unless otherwise stated.

Statement of Confidentiality

The contents of this report and any attachments are confidential and are intended solely for the addressee. The information may also be legally privileged. If you have received this report in error, any use, reproduction or dissemination is strictly prohibited. If you are not the intended recipient, please immediately notify the sender by reply e-mail or phone and delete this report and its attachments, if any.

Disclaimer

This document has been prepared in accordance with the scope of services described in the contract or agreement between Marsden Jacob Associates Pty Ltd ACN 072 233 204 (Marsden Jacob) and the Client. This document is supplied in good faith and reflects the knowledge, expertise and experience of the advisors involved. The document and findings are subject to assumptions and limitations referred to within the document. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the Client. Marsden Jacob accepts no responsibility whatsoever for any loss occasioned by any person acting or refraining from action because of reliance on the document. The document has been prepared solely for use by the Client and Marsden Jacob Associates accepts no responsibility for its use by other parties.

Contents

Executive summary and recommendations	5
Introduction	5
Review process	5
Conclusions	6
Recommendations	7
1. Introduction and background	10
1.1 Overview	10
1.2 Review of the <i>Mining Rehabilitation Fund Act 2012</i>	10
1.3 Review terms of reference	11
1.4 Review approach	11
1.5 Background on the objectives of the MRF Act	12
2. Review of rehabilitation provisions in other jurisdictions	13
2.1 Comparison of the MRF to arrangements in other jurisdictions	13
3. Financial reporting and modelling	17
3.1 Current financials and categories	17
3.2 Forecast five-year plan from AMP	20
3.3 Modelling interest rates	20
3.4 Modelling the impact of policy options	22
4. Consultation	23
4.1 Overview of consultation undertaken	23
4.2 Input on the scope, objectives and purpose of the MRF Act	24
4.3 Increasing the effectiveness of the MRF	25
4.4 Improving the efficiency of the MRF	34
5. Discussion	36
5.1 On changes to the scope, objectives and purpose of the MRF	36
5.2 On minimising the risk of new abandoned mines	39
5.3 On changes to increase the effectiveness of the MRF	46
5.4 On changes to provide improved clarity	64
5.5 On changes to increase the efficiency of the MRF	67
6. Conclusions	68
6.1 Overview	68
6.2 Specific questions raised in the terms of reference	68
Appendix 1. Other jurisdictions	70
A1.1. Northern Territory	70
A1.2. Queensland	73
A1.3. South Australia	75

A1.4. Other reviews	82
Appendix 2. Consultation slides and questions	83

Tables

Table 1: Summary of recommendations	7
Table 2: Summary of legislation in WA and other jurisdictions	14
Table 3: Current categories and unit rates per hectare	18
Table 4: Financial summary of the MRF (A\$ million)	19
Table 5: Interest rate assumptions published and used in WA Budget projections	21
Table 6: Summary of comments on the scope, objectives and purpose of the MRF Act	24
Table 7: Summary of comments on the effectiveness of the MRF	25
Table 8: Disturbance reported in each category (hectares)	43
Table 9: RLE values at 2022-23 if indexed	50
Table 10: Estimated contributions and number of affected tenements if RLE values were indexed	51
Table 11: Category rates indexed at forward estimates	52
Table 12: Estimated industry contribution and contributing tenements if indexed at estimated CPI	52
Table 9: Distribution of tenements reporting into the MRF by RLE value	54
Table 10: Estimated contributions under different thresholds (A\$ million)	55
Table 15: Estimated industry contributions if category values are indexed and thresholds changed	56
Table 16: Percentage of tenements estimated to contribute under different thresholds	57
Table 11: Modelling a 2% floor for interest rates	59
Table 12: Mining security held by the NT Government	71
Table 13: Hypothetical surety for small mining tenures	75
Table 14: Summary of bond types and amounts held by the Department for Energy and Mining for mineral tenements, 30 June 2023 (\$ million)	80

Figures

Figure 1: Forecast project spend by the AMP	20
Figure 3: Program logic	38
Figure 4: Stylised depiction of the value of extractable minerals and the rehabilitation liability over the life of a project	41
Figure 5: Value of rehabilitation liability is lower if more progressive rehabilitation is undertaken	41
Figure 6: Land under rehabilitation compared to total disturbed land, 2013 to 2023 (hectares)	42
Figure 7: Annual change in RLE values for each category if indexed according to CPI	49
Figure 8: Annual change in RLE values for each category if indexed according to PPI	49
Figure 7: Total estimated interest generated under the current system and with a 2% floor	60
Figure 8: South Australia's environmental protection and assurance framework	77

Acronyms and abbreviations

AER	annual environmental reporting
AMEC	Association of Mining and Exploration Companies
AMP	Abandoned Mines Program
APLA	Amalgamated Prospectors and Leaseholders Association
CEO	chief executive officer
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
EARF	Extractive Areas Rehabilitation Fund
EARS	Environmental Assessment and Regulatory System
ERC	estimated rehabilitation cost
MOP	mine operations plan
MRAP	Mining Rehabilitation Advisory Panel
MRF	Mining Rehabilitation Fund
MRF Act	<i>Mining Rehabilitation Fund Act 2012</i>
NT	Northern Territory
PEPR	program for environmental protection and rehabilitation
PRCPs	progressive rehabilitation and closure plans
RLE	rehabilitation liability estimate
SA	South Australia
UPB	unconditional performance bond
WA	Western Australia

Executive summary and recommendations

Introduction

The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS, the department) is responsible for the regulation of mining in Western Australia (WA). The mining industry is regulated through a range of legislation, which provides the framework for ensuring that resources are developed in a sustainable and responsible manner.

The *Mining Rehabilitation Fund Act 2012* (MRF Act), enacted in November 2012, established the Mining Rehabilitation Fund (MRF). The MRF is a pooled fund, levied annually according to the environmental disturbance on a mining tenement at the annual reporting date. It supports the WA Government's regulatory objectives by enhancing the state's 'capacity to manage and rehabilitate abandoned mines, leading to better environmental and community safety outcomes'.¹

Section 38 of the MRF Act ('Review of Act') requires the responsible minister, currently the Minister for Mines and Petroleum, to review the operation and effectiveness of this Act after 10 years from the date of royal assent.

DEMIRS engaged Marsden Jacob Associates (Marsden Jacob) to undertake the statutory review.

Review process

As per the review's terms of reference, Marsden Jacob:

- considered the purpose(s) for which the MRF was established
- determined whether, since its commencement, the Act and its supporting legislation has operated effectively in support of that purpose (or those purposes)
- identified changes that may be required to the Act and its supporting legislation in order to achieve its stated purpose(s) more effectively.

The review methodology was informed by the WA Government's *Guidelines for reviewing legislation*.² The review process comprised:

- desktop research, which informed a comparison of WA's regulatory approach with that of other Australian jurisdictions
- consultation with key stakeholders representing the WA Government, industry bodies, private-sector organisations and environmental advisory services
- economic modelling of potential future income and expense streams under a range of scenarios, including the current scheme, as well as possible changes.

¹ Department of Energy, Mines, Industry Regulation and Safety, '[About the MRF](#)', WA Government, 2024.

² '[Guidelines for reviewing legislation](#)', WA Government, 16 May 2023.

The consultation process focused on eliciting stakeholders' views on:

- the purpose, scope and objectives of the Act (Section 4.2 of this report), including ways in which improvements (if required) could be achieved (Section 5.1)
- minimising the risk, likelihood and consequences of mine abandonment (Section 5.2), including ways in which adverse outcomes could be managed
- increasing / improving the MRF's effectiveness (Section 4.3) and efficiency (Section 4.4).

Conclusions

In general, stakeholders were supportive of the MRF Act and of the following views:

- The Act's objectives and purpose remain relevant.
- It is a well-targeted approach to minimising the risk and impost of abandoned mines to and on the state.
- It is, or appears to be, effective at this stage, noting that 10 years of operation is a relatively short time frame in which to assess this, particularly when comparing that time frame with the life span of mining operations and the history of mining in WA.

While stakeholders were generally of the view that the Act remains relevant and is effective, many suggested changes, whether legislative, regulatory or policy, that they believe will support the MRF to better achieve its objectives. Their suggestions are discussed and summarised in Section 5 and reflected in the recommendations (Table 1).

Marsden Jacob has concluded that the MRF Act, supporting legislation and MRF operation do not require wholesale reform but would benefit from incremental improvements designed to make the MRF more efficient, effective and responsive. Those changes, reflected in the recommendations, may:

- enable DEMIRS to:
 - manage and minimise the risk posed by *all* mining operations and resource sectors in WA
 - minimise the likelihood and consequences of mine abandonment, particularly new abandonment
 - better incentivise progressive rehabilitation
 - streamline reporting processes
 - regularly monitor, measure and, if necessary, improve the MRF to ensure that it is meeting its objectives
- provide operators with greater clarity about:
 - the state government's expectations of operators and standards of rehabilitation work
 - the types of activities considered acceptable under the MRF
- make the MRF more responsive to:

- the contemporary mining industry
- changes in the operating environment, and the impacts of those changes, as they arise.

Recommendations

Based on the analysis and conclusions, Marsden Jacob makes 16 recommendations for legislative, regulatory or policy change (Table 1), acknowledging that further consideration and stakeholder consultation are needed to progress them.

Table 1: Summary of recommendations

Recommendation	Action required	
1	The MRF reporting requirements should be reviewed and should be broadened to include mines operating under State Agreements if this change is found to deliver a net benefit.	Legislative change
2	DEMIRS should consider the current, or an adapted, program logic in setting measures for reporting short- and medium-term outcomes.	Policy change / guideline development
3	DEMIRS should identify a rehabilitation profile that represents good practice and then monitor levels of progressive rehabilitation at the industry level against those good practices. If DEMIRS finds that incentives for progressive rehabilitation need to be strengthened, then it should use a 'carrot and stick' approach to reward mines that achieve or exceed good practice as well as to disincentivise poor practices.	Policy change / legislative change
4	DEMIRS should work with parts of the mining industry operating larger mine sites to identify a more detailed approach to reporting rehabilitation liabilities that is suitable for the largest sites. Once a suitable approach is identified, a tiered reporting approach should be implemented in which more detailed reporting is required for sites with rehabilitation liability estimates (RLEs) greater than a specified value—such as \$1 million.	Policy change
5	The RLE categories should be reviewed regularly to ensure that they reflect the range of modern mining activities.	Change to regulations

Recommendation	Action required
<p>It is recommended that:</p> <ul style="list-style-type: none"> a) the RLE values be updated (after the categories have been reviewed) b) the RLE values be reviewed on a regular basis (for example, every five years, depending on advice from the Treasury) c) the RLE values be indexed against a measure of inflation to minimise the drift between the RLE values and the true cost of rehabilitation between reviews. 	Legislative change
7	<p>While 1% is an appropriate contribution rate, it should be reviewed on a regular basis.</p> <p>Change to regulations</p>
8	<p>DEMIRS should investigate the possibility of reducing or increasing the contribution rate of projects based on risk assessments undertaken by the department using agreed criteria.</p> <p>Change to regulations / policy change</p>
9	<p>If the RLE rates are revised, then the contribution threshold should also be reviewed. It appears appropriate to maintain the proportion of tenements that contribute financially to the MRF.</p> <p>Change to regulations</p>
10	<p>Section 8 of the MRF Act should be amended to enable flexibility with drawing from the fund, for example to allow funds to be borrowed from the fund's principal in times of low interest rates—subject to some constraints, such as limits on the duration of the loan and the total value that could be borrowed.</p> <p>Legislative change</p>
11	<p>The MRF Act should be amended to require a further review on the 20-year anniversary of the commencement of the legislation.</p> <p>Legislative change</p>
12	<p>The role of the Mining Rehabilitation Advisory Panel (MRAP) should be reviewed. Any proposed changes to the relevant sections of the regulations should be consulted upon broadly with industry.</p> <p>Legislative change</p>
13	<p>The proposed extension of the two-year limit set out in section 19 of the MRF Act should be included in a suite of possible reforms, which should be consulted upon broadly.</p> <p>Legislative change</p>

Recommendation		Action required
14	DEMIRS should define the standard that the Abandoned Mines Program (AMP) seeks to return sites to. That definition should be set out in a guidance document that is periodically reviewed and updated, for example every five years.	Policy change
15	DEMIRS has identified a range of reforms that seek to clarify the AMP's powers. They include clarifying and broadening the definition of 'rehabilitation works', restricting site entry, and obtaining data and reports for abandoned mines. These reforms should be clearly defined and consulted upon with industry, with a view to implementing legislative reforms.	Legislative change
16	DEMIRS should consider the process and system changes proposed to ease the reporting burden and consider whether system and process changes would be beneficial.	Policy change

1. Introduction and background

1.1 Overview

Western Australia (WA) is a significant resource province that supports a diverse and active mining sector. WA Government publications show that there are nearly 1,000 active mine sites across WA that mine more than 50 different minerals.³

Mining in WA is regulated by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS, or the department) under a broad range of legislation. Regulation of the mining industry ensures that resources are developed in a sustainable and responsible manner.

The *Mining Act 1978* (the Act) provides for the protection of land on which mining is undertaken and for the rehabilitation of land disturbed by operations. The Act also requires all tenement holders to report annually on any disturbances arising from mining operations.

On 5 November 2012, royal assent was given to the *Mining Rehabilitation Fund Act 2012* (MRF Act), which provides for:

- the establishment of the Mining Rehabilitation Fund (MRF)
- the declaration of abandoned mine sites
- a levy payable in respect of mining authorisations, and for related purposes.⁴

The MRF is a pooled fund levied annually according to the environmental disturbance on a mining tenement at the annual reporting date. All tenements with a rehabilitation liability estimate (RLE) of over \$50,000 pay levies based on their areas of disturbance.

The intention of the MRF is to provide WA with a funding source to manage current and emerging mine rehabilitation liabilities.⁵ However, the fund does not absolve miners of their obligations to rehabilitate their mine sites.

1.2 Review of the *Mining Rehabilitation Fund Act 2012*

Marsden Jacob Associates (Marsden Jacob) was commissioned by DEMIRS to undertake the statutory review of the MRF Act.

Section 38 of the MRF Act ('Review of Act') requires the responsible minister (currently the Minister for Mines and Petroleum) to undertake a review of all matters relating to the operation and effectiveness of the MRF Act.

³ ['Mining and METS', Invest & Trade Western Australia](#), no date.

⁴ [Mining Rehabilitation Fund Act 2012 \(WA\)](#).

⁵ ['Explanatory memorandum: Mining Rehabilitation Fund Bill 2012'](#), WA Parliament, no date.

Section 38 states that:

- (1) The Minister must carry out a review of the operation and effectiveness of this Act as soon as is practicable after the end of the period of 10 years beginning on the day on which this Act receives the Royal Assent.
- (2) The Minister must prepare a report based on the review and must cause the report to be laid before each House of Parliament as soon as is practicable after it is prepared and, in any event, not later than 18 months after the end of the period referred to in subsection (1).

The MRF Act received royal assent on 5 November 2012.⁶ Therefore, the review was required to be commenced after 5 November 2022 and to be completed by 5 May 2024.

1.3 Review terms of reference

The terms of reference for this review, provided by DEMIRS, are linked to the three purposes of the Act. The review is to:⁷

1. consider the purpose(s) for which the Mining Rehabilitation Fund was established
2. determine whether, since its commencement, the Act and its supporting legislation have operated effectively in support of that purpose (or those purposes)
3. identify what changes may be required to the Act and its supporting legislation in order to achieve its stated purpose(s) more effectively, including but not limited to:
 - a. the appropriateness of the existing rehabilitation liability categories and unit rates and the extent to which they recognise the relative rehabilitation cost of mining activities
 - b. mechanisms for providing greater incentive to rehabilitate disturbed land
 - c. mechanisms for ensuring that sufficient funding remains available for the purposes set out in section 8(2) of the Act, particularly when investment income is constrained by adverse economic conditions
 - d. examine the issue of the optimal size of the Mining Rehabilitation Fund, including undertaking any required economic modelling for this purpose.

1.4 Review approach

In undertaking this review, Marsden Jacob followed the WA Government's *Guidelines for reviewing legislation*.⁸ Key analytical inputs to the review were:

- desktop research of WA's approach and approaches from other jurisdictions, and a comparative analysis of those approaches
- consultation with a broad range of stakeholders, including government and industry representatives, consultants and environmental groups (we sought to consult with a range of

⁶ [Mining Rehabilitation Fund Bill 2012](#), WA Parliament.

⁷ Information provided by DEMIRS (unpublished).

⁸ ['Guidelines for reviewing legislation'](#), WA Government, 16 May 2023.

industry segments, including small, medium-sized and large mining operations)

- modelling of the current fund and of potential future income and expense streams under a range of scenarios.

1.5 Background on the objectives of the MRF Act

In assessing whether the MRF is effective, it is necessary to identify the objectives of the Act.

The MRF Act was determined to provide for:

- the establishment of the MRF
- the declaration of abandoned mine sites
- a levy payable in respect of mining authorisations and for related purposes.

Section 6 of the Act states the purpose of the fund as follows:

The main purpose of the Fund is to provide a source of funding for the rehabilitation of abandoned mine sites and other land affected by mining operations carried out in, on or under those sites.

The second reading speech stated that the MRF would achieve both economic and environmental goals. It proposed that the MRF would:⁹

- Reduce ... the State's exposure to financial risk relating to the rehabilitation of abandoned mines.
- Diminish the annual financial operating burden on resource industry participants, which would strengthen Western Australia's attractiveness as an investment location.
- Secure adequate funding to deal appropriately with:
 - the environmental and safety risks caused by business failure and default in the mining industry, and;
 - the State's legacy of historical abandoned mines.

⁹ ['Mining Rehabilitation Fund Bill 2012: introduction and first reading'](#), *Hansard*, Legislative Assembly, WA Parliament, 15 August 2012, pp. 5011–5012.

2. Review of rehabilitation provisions in other jurisdictions

2.1 Comparison of the MRF to arrangements in other jurisdictions

Desktop research was undertaken to assess rehabilitation fund mechanisms used in the Northern Territory (NT), Queensland and South Australia (SA), and then compare those with mechanisms used in WA. A summary of the key elements of each fund is set out in Table 2; further information is provided in Appendix 1.

WA was the first jurisdiction in Australia to introduce a mining rehabilitation levy. Key points of comparison between the schemes include the following:

- WA and the NT apply a uniform rate of 1%, Queensland applies a variable rate based on a mine's level of risk, and SA applies a prescribed rate of royalties received or recovered (extractives only).
- In WA, rehabilitation levies are the main tool for ensuring that abandoned mine liabilities do not fall to the state government. In addition, section 126 of the *Mining Act 1978* provides for unconditional performance bonds to be imposed, but that is currently considered only for high-risk projects.
- WA, the NT and Queensland have similar rehabilitation liability schemes that apply a levy based on a small percentage of the estimated rehabilitation liability.
- SA's approach to liability payments is informed by a distinction between extractive and non-extractive minerals operations. Non-extractive operators pay a bond. Extractive operators pay a prescribed rate of royalties and may also be required to pay a bond if the regulator determines that a project has a high risk of non-compliance with environmental conditions.

A further point to note is that the NT has recently undertaken a significant reform to its scheme, and the reform legislation passed the NT Parliament in late November 2023¹⁰—during this review. For that reason, the legislation is summarised, but the details of the implementation processes and approach are yet to be determined, and therefore were unavailable for this review.

¹⁰ ['Environment Protection Legislation Amendment Bill 2023'](#), Legislative Assembly, NT Parliament.

Table 2: Summary of legislation in WA and other jurisdictions

	Western Australia	Northern Territory	Queensland	South Australia
Title	<i>Mining Rehabilitation Fund Act 2012</i>	Mining Remediation Fund	<i>Mineral and Energy Resources (Financial Provisioning) Act 2018</i>	Extractive Areas Rehabilitation Fund
Legislation	<i>Mining Rehabilitation Fund Act 2012</i> Mining Rehabilitation Fund Regulations 2013	<i>Environmental Protection Legislation Amendment Act 2023</i> <i>Legacy Mines Remediation Act 2023</i>	<i>Mineral and Energy Resources (Financial Provisioning) Act 2018</i>	<i>Mining Act 1971</i> Mining Regulations 2020
Scope	All tenement holders operating on <i>Mining Act 1978</i> tenures. Excludes mines operating under State Agreement Acts.	All mining operators.	All resource activity holders of an environmental authority (so mining, petroleum and gas). All holders of small-scale mining tenure permits.	Extractive and non-extractive mineral mining and exploration operators. Petroleum, geothermal energy, opals and some gemstones are regulated under separate Acts.
Bonds applied	Not generally used—although the <i>Mining Act 1978</i> provides for unconditional performance bonds. They could be applied to high-risk projects.	Yes—all operators must pay a security.	Yes. If the estimated rehabilitation cost (ERC) is less than \$100,000, or for small mining tenures, the bond is equal to the estimated rehabilitation amount. If deemed ‘high risk’—surety is equal to the ERC. If any category other than ‘high risk’—at the discretion of the scheme manager.	Yes—bonds are required for non-extractive mineral operators. Bonds are equal to 100% of the maximum rehabilitation liability. Liability estimates are based on reasonable third-party costs of undertaking rehabilitation. Extractive mineral lease and exploration operators may be required to enter a bond for civil/statutory liability or rehabilitation. Determinations are case by case, based on level of project risk.

	Western Australia	Northern Territory	Queensland	South Australia
Levy rate paid annually	1% of the estimated rehabilitation liability estimate (RLE).	1% of the operator's security.	Very low risk—0.5% of ERC. Low risk—1% of ERC. Medium risk—2.75% of ERC. High risk—at the discretion of the Scheme Manager.	No. A prescribed rate of royalties received or recovered on extractive minerals is paid to the Extractive Areas Rehabilitation Fund (25 cents per tonne). A lesser amount may be prescribed as per the Mining Regulations 2020 (r. 61).
Threshold	Yes—if the RLE is less than \$50,000, then no levy is paid.	No.	No.	No.
Statutory role created	No—managed within DEMIRS.	No—managed within the Department of Industry, Tourism and Trade.	Scheme Manager.	No—managed within the Department of Energy and Mining
Advisory committee	Mining Rehabilitation Advisory Panel	n.a.	Financial Provisioning Scheme Advisory Committee	n.a.
Rehabilitation fund(s)	Mining Rehabilitation Fund	Mining Remediation Fund	Financial Provisioning Fund	Extractive Areas Rehabilitation Fund Mining Rehabilitation Fund
Purpose of the rehabilitation fund(s)	Fund the rehabilitation of abandoned mine sites and other land affected by mining operations. Protect the state against the risk of financial liability for rehabilitation.	Ensure compliance with the Act and licence conditions and license applicable approvals. Prevent, minimise or remediate environmental harm resulting from any phase of the mining. Pay for remediation and rehabilitation or closure of the mining site. Pay for post-closure monitoring, management and reporting.	Protect the state against the risk of financial liability for rehabilitation. Fund the rehabilitation of mine sites and other land affected by mining operations where operators have failed to do so. Prevent, minimise or remediate environmental harm resulting from any phase of the mining.	Protect the state against the risk of financial liability for rehabilitation. Fund the rehabilitation of mine sites and other land affected by mining operations where operators have failed to do so. Prevent, minimise or remediate environmental harm resulting from any phase of the mining. Ensure compliance with the Act and licence conditions and license applicable approvals.

	Western Australia	Northern Territory	Queensland	South Australia
Relevant sources	www.parliament.wa.gov.au www.legislation.wa.gov.au www.dmp.wa.gov.au/Environment/What-is-the-MRF-19522.aspx	https://nt.gov.au/industry/mining/legacy-mines-remediation/remediation-projects/mining-remediation-fund	https://environment.des.qld.gov.au/management/policy-regulation/mining-rehab-reforms	https://www.energymining.sa.gov.au/industry/minerals-and-mining/mining/quarries/extractive-areas-rehabilitation-fund-earf

Source: Marsden Jacob analysis.

3. Financial reporting and modelling

3.1 Current financials and categories

The current MRF categories and activities, and associated unit rates to the end of 2022–23, are shown in Table 3. Unit rates have remained the same since the establishment of the MRF (Schedule 1 of the Mining Rehabilitation Fund Regulations 2013), except for categories F and G, which were added in July 2021.

The MRF's principal and interest are reported annually. The reported balance of the MRF as of June 2023 was \$291.19 million.¹¹ For year ending 2022–23, approximately \$47 million was contributed to the fund, comprising an industry contribution of \$41.5 million and an interest payment of \$5.7 million (Table 4).

The impact of the COVID-19 pandemic on interest rates led to a reduction in the amount of interest paid into the MRF since 2019–20. The interest received fell from \$3.094 million in 2018–19, reaching its lowest point at \$0.859 million in 2020–21. Although interest rates have increased, interest payments to the MRF have only recently recovered to pre-pandemic levels.

Because of that, the value of the MRF is not as high as early modelling may have suggested. This has also affected the Abandoned Mines Program (AMP), which has been unable to undertake a large proportion of its projected work during the period of low interest rates due to a reduction in available funding.

¹¹ The total balance comprises the fund's principal and interest; however, the MRF Act requires the department to determine which funding component is applied to work undertaken through the AMP.

Table 3: Current categories and unit rates per hectare

Category	Rate per ha	Activities
A	\$50,000	<ul style="list-style-type: none"> • Dam—saline water or process liquor • Evaporation pond • Heap or vat leach facility • Tailings or residue storage facility (class 1) • Waste dump or overburden stockpile (class 1)
B	\$30,000	<ul style="list-style-type: none"> • Dam—freshwater • Diversion channel or drain • Fuel storage facility • Landfill site • Low-grade ore stockpile (class 1) • Mining void (at least 5 m deep)—below groundwater level • Plant site • Tailings or residue storage facility (class 2) • Waste dump or overburden stockpile (class 2) • Workshop
C	\$18,000	<ul style="list-style-type: none"> • Airstrip • Basic raw material extraction • Borefield • Borrow pit or shallow surface excavation (less than 5 m) • Building (other than workshop) or camp site • Core yard • Laydown or hardstand area • Low-grade ore stockpile (class 2) • Mining void (at least 5 m deep)—above groundwater level • Other cleared land—land • Run-of-mine pad • Sewage pond • Transport or service infrastructure corridor
D	\$2,000	<ul style="list-style-type: none"> • Exploration/prospecting operations—land
E	\$2,000	<ul style="list-style-type: none"> • Topsoil stockpile • Land under rehabilitation
F	\$20,000	<ul style="list-style-type: none"> • Evaporation pond (off-playa) associated with minerals-in-brine extraction • Evaporation pond (on-playa) associated with minerals-in-brine extraction • Halite/salt stockpile (off-playa) associated with minerals-in-brine extraction • Minerals-in-brine abstraction trench
G	\$10,000	<ul style="list-style-type: none"> • Halite/salt stockpile (on-playa) associated with minerals-in-brine extraction

Table 4: Financial summary of the MRF (A\$ million)

		2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23
Opening balance		0	9.855	35.141	63.377	92.4	122.616	150.473	185.237	219.493	253.82
Receipts											
	Contribution from industry	6.719	26.667	27.098	28.348	28.653	30.723	33.902	34.677	37.717	41.513
	Interest received	0	0.777	1.175	1.654	2.223	3.094	1.644	0.694	0.859	5.733
	Other	4.7 ^a	-1.087 ^a	0.8	0.016				0.941		
	<i>Receipts subtotal</i>	<i>11.419</i>	<i>26.357</i>	<i>29.073</i>	<i>30.018</i>	<i>30.876</i>	<i>33.817</i>	<i>35.546</i>	<i>36.312</i>	<i>38.576</i>	<i>47.246</i>
Payments											
	Salaries	0.013	0	n.a.	0.163	0.144	0.163	0.388	0.62	0.449	0.956
	Operational expenditure	1.551	1.02	0.837	0.832	0.516	0.479	0.094	0.692	3.034	7.694
	Other	0	0.052	0	0	0	5.318	0.3	0.744	0.766	1.226
	<i>Payments subtotal</i>	<i>1.564</i>	<i>1.072</i>	<i>0.837</i>	<i>0.995</i>	<i>0.66</i>	<i>5.96</i>	<i>0.782</i>	<i>2.056</i>	<i>4.249</i>	<i>9.876</i>
Closing balance		9.855	35.14	63.377	92.4	122.616	150.473	185.237	219.493	253.82	291.19

^a Treasurer's advance and transfer of called-up performance bonds.

Source: DEMIRS, Mining Rehabilitation Fund yearly reports (2014 to 2023).

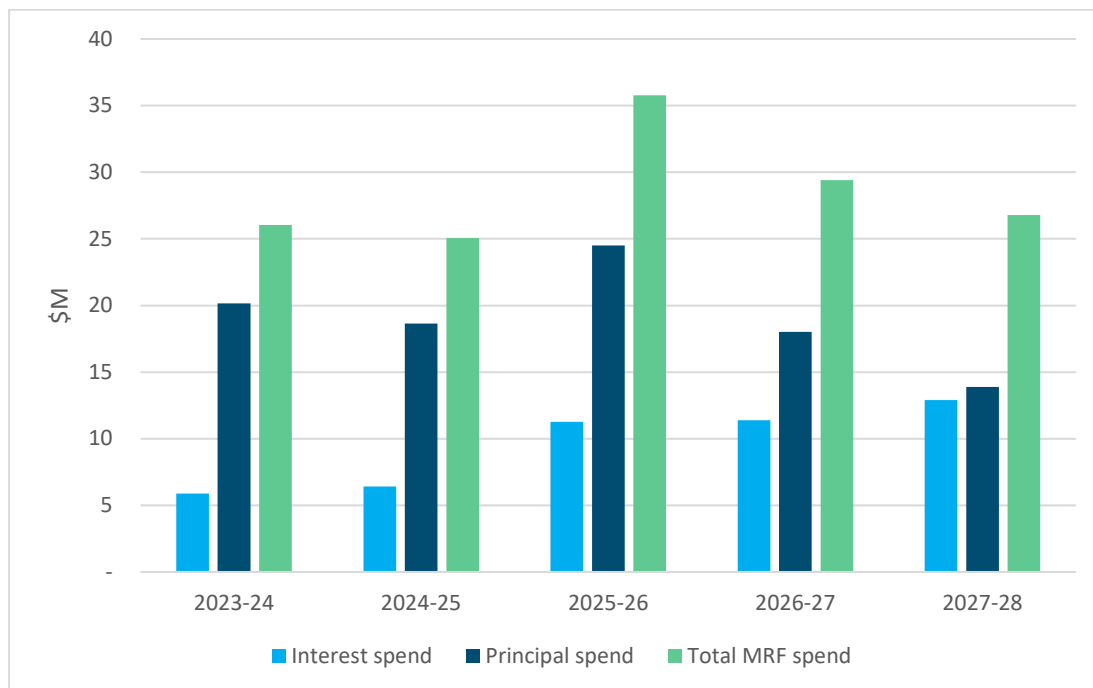
3.2 Forecast five-year plan from AMP

The AMP has a proposed five-year plan, which has forecast the expected interest rates and corresponding interest payments to be received (based on Treasury budget projections) and the expected spends on abandoned mines.

A five-year projected budget was presented to Treasury (Figure 1). The AMP determined:

- the projected budget for project spend
- the total AMP spend (including salaries and other indirect costs).

Figure 1: Forecast project spend by the AMP



Source: AMP internal forecasts.

It is noted that the spend from the principal of the fund may increase in the latter years if a mine that has contributed to the fund is abandoned. However, the expected spend of projects using the principal from the fund can be based only on current information.

3.3 Modelling interest rates

Over the 10-year period since its commencement (2012–2022), the MRF has generated cumulative interest (prior to expenses for administration and works funded by the interest component of the fund) of approximately \$17.7 million. The cumulative interest has been negatively affected by very low interest rates during the COVID-19 pandemic; rates have only recently rebounded to pre-pandemic levels.

The current balance in the fund (principal and interest) is approximately \$291 million.

The WA Treasury published the projected interest rates shown in Table 5 in the latest Budget papers.¹²

Table 5: Interest rate assumptions published and used in WA Budget projections

Fiscal year	Interest rate
2023–24	3.0%
2024–25	3.7%
2025–26	3.8%
2026–27	3.8%

Source: WA state Budget papers 2023–24.

Marsden Jacob’s modelling of the MRF’s future state uses the Treasury’s projected interest rates for the relevant years (2023 to 2027) and assumes an interest rate of 3.5% for the subsequent years. The AMP team provided estimates relating to forward works expenditure, which were also used to model the future state of the fund.

The modelling results depend on the input used, and so a range of scenarios can be tested. For the ‘central case’, the model makes the following assumptions:

- The industry contribution for the years from 2023–24 onwards has been assumed to be steady at the 2022–23 contribution of \$41.5 million. This assumes that the current level of mining activity continues and the current rehabilitation liability contribution rates continue.
- The modelling uses only the cost estimates for works on sites identified in the AMP’s five-year plan. There is a possibility that there may be additional sites that may draw on the fund. Beyond the five-year plan, the model assumes that the expenditure remains constant.

Based on those inputs, the modelling for the 10-year period from 2023–24 to 2032–33 produces the following results:

- Total industry contribution to the principal of the fund is \$415 million.
- Interest generated by the fund is approximately \$142 million.
- The forecast expenditure from the principal component of the fund is approximately \$155 million.
- The forecast expenditure from the interest component of the fund is approximately \$50 million, although it is assumed that this would be scaled to align with interest accrued.
- This income and expenditure result in a closing balance of \$643 million.

The model highlights a couple of points, such as the impact of interest rates on the levels of activity that can be undertaken by the AMP. In addition, adjusting the assumptions in the model demonstrates the difficulty in balancing the need to spend funds (both principal and interest) on existing issues, while retaining a significant balance for potential future issues that could arise.

¹² ‘Budget paper no. 3: Economic and fiscal outlook’, WA Budget 2023–24, Table 1, p. 3.

3.4 Modelling the impact of policy options

The model is useful for resource planning but also facilitates policy analysis. Modelling is used in the discussion of:

- current levels of progressive rehabilitation (Section 5.2.3)
- thresholds for mines to contribute financially to the MRF (Section 5.3.2)
- creation of a floor for funds available under section 8(2) of the Act (Section 5.3.2).

4. Consultation

4.1 Overview of consultation undertaken

Consultation was carried out through briefings, individual meetings with stakeholders, an online survey and written submissions. The survey and briefings were supported by slides and questions, which are provided in Appendix 2.

The consultation was publicised through a media release by the Minister for Mines and Petroleum on 14 August 2023. The consultation period ran from mid-August to mid-November 2023.

A range of stakeholders sought a briefing and/or provided input, including:

- industry and peak body groups representing a cross-section of the mining and extractive industries
- tenement management advisers
- environmental advisers
- environmental consultants and rehabilitation specialists
- Indigenous stakeholders
- non-government organisations
- government departments, including DEMIRS, the Department of Water and Environmental Regulation and the Department of Treasury
- the Mining Rehabilitation Advisory Panel (MRAP).

Responses were received via a range of methods. They included:

- eight written submissions
- seven survey responses
- 18 briefings and meetings.

This section contains a summary of comments received from various stakeholders. The submissions received and survey responses have been provided separately. Notes taken during stakeholder meetings have not been provided in full but were used in the analysis and findings.

In general, all stakeholders were supportive of the MRF Act and believed that its objectives and purpose remain relevant. However, most stakeholders suggested that some changes, whether legislative, regulatory or policy, are needed to assist the MRF to successfully deliver its objectives. Their views and suggested changes are summarised in the sections below.

4.2 Input on the scope, objectives and purpose of the MRF Act

Stakeholders made several suggestions about ways to improve the clarity of the MRF legislation. Those comments are summarised in Table 6.

Table 6: Summary of comments on the scope, objectives and purpose of the MRF Act

Response/feedback	Stakeholder group	Suggested action(s)
The MRF does not cover all resource activities.	Regulatory experts	Broaden the scope of the MRF to include petroleum and gas activities.
Concerns that State Agreements, which operate outside the MRF, at present have a large, but undocumented, risk for the state (a mismatch of liability).	Industry peak body Small miners / tenure holders State government	Those on State Agreements should (at a minimum) report into the framework to provide the department with an ability to quantify the risk. All operators, including those under State Agreements, must use the MRF reporting framework. Investigate whether and how to bring operators into the MRF when a State Agreement is renegotiated (as occurred with Nickel West).
Ensure that the MRF reporting framework is used consistently and equitably across the industry.	State government departments Regulatory experts	Ensure that State Agreement sites enter relevant data into the MRF system, even if no contribution is made to the fund.
	MRAP	Require new State Agreements to be included in the MRF in some way. Consider alternative strategies, such as unconditional performance bonds or bonds in conjunction with the MRF contribution.
The objectives and purpose remain relevant.	General support	No action proposed.

4.3 Increasing the effectiveness of the MRF

Stakeholders provided comment on the effectiveness of the MRF in achieving its objectives and suggested actions that they believe would improve its effectiveness.

Table 7: Summary of comments on the effectiveness of the MRF

Response/feedback	Stakeholder group	Suggested action(s)
Ensure that MRF contributions do not significantly affect operating costs, particularly during periods of commodity price downturns.	Industry	Introduce financial stress criteria allowing either a) a reduction in contributions, or b) a deferment of contributions, under the condition that operators continue to fund rehabilitation activities. Introduce concessions (e.g. the Australian Government’s Safeguard Mechanism) where the cost impact of MRF contributions exceeds a certain threshold of earnings before interest and tax.
A return to the use of bonds / financial securities would reduce WA’s attractiveness as an investment location.	Industry	Do not reintroduce bonds.
The annual environmental reporting (AER) and MRF dual reporting process creates duplications, inefficiencies and inconsistencies.	Industry peak bodies Industry	Streamline the systems and/or harmonise reporting categories (e.g. similar programs of works and mining proposals are Category D in the AER and must be changed to Category C in the MRF).
Program logic		
The program logic was supported as a suitable framework for linking short-term goals to the longer term objectives of the MRF.	General support from a range of stakeholders	n.a.
	MRAP	Incorporate the monitoring of metrics to assess performance according to the program logic into annual reporting.
The long-term outcomes are vague, and it is unclear as to how they would be assessed and success would be measured.	Industry peak body	Suggests not relying on the program logic.

Response/feedback	Stakeholder group	Suggested action(s)
Rehabilitation liability estimates (RLEs) and categories		
Industry uses RLEs as a starting point for the cost of rehabilitation; however, those rates do not reflect the true cost of rehabilitation (the rates are outdated and generally too conservative).	Industry peak body Mine closure specialists Environmental groups Tenure management advisers State government	Review rates to reflect a truer cost of rehabilitation per hectare. Align the MRF unit rates to the actual land disturbance rates calculated for closure costs.
RLEs are appropriate.	Small miners / tenure holders	No action required.
RLE activities are put into categories that are seen as the 'closest fit', and there may be inconsistencies. Specific concerns were raised about land disturbance for generation, storage and transmission infrastructure for energy transitions.	Industry peak body Industry Mine closure specialists Environmental groups Tenure management advisers MRAP	Develop guidelines to clarify the categorisation of activities that are not an 'easy fit' (for example, a fuel storage facility, land cleared of vegetation but not described in the table, a workshop). Make the system more flexible and fluid, and allow for the engagement and participation of traditional owners. Consider categories that may be required in the future, such as those for energy transmission (batteries, wind farms, solar farms, power transmission and generation). Consider how certain features at different depths would have different liabilities (currently treated in the same manner).
Review the threshold (currently at \$50,000)	Industry peak body	Potentially readjust to a higher value (e.g. \$100,000)

Response/feedback	Stakeholder group	Suggested action(s)
Progressive rehabilitation		
Lack of definition of 'rehabilitation' results in the objectives of the MRF lacking clarity.	Range of stakeholders	<p>Include a definition of rehabilitation in the MRF Act to provide clarity about expectations. With a definition, there should be increased consistency of its application in MRF reporting.</p> <p>Consideration of the term 'rehabilitation' needs to be made in alignment with the overall objectives of the MRF. Rehabilitation could include management and works of high-risk sites.</p>
Process improvements may incentivise progressive rehabilitation.	General	<p>Investigate and implement improvements to the Environmental Assessment and Regulatory System (EARS).</p> <p>Permit progressive rehabilitation under the EARS—allow for reconciliation between the disturbance undertaken and the rehabilitation of that disturbance (shows the steps to completed rehabilitation).</p> <p>Consider using a percentage of costs incurred in undertaking progressive rehabilitation works to offset MRF contributions, so that smaller companies do not have to use their rehabilitation budgets to cover their MRF levies.</p>
Uncertainty about the liability to the state as the rate of rehabilitation falls behind the rate of activity/disturbance.	MRAP	Increase incentives to undertake progressive rehabilitation.
Financial benefits may incentivise progressive rehabilitation.	General	<p>Reduce MRF contributions for operators who undertake progressive rehabilitation.</p> <p>Reduce the RLE for land under rehabilitation.</p> <p>Consider a grants approach for companies that undertake additional progressive rehabilitation.</p>

Response/feedback	Stakeholder group	Suggested action(s)
Clarity and consistency may incentivise progressive rehabilitation.		<p>Improve or clarify the definition of ‘rehabilitation’.</p> <p>Consider a new category for ‘partial rehabilitation’.</p> <p>Consider a risk-based approach.</p> <p>Consider a system that can recognise multiple land uses.</p>
Funding arrangements under section 8		
Level of available funds now and in the future.	Industry peak bodies	<p>Government undertakes modelling to determine an optimal value required and any potential cap.</p> <p>Must protect the principal in the fund.</p>
Lack of available funds for the AMP due to low interest rates.	<p>State government</p> <p>Environmental consultants</p> <p>MRAP</p>	<p>Increase flexibility—consider how principal as well as interest could be allocated to abandoned or legacy sites.</p> <p>Investigate alternative trust options available to ensure that the best market interest rate is received.</p> <p>Consider a mechanism in which interest rates fall below a set value, funds are restricted, and another process can be used to allocate funds for remediation works.</p> <p>Suggest that, if interest rates drop below a set level (e.g. 2%), then funds can be drawn from the fund principal.</p> <ul style="list-style-type: none"> – Some participants suggested that funds would be repaid once interest rates increased above 2%. – Others suggested that repayment was not necessary.
Low interest rates have affected the MRF’s effectiveness by reducing the amount of funds available for the AMP.	Environmental sector	Permit the use of the fund’s principal when interest rates fall below a prescribed threshold.
	Industry peak bodies	Caution against using the fund’s principal.
	State government— MRAP	Model a revised estimate of liability to industry and to the state.

Response/feedback	Stakeholder group	Suggested action(s)
Alternative use of principal.	Mining company	Consider using principal/capital to develop rehabilitation and closure guidance and standards.
	Amalgamated Prospectors and Leaseholders Association (APLA)	Open the use of principal and interest for historic areas requiring rehabilitation.
Cap on the MRF.	Association of Mining and Exploration Companies Mining consultants	Consider the optimal size of the fund through modelling or the cost to rehabilitate a major mine site.
Future of the Abandoned Mines Program		
Program funding and operation.	Industry	Review the program's governance, project prioritisation and evaluation criteria. Consider other funding options to remove the reliance on the interest generated by the MRF.
Lead agency and staffing.	Consultant One view raised by state government representatives	Consider where the program should sit: DEMIRS or elsewhere. Review program staffing: whether to have many permanent employees, a medium number, or contract managers only, with work being carried out outside of DEMIRS.

Response/feedback	Stakeholder group	Suggested action(s)
Consider legacy mines in terms of their historical significance to a community.	Mining consultants Small miners / tenure holders	Undertake a cost–benefit analysis to ascertain the value of retaining and preserving (with the MRF interest) heritage features, thereby allowing a community to create tourist activities associated with mining in the area. Improve communication between stakeholders, local communities and DEMIRS/AMP about community concerns. Incentivise communities to preserve and make safe heritage mines—in the form of funding.
Provide additional clarity in the legislation		
Definition of rehabilitation works to be funded by the MRF.	State government	Define ‘rehabilitation’ very broadly—including tasks and activities that may be carried out (e.g. fencing and signage) that may be excluded from traditional views of rehabilitation. The AMP considers that the definition should include project management and activities that manage access and risks to the relevant sites. Consider how to manage a definition of rehabilitation for abandoned mines that may have potential for mining in the future. A ‘standard’ definition of rehabilitation might not be appropriate. Consider the wording in section 9 of the NT Legacy Mines Remediation Bill 2023 for the types of works that the fund can cover.
Improve clarity and consistency of section 8 of the MRF Act.	State government	Allow for a consistent approach to rehabilitation on an abandoned site—either a principal- or an interest-funded site.
Standard of rehabilitation work carried out by the AMP.	State government	Define ‘rehabilitation’ to provide clarity on the expected work standards. Consider changing the language from ‘rehabilitation’ to ‘mine closure’.

Response/feedback	Stakeholder group	Suggested action(s)
Powers to enter sites where 'work funded by MRF.'	State government	<p>Remove 'rehabilitation work' from section 10, but retain the power to enter. This power should include entry to investigate the scope and nature of the work (not just entry for work being undertaken).</p> <p>Decouple power to enter from the MRF funds, because alternative funding is available in the form of unconditional environmental bonds / mining securities.</p>
Site access	State government	<p>Consider including the funding of works to establish and maintain site access routes (including access outside of the abandoned mine site area), similar to the NT Legacy Mines Rehabilitation Bill 2023 (section 9).</p> <p>Consider providing the AMP with:</p> <ul style="list-style-type: none"> • the ability to restrict access to abandoned mine sites • access to features such as water bores and borrow pits as required to maintain access and undertake rehabilitation work.
Situation in which the AMP is working to rehabilitate an abandoned site while a new tenement holder is planning to redevelop part of the site—the AMP must progress until liabilities are with the new tenement holder.	State government	Harmonise the <i>Mining Act 1978</i> and the MRF Act to minimise conflicts.
Data and reports from an abandoned mine.	State government	Expand section 29 of the MRF Act to allow the AMP to request all available information held by consultants and third parties, which could inform the rehabilitation of an abandoned mine site.
The Mining Rehabilitation Advisory Panel		
Functions and composition of the MRAP.	Industry peak body	Review the function of the MRAP.

Response/feedback	Stakeholder group	Suggested action(s)
	State government	Identify ways to encourage a greater connection with industry, particularly in relation to strategy and finance. Consider whether the MRAP's role should include additional areas for approval or advice.
Query whether the MRAP remains relevant in its current form.	Consultants	Review the MRAP's role and membership of the MRAP.
General effectiveness of the MRF		
More clarity is required about the pathway to relinquish a claim (under the Mining Act).	Industry peak body Large miner / tenure holders	Develop a statutory process to allow sign-off for rehabilitated land. Consider the ability to use the MRF's principal to develop rehabilitation and closure guidance and standards.
Ability to adapt and respond to a constantly evolving and changing industry.	Industry peak body Industry Mining consultants	State government commits to ongoing reviews of the legislation (suggested every 10 years) and particularly of the rehabilitation liability estimates (RLEs)—to enable the consideration of legislation against ongoing changes in the industry (particularly new technologies and emerging best practice for rehabilitation)
The MRF has had limited success in encouraging progressive rehabilitation, resulting in: <ul style="list-style-type: none"> • failure to meet community expectations about rehabilitation outcomes • the rate of rehabilitation falling behind the rate of disturbance and activity. 	Industry Industry peak bodies State government	Investigate and implement measures to incentivise progressive rehabilitation prior to mine closure or abandonment.
The meaning and expected standards of 'rehabilitation' are undefined in the Act.	State government MRAP	Further define and/or prescribe mine rehabilitation and management standards.
There are inconsistencies between the MRF and approvals process (e.g. program-of-work applications and mining proposals) as well as miscellaneous licence purposes carried out under the Mining Act.	Top-tier miner	Align MRF and Mining Act processes.

Response/feedback	Stakeholder group	Suggested action(s)
Regular changes to AMP criteria and process for selecting mines and shafts to be rehabilitated.	Industry peak bodies	Clarify the process for prioritising abandoned mines and maintain the program's focus and criteria for longer periods.
MRF activities can support the achievement of community and Aboriginal employment outcomes.	Industry Indigenous consultant	Investigate opportunities for private–public partnerships that can generate employment.
The two-year limit on reassessment (section 20 of the Act) can restrict the ability to enforce adjustments of information.		Maintain the two-year limit with conditions granting the CEO discretion to extend the reassessment period.
The reporting obligations and legal responsibilities of individual parties to joint tenements is unclear.		Investigate and implement guidelines, processes and/or mechanisms to improve this aspect of reporting.
Abandoned Mines Program (AMP)		
The AMP focuses on large-scale rehabilitation, which does not adequately address the large number of historic abandoned mines and workings.	Small miners / tenure holders Mining consultants	Programs to engage local contractors (including prospectors and tenement holders) to rehabilitate smaller scale areas such as old camps and rubbish dumps—signed off by local DEMIRS staff or geologists. Look at ways to use both the principal and interest for historic areas requiring rehabilitation. Amend the AMP's scope to allow for consideration of repairing/preserving legacy sites to support communities that wish to retain mining heritage conservation and tourism.
Rehabilitation of abandoned mines in line with community engagement.	Small miners / tenure holders Mining consultant	Maintain old shafts as heritage sites with the support of the local community—such as sites being fenced off with signage and recorded through a local historical society or the DEMIRS History Division. Consider a step in the AMP guidance such as 'reviews legacy sites with the view of balancing reducing risk with preserving/promoting mining heritage'.
	Industry peak body	Communication between stakeholders, local communities and DEMIRS/AMP could be more transparent.

Response/feedback	Stakeholder group	Suggested action(s)
	Indigenous consultant	Work with remote communities (particularly in relation to Indigenous issues) to ensure the most beneficial use of the sites.

4.4 Improving the efficiency of the MRF

Response	Stakeholder	Suggested action
Simplify and harmonise the MRF and EARS reporting systems, processes and requirements.	MRAP	Where possible: <ul style="list-style-type: none"> • address data duplication between the MRF and EARS • ensure consistency of data between the systems • align AER and MRF reporting categories. Benefit: Reduces DEMIRS' administrative and compliance costs.
Ease the reporting burden.	Industry peak body Small miners / tenure holders Tenure management advisers	Where possible, reduce reporting costs.
Improve or change the current manual data-entry process.		Where possible, enable the 'bulk upload' of data.
Simplify the reporting system, process and requirements.	APLA	Introduce a 'nil report' tick-box for tenements with nothing to report, enabling an early exit from the reporting process.
Update the imagery used when conducting audits.	Chamber of Minerals and Energy of Western Australia	Either allocate funds to purchase enhanced imagery <i>or</i> encourage proponents to include up-to-date imagery in reports.

Response	Stakeholder	Suggested action
Inefficiencies arise because rehabilitated areas that have not been relinquished remain as 'land under rehabilitation' and must be reported on.		Investigate mechanisms to ensure the timely relinquishing of a rehabilitated area and its removal from MRF reporting.

5. Discussion

5.1 On changes to the scope, objectives and purpose of the MRF

In general, it was agreed that the MRF Act remains relevant, and most stakeholders were supportive of the functions of the Act. Stakeholders identified a range of issues and suggestions in reference to improving the legislation’s clarity, which are discussed throughout this section.

5.1.1 Objectives and purpose of the MRF

There were no suggested changes to the objectives and purpose of the MRF.

5.1.2 Broadening the scope of the MRF to include all resource activities

A few consultants suggested broadening the MRF’s scope to include all resource activities. That would include oil and gas on land and within state waters (both conventional and unconventional gas projects).

This would be a significant broadening of the MRF’s scope. The review team has not assessed whether the current powers for petroleum and gas tenure are sufficient to avoid sites being abandoned. Accordingly, we have not identified whether there is a strong case for government intervention in this area.

5.1.3 Broadening the scope of the MRF to include State Agreement Acts

As noted in Section 4.2, a range of stakeholders raised concerns about the exclusion of mines operating under State Agreements—which are stand-alone Acts—from the MRF.

A State Agreement is ‘a legal agreement between the WA Government and a proponent of a major project within the boundaries of WA’.¹³ State agreements are administered by the Department of Jobs, Tourism, Science and Innovation. There are approximately 42 State Agreement mines that would fall under the MRF’s scope, but, importantly, State Agreements are generally held by the larger mining operations. One submission stated:¹⁴

... over 60 extractives projects operate under State Agreements, which is about 80% (value) of minerals and petroleum produced in WA.

Two points were raised by stakeholders.

First, State Agreement mines do not report under the MRF. It was commented that the exclusion of those operations means that the MRF data represents only part of the industry.

¹³ Department of Jobs, Tourism, Science and Innovation, ‘[State Agreements](#)’, WA Government, 4 January 2024.

¹⁴ MRAP submission.

Second, it was noted that (with one exception) State Agreement mines do not contribute financially to the MRF.¹⁵ That exclusion means that a significant proportion of mining operations have not contributed to the scheme that seeks to minimise the impact of abandoned mines on the state.

As a result, the failure of a State Agreement mine could be seen as a larger operator imposing a burden across the whole of the industry, including on small and medium-sized operations.¹⁶ This creates a perception of inequity, as miners reporting and contributing to the MRF feel they would be negatively affected, whether directly or indirectly.

As State Agreements are individual contracts between the mine operator and the state, amending them is likely to be done on a case-by-case basis and may require a negotiated outcome. For that reason, the legislative amendment process is likely to be challenging and would require long-term planning.

Including State Agreement mines in the MRF reporting requirements

Requiring State Agreement mines to report annual disturbance data through MRF reporting would appear to have some benefits, such as:

- ensuring that the MRF reported data provides a holistic overview of mining disturbance in WA
- removing part of the perceived inequity between State Agreement mines and other operations
- improving the transparency of the potential liability that the state would face if a State Agreement mine were to become abandoned.

In contrast to those benefits, the regulatory burden of including State Agreement mines in the MRF reporting requirements appears to be small, given this information would already be collected by most of the relevant businesses.

Seeking State Agreement mines to contribute financially to the MRF

Seeking State Agreement mines to contribute financially to the MRF appears to be a more significant change that would also require the negotiation of individual State Agreements. There also appears to be a risk that the mines most willing to be included in the MRF may be seeking the return of any financial security held and would include those that are more likely to become abandoned.

The inclusion of State Agreement mines to contribute financially to the MRF appears to be beneficial; however, it is noted that this may be a longer term goal and that mines seeking to be included may need to be assessed on a case-by-case basis. Such assessments should consider the risk of mine abandonment and what the government is asked to surrender in order to reach an agreement.

Recommendation 1: The MRF reporting requirements should be reviewed and should be broadened to include mines operating under State Agreements if this change is found to deliver a net benefit.

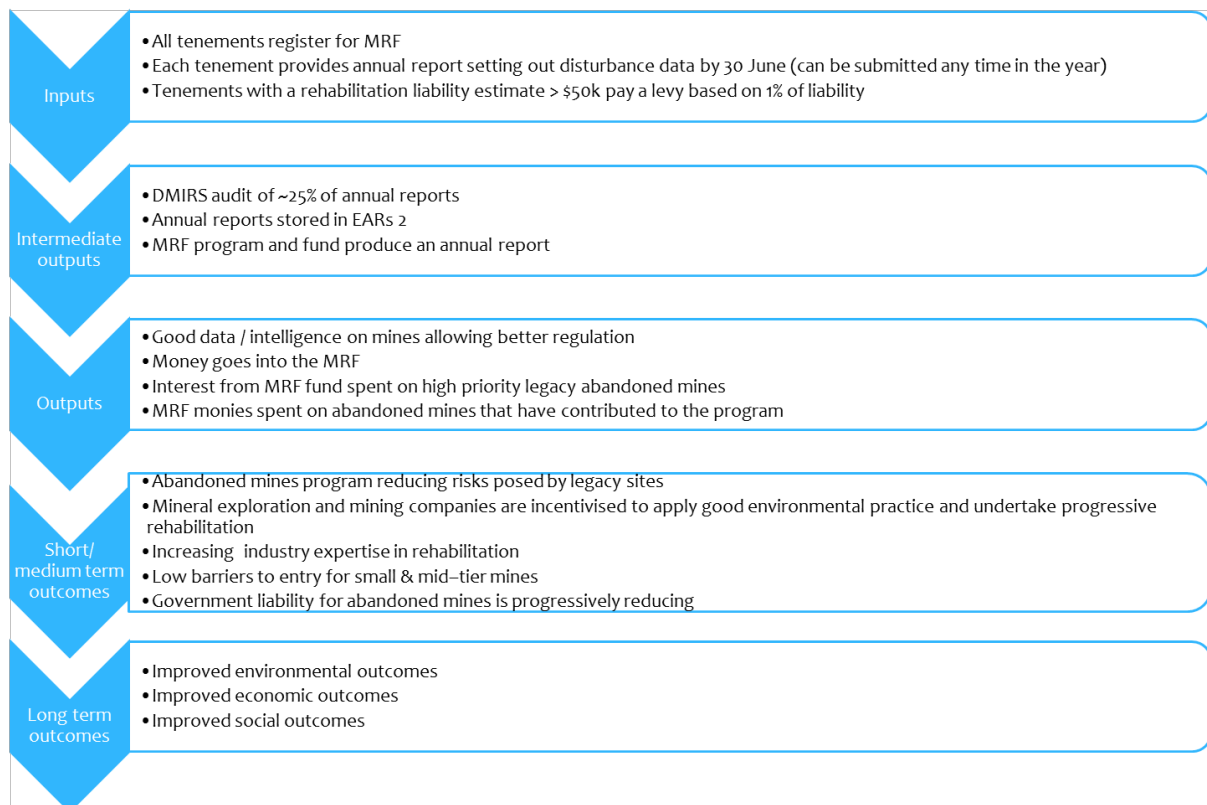
¹⁵ The one exception is the Nickel (Agnew) Agreement, which covers BHP's Nickel West operations and was varied through an amendment Bill in 2023. [Nickel \(Agnew\) Agreement Amendment Bill 2023](#), WA Parliament.

¹⁶ AMEC submission.

5.1.4 Program logic

Marsden Jacob’s post-implementation review of the MRF Act (undertaken in 2018)¹⁷ included the development of a program logic (Figure 2). The program logic aligned the outputs of the legislation with the desired outcomes and was refined in consultation with stakeholders. It draws out key outputs and shorter term outcomes, such as the collection of data on disturbance and rehabilitation, as well as incentivising progressive rehabilitation.

Figure 2: Program logic



Source: Marsden Jacob Associates, 2018.

The program logic was considered as part of the current MRF Act review. There was general agreement that the program logic:

- provides a useful framework for linking the MRF inputs, the outputs and the short- to medium-term outcomes
- supports measures that could be used to track the success of the MRF over the longer term.

Stakeholders proposed minor edits to the logic text, with the suggestion that the first short-/medium-term outcome be changed to:

¹⁷ Marsden Jacob Associates, *Mining Rehabilitation Fund: post-implementation review: final report*, prepared for the Department of Mines, Industry Regulation and Safety, WA Government, July 2018.

*Abandoned Mines Program reducing **safety** risks posed by legacy sites.*

While we agree that safety risks are the current focus of the safer shafts program,¹⁸ we consider that over time the AMP will consider other risks—such as environmental risks. Therefore, the proposed amendment is unnecessarily precise and risks constraining the program in the future.

One other stakeholder commented that the longer term outcomes are vague and difficult to measure. While we agree that this is true, the purpose of a program logic is to break longer term outcomes into measurable steps.

Based on stakeholder feedback, we consider that the program logic is a useful way of conceptualising the objectives of the MRF. In addition, the outputs and short-/medium-term outcomes may provide useful measures for the department to report against. It is noted that the program logic may require revision if it were to be adopted by DEMIRS; in addition, it is likely to require regular review to ensure that it remains relevant.

Recommendation 2: DEMIRS should consider the current, or an adapted, program logic in setting measures for reporting short- and medium-term outcomes.

5.2 On minimising the risk of new abandoned mines

Contributions to the MRF can be thought of as an insurance policy to minimise the state's liability for mines that are abandoned.

Similar to an insurance policy, the contribution (currently 1%) from tenement holders needs to reflect the risk of a mine abandonment. Risk is generally conceptualised as a function of likelihood and consequences and the event arising. This can be written mathematically as:

$$\text{Risk} = \text{Likelihood} \times \text{Consequences.}$$

This section considers strategies to minimise that risk.

5.2.1 Minimising the likelihood of mine abandonment

The MRF Act has no direct role in minimising the likelihood of mine workings becoming abandoned. For that reason, a strategy to minimise the likelihood of mine abandonment must rely on other legislative tools within the broader mining legislation 'ecosystem'.

In WA, the *Mining Act 1978* is the central piece of legislation for the granting, management and closure of mining tenements. Ensuring that the Mining Act powers are effective at minimising the risk of mine abandonment will maintain the integrity of the MRF and minimise the contributions made by the broader industry.

As this review is focused on the MRF Act, we have not provided recommendations on changes to the Mining Act. However, it is noted that monitoring instances of unexpected mine closure, mine forfeiture and mine abandonment is an important role for DEMIRS.

¹⁸ <https://www.dmp.wa.gov.au/Geological-Survey/Safer-Shafts-for-Towns-32045.aspx>

If DEMIRS finds that the likelihood of mine abandonment has increased, or if other undesirable trends are identified, then ensuring that the powers under the Mining Act are maintained, refined and used appropriately will be important.

5.2.2 Minimising the consequences of mine abandonment

Through research on other jurisdictions, and consultation on the MRF, two strategies are readily identified that may minimise the consequences of an abandonment of a mine to both a local community and the state as a whole:

- progressive rehabilitation undertaken across the life of a mine to minimise the potential rehabilitation liability that exists in the later part of the mine's life
- mine bonds or financial securities to provide a funding source to pay for some or all of any rehabilitation liability that would arise from the abandonment of a mine.

While separate, the two strategies could be used to maximise progressive rehabilitation and to use the threat of requiring an unconditional performance bond to incentivise progressive rehabilitation.

The need for progressive rehabilitation

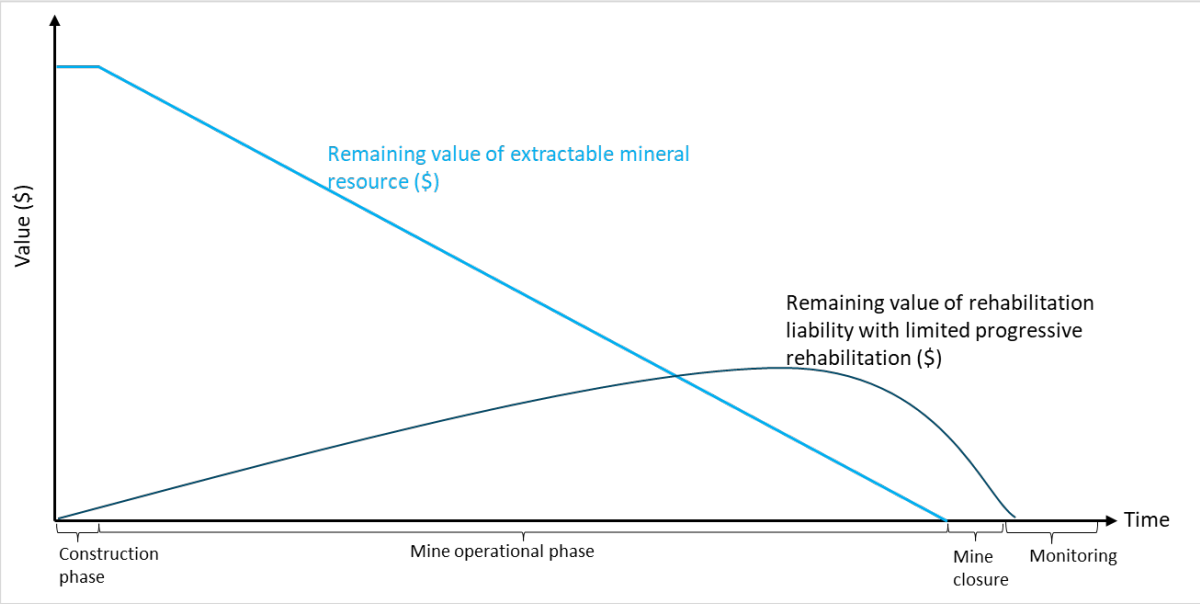
Across the operational life of a mine, the value of the remaining extractable mineral resource reduces as the material is extracted. At the same time, the value of the rehabilitation liability increases over time if progressive rehabilitation is not undertaken. Following the end of the mine's operational phase, the mine will enter a closure phase. A stylised depiction of that process is shown in Figure 3.

For simplicity, the graph makes several assumptions, such as:

- the unit value of the extracted mineral is constant
- the mineral extraction is constant.

Costs occurring during the monitoring phase are not shown.

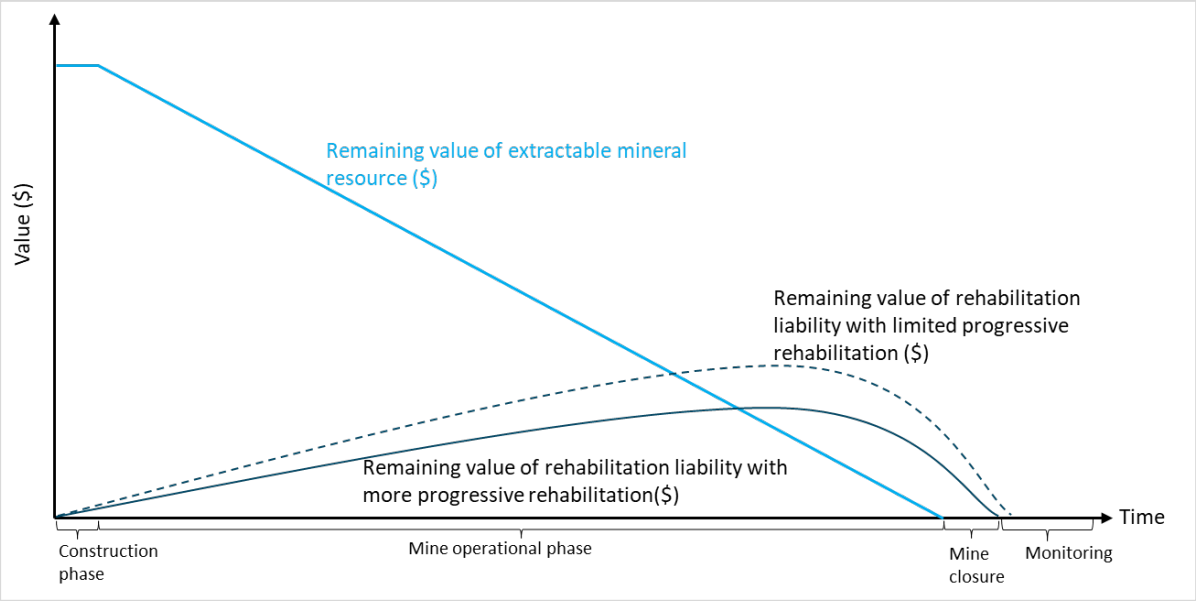
Figure 3: Stylised depiction of the value of extractable minerals and the rehabilitation liability over the life of a project



Source: Marsden Jacob analysis.

As shown above, in the later part of the mine’s life the value of rehabilitation is likely to be larger than the value of the extractable mineral resource. Figure 4 shows the reduced liability that would remain if more progressive remediation were undertaken. While progressive rehabilitation does not remove the rehabilitation liability or the mine closure phase, it does reduce the liability that arises across the mine’s life.

Figure 4: Value of rehabilitation liability is lower if more progressive rehabilitation is undertaken



Source: Marsden Jacob analysis.

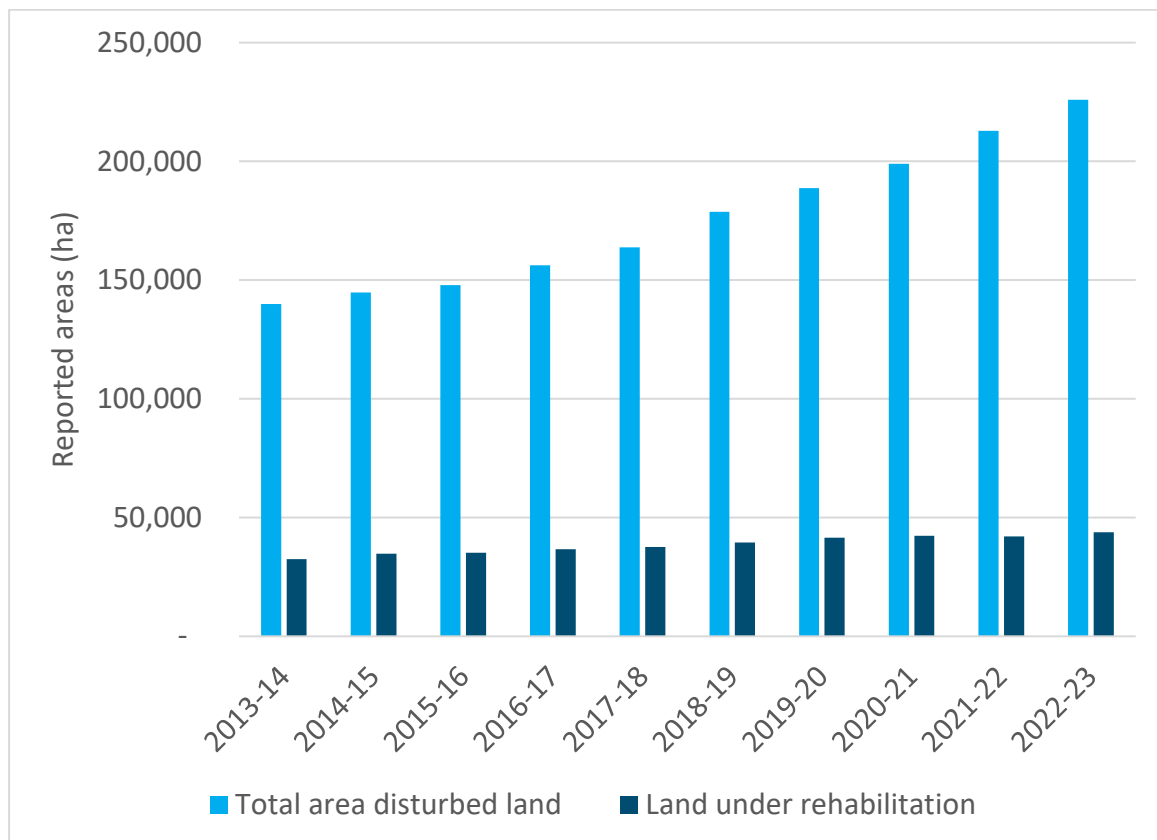
5.2.3 Incentivising progressive rehabilitation

A few stakeholders commented that the current incentives for progressive rehabilitation are not strong. As set out below, analysis of the MRF reporting data indicates that areas reported as being under rehabilitation have not increased at the same rates as areas of disturbed land.

Current levels of progressive rehabilitation

Consultation participants commented that little progressive rehabilitation has been undertaken under the MRF. That view is supported by MRF data. Table 8 shows the changes in the area of land under rehabilitation reported in each category over the past 10 years. There has been a 70% increase in the reported disturbance of land but only a 35% increase in reported rehabilitated land. Both those values can be compared with the 12% increase in the number of tenements that provide disturbance reports to the MRF over the same period. Figure 5 shows that rehabilitation has increased, but not at a level in proportion to disturbance. While those statistics could be indicative that the mining industry in WA went through a growth phase, they may also indicate that the current incentives for progressive rehabilitation are not strong enough. If the incentives are appropriate, it would be expected that the area of land under rehabilitation would increase, but this would lag the area of disturbance by some years.

Figure 5: Land under rehabilitation compared to total disturbed land, 2013 to 2023 (hectares)



Source: MRF reported data (2013 to 2023).

Table 8: Disturbance reported in each category (hectares)

Category	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	Difference between 2013 and 2023
A	25,494	26,204	27,024	27,567	28,486	30,465	32,808	34,714	37,733	40,039	14,545 (57% increase)
B	17,919	17,050	17,085	17,672	18,205	19,610	20,833	22,154	23,610	24,229	6,310 (35% increase)
C	44,475	47,491	47,546	50,278	53,894	59,132	64,266	70,852	76,381	84,964	40,488 (91% increase)
D	16,298	15,905	17,051	20,232	22,077	25,315	24,026	23,294	26,321	25,406	9,109 (56% increase)
E	3,172	3,449	3,775	3,892	42,111	4,636	5,264	5,595	6,060	6,602	14,748 (41% increase)
F	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	578	839	839
G	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	18	18
Total disturbance	107,357	110,100	112,481	119,641	126,874	139,159	147,196	156,609	170,684	182,097	74,740 (70% increase)
Land under rehabilitation	32,558	34,748	34,594	36,637	37,626	39,553	41,535	42,329	42,127	43,876	11,318 (35% increase)
Total reported	139,916	144,848	147,075	156,278	164,500	178,712	188,731	198,937	212,811	225,973	86,058 (62% increase)

Note:

1. Category E contains both 'topsoil stockpile' and 'land under rehabilitation'. For this table, 'land under rehabilitation' has been removed from the disturbance figures for Category E.
2. Categories F and G are new categories introduced from July 2021.

Source: Marsden Jacob analysis of MRF reported data (2013 to 2023).

Stakeholders suggested a range of strategies to incentivise progressive rehabilitation:

- Improvements to the Environmental Assessment and Regulatory System (EARS)¹⁹ may support progressive rehabilitation.

Some stakeholders are of the view that the misalignment between the EARS and reported rehabilitation reduces the incentive to progressively rehabilitate. Including progressive rehabilitation in the EARS may stimulate rehabilitation with the incentive to reduce the MRF contribution. DEMIRS outlined that these comments appear to be a misconception of the arrangements, as EARS 2 already allows areas to be moved progressively to 'land under rehabilitation', where that attracts a lower RLE .

- Reduce the RLE for land under rehabilitation compared to other categories.

The RLE rate per hectare for 'land under rehabilitation' is \$2,000, which is the lowest rate available. The suggestion is that this RLE category should be substantially lower than the other categories. DEMIRS commented that the RLE for land under rehabilitation is already substantially lower than for most other categories.²⁰ The RLE for most mining activities is \$18,000 to \$50,000 per hectare.²¹ As companies contribute 1% of the RLE, land under rehabilitation costs \$20 per hectare, whereas most mining activities cost \$180 to \$500 per hectare on an annual basis.

- Consider some of the rehabilitation cost as part of the MRF levy contribution.

Some smaller companies may be using part of their rehabilitation budgets to make their required MRF contributions. Some stakeholders suggested using a percentage of costs incurred through undertaking progressive rehabilitation to offset MRF payments for that year. Evidence of those costings and the work undertaken would need to be provided, as well as some way to verify that past rehabilitation work continued to be 'successful'.

A similar suggestion from other stakeholders was that the MRF could provide grants or rebates to operators that have undertaken high levels of rehabilitation works. DEMIRS noted that rehabilitation is part of each mining company's obligations. For that reason, a grant or a rebate for companies that meet their obligations does not fit within the current scope of the MRF.

- Implement a system that can recognise multiple land uses.

Some stakeholders suggested that, when assessing what 'land under rehabilitation' looks like, consideration should also be given to the final outcome of the land, or whether the land can be used for another use prior to any mine closure stage. If an area considered by the MRF as 'land under rehabilitation' is being successfully used for other economic activities, another RLE category may be useful (with either a low or zero rate per hectare). DEMIRS clarified that recognising 'land under rehabilitation' involves determining whether the mining company has completed the earthworks component of its closure obligation for the feature in question. By being pegged to its

¹⁹ For simplicity, this refers to both EARS and EARS 2.

²⁰ Categories D (exploration/prospecting operations) and E (topsoil stockpile) also have an RLE of \$2,000 per hectare.

²¹ Category G (halite/salt stockpile (on-playa) associated with minerals-in-brine extraction) has an RLE of \$10,000 per hectare but rarely arises and was limited to 18 hectares in the 2022–23 financial year.

closure obligations, that determination inherently recognises multiple land uses. If the mine's closure obligations change over time, so, potentially, does the point at which it reaches the threshold for 'land under rehabilitation'.

- Consider a risk-based approach.

Queensland considers the risk profile of an operation when determining the required annual levy. There are three risk categories²² that have an assigned ERC percentage:

- Very low—0.5% of the ERC
- Low—1% of the ERC
- Medium—2.75% of the ERC.

A fourth category ('high risk') carries no official percentage payment into the levy. Operators in that category are managed at the discretion of the Scheme Manager, who would generally use other mechanisms (such as bonds) as well as the option to impose an annual levy payment.

Carrot-and-stick approach

Queensland's model is essentially a carrot-and-stick approach: the higher the risk profile of an operator, the higher the financial requirements placed upon it. Risk is assessed based on a 'financial soundness assessment' and a weighted 'resource project characteristics assessment' (discussed in Appendix 1). The risk profile of an operation can (and probably will) change throughout the project's life cycle and, therefore, the assurances required will change. ERCs are required to be updated when progressive rehabilitation and closure plans are updated, which occurs every three to five years.

The levy can be seen as the 'carrot': the lower the assessed risk profile of an operation, the lower the annual levy. The 'stick' is the requirement to pay a bond. As we have noted, the *Mining Act 1978* still allows for unconditional performance bonds to be imposed as necessary.²³

The Queensland model imposes a surety equal to the ERC on an operator deemed to be of high risk, and a surety can be imposed on any category if that is deemed necessary. The advantage of this model is that the risk considers the whole of the project life cycle and recognises that the risk increases over time.

It has been noted by industry that a return to a system of bonds or sureties would have a detrimental effect on the competitive advantage that the WA system has over other jurisdictions in attracting project investment. Some stakeholders believe that a return to the bonds system would be 'untenable'.

However, this proposed approach may enable operators to avoid having to pay a surety at the beginning of the project life cycle, and through progressive rehabilitation, among other factors, could work to maintain a lower risk rating.

²² Risk as determined by the Scheme Manager appointed under section 12 of *Mineral and Energy Resources (Financial Provisioning) Act 2018* (Qld).

²³ While unconditional performance bonds are not currently part of the MRF Act, this tool can be applied by DEMIRS under the *Mining Act* to assist the MRF and broader government objectives for minimising rehabilitation liabilities.

Proposed approach

If DEMIRS identifies a rehabilitation profile that represents good practice, then it can apply a carrot-and-stick approach to reward mines that achieve or exceed good practice, as well as disincentives for poor practices.

An incentive could be applied for mines that exceed a suitable level of progressive rehabilitation; for example, a reduced contribution to the MRF (such as 0.75%, rather than 1%, of the RLE).

While the option to apply unconditional performance bonds under the Mining Act is available to DEMIRS, those bonds are rarely applied and are not imposed by the MRF compliance team. It is proposed that unconditional performance bonds should be applied more frequently for sites that do not meet the desired level for good practice and/or are considered at high risk of non-compliance with environmental conditions. This change in the use of existing powers would be seen as a 'stick' by mines and could be applied for mines that do not achieve a suitable level of progressive rehabilitation. The threat of a financial surety, such as an unconditional performance bond, would be likely to ensure that mines include progressive rehabilitation in their mine plans.

If the carrot (of reduced levy rates) and the stick (of unconditional performance bonds) were used together to encourage increased levels of progressive rehabilitation, then the MRF team could contribute to criteria to identify sites for which these powers would be appropriate.

The nature of the financial surety described above is that the bond would be applied during the operational phase of the mine's life. That timing of the financial imposition would reduce the impact on each project considerably compared to requiring a financial surety 'up front' before project commencement. The timing and nature of the financial surety would be analogous to superannuation, in which a small portion of funds is put aside during high-income years and is returned once the income stream ceases.

Recommendation 3: DEMIRS should identify a rehabilitation profile that represents good practice and then monitor levels of progressive rehabilitation at the industry level against those good practices. If DEMIRS finds that incentives for progressive rehabilitation need to be strengthened, then it should use a 'carrot and stick' approach to reward mines that achieve or exceed good practice as well to disincentivise poor practices.

5.3 On changes to increase the effectiveness of the MRF

A broad range of changes were proposed on the basis that they would assist the MRF in achieving more of its objectives.

5.3.1 Calculation of rehabilitation liability estimates

The calculation of liability estimates is set out in the Mining Rehabilitation Fund Regulations 2013, although a high-level power is included in section 13 of the MRF Act. The following discussion therefore relates only to the regulations.

Alternatives to the RLE categories

The current methodology for estimating rehabilitation liabilities in WA (summarised in Section 3.1) is relatively simple and quick. While the current RLE categories provide an overview of the total area of disturbance and total liability, improved data on mine disturbance and total liability could be obtained by using a more complex system. However, that would also increase reporting costs.

A range of stakeholders commented on the reporting costs that arise under the MRF. Understandably, smaller mines—which either do not contribute financially (below the \$50,000 contribution threshold) or do not contribute significantly—focus more on the reporting costs imposed.

Queensland’s model provides a useful comparison in which the liability estimate is calculated using a more detailed Excel spreadsheet that applies risk weightings. For example, a tailings dam with a high dam wall has a higher rehabilitation liability than the same sized dam with a low dam wall. While the Queensland model provides improved data, it would also come at an increased reporting cost.

A possible way to minimise costs for smaller businesses, but improve the quality of reported data, is a tiered approach, such as:

- retaining the RLE categories for smaller mines, such as disturbance estimates below \$1 million (in 2022–23, there were 22,920 tenements with RLEs below \$1 million)
- utilising a model like the Queensland ERC for sites with RLEs above \$1 million (in 2022–23, there were 717 tenements with RLEs above \$1 million and 195 with RLEs above \$5 million).

Any review of the reporting and calculation of liability estimates will need to consider competing objectives for:

- collecting detailed data on mine rehabilitation liabilities
- minimising the costs to industry.

While it is difficult to balance those objectives to the satisfaction of all stakeholder groups, the use of a tiered approach may minimise the cost for many small operators while ensuring that larger operators provide more detailed data as part of their business operations for mine closure planning.

Recommendation 4: DEMIRS should work with parts of the mining industry operating larger mine sites to identify a more detailed approach to reporting rehabilitation liabilities that is suitable for the largest sites. Once a suitable approach is identified, a tiered reporting approach should be implemented in which more detailed reporting is required for sites with RLEs greater than a specified value—such as \$1 million.

RLE categories

A broad range of stakeholders commented that grouping all mine-related disturbances into seven categories requires simplification, while acknowledging that this would be difficult to address.

Stakeholders generally agreed that the RLE categories, as presented in Schedule 1 of the regulations, need to be reviewed and regularly maintained to ensure that they continue to reflect the full range of activities that occur in a modern mining project.

In reviewing categories, there were discussions about introducing new categories reflecting energy transition—where mining operations are reducing carbon emissions and transitioning to renewable energy sources. Renewable energy generation (through wind and solar farms) as well as storage and infrastructure will result in land disturbance. Some future categories to consider were, therefore:

- batteries
- wind farms
- solar farms
- power transmission.

There may also be a need for recognition of the rehabilitation expectations for this land at the ends of projects' lives.

Recommendation 5: The RLE categories should be reviewed regularly to ensure that they reflect the range of modern mining activities.

RLE values

Most stakeholders generally accepted that the RLE values are too low and do not represent the true cost of rehabilitation. DEMIRS staff commented that they do not consider the RLE values to be representative of the true cost of rehabilitation; however, consultation indicated that some in the industry view the RLE values as a starting point for costings.

The values have not been updated since they were introduced in 2012, and over the intervening 11-year period, the total inflation across the economy has resulted in a 33% increase in costs.²⁴

One expert consultant estimated that the RLE category values vary from the true rehabilitation liability by as much as 50% for some categories.

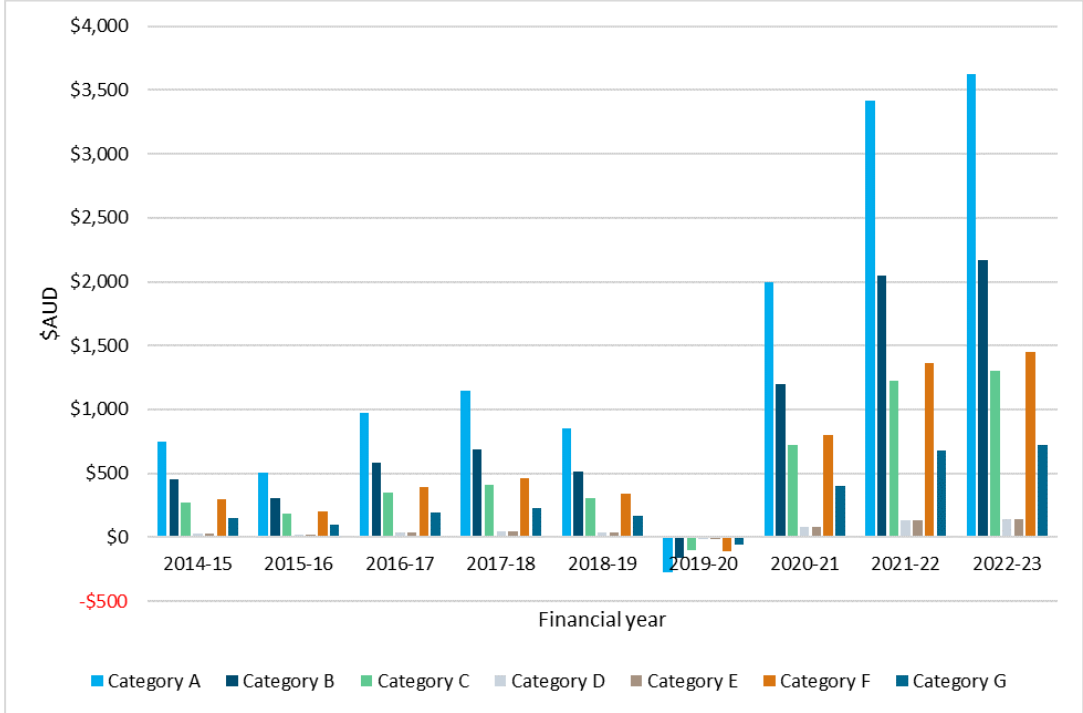
Indexing of RLE values

Some stakeholders suggested that the RLE values could be indexed against a measure of inflation (such as the Consumer Price Index (CPI) or the Producer Price Index (PPI)) – particularly between any reviews of the RLE values to ensure that they keep pace with inflation. The estimated difference in RLE values for each category through the years between 2013-14 and 2022-23, if indexed each year according to CPI²⁵, is illustrated in Figure 6. Figure 7 shows the changes if indexed at PPI.

²⁴ 'Inflation calculator', Reserve Bank of Australia, 2024.

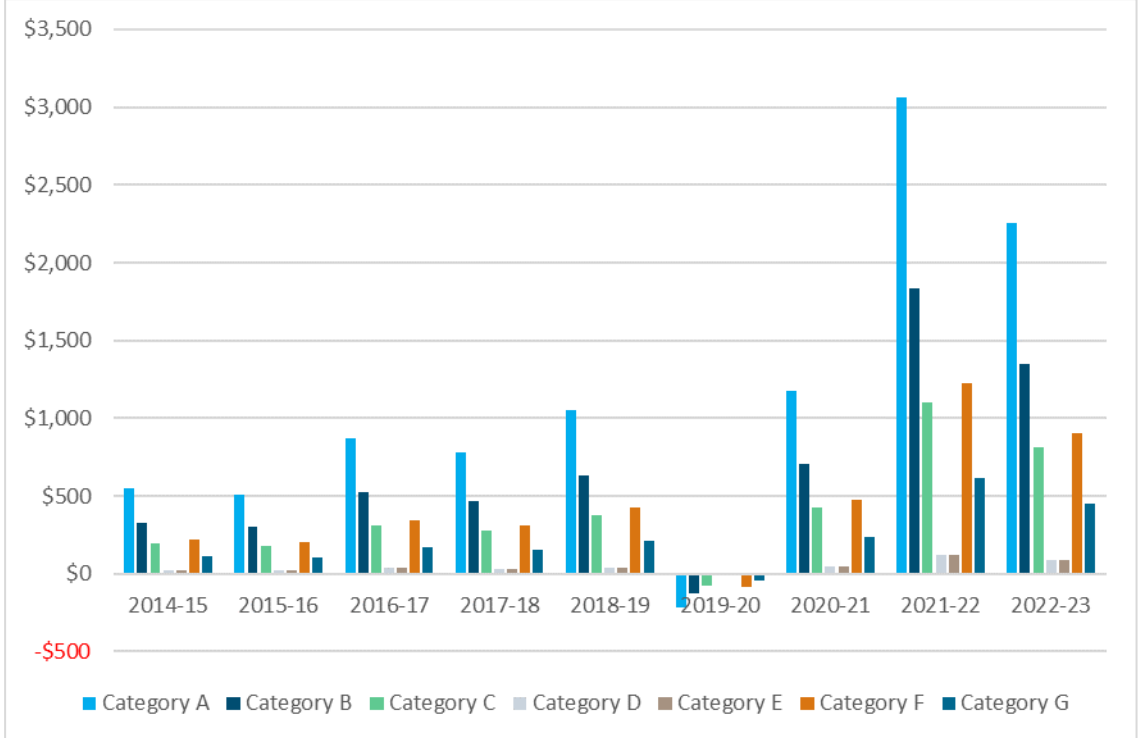
²⁵ Both CPI and PPI rates used for the modelling of the financial years from 2014-15 through 2022-23 have been sourced from ABS.

Figure 6: Annual change in RLE values for each category if indexed according to CPI



Source: MJA analysis.

Figure 7: Annual change in RLE values for each category if indexed according to PPI



Source: MJA analysis.

Table 9 shows the estimated category rates for 2022-23 if RLE values had been indexed each year according to CPI or PPI from 2012-13. In Figure 6 and Figure 7 above it can be seen that a majority of the increase in RLE values has been as a result of increasing inflation since 2020.

Table 9: RLE values at 2022-23 if indexed

Category	Current RLE value	Estimated RLE value if indexed at CPI for 2022-23	Estimated RLE value if indexed at PPI for 2022-23
A	\$50,000	\$62,995	\$60,037
B	\$30,000	\$37,797	\$36,022
C	\$18,000	\$22,678	\$21,613
D	\$2,000	\$2,520	\$2,401
E	\$2,000	\$2,520	\$2,401
F	\$20,000	\$25,198	\$24,015
G	\$10,000	\$12,599	\$12,007

Source: Marsden Jacob analysis using ABS data for CPI and PPI

Using the disturbance data provided in the MRF reports industry contributions over the period of the MRF have been estimated and the number of tenements impacted (Table 10). The additional tenements that would have contributed to the fund is based on retaining the current contribution threshold of a total RLE of \$50,000.

Table 10: Estimated contributions and number of affected tenements if RLE values were indexed

Year	Industry contributions to date (\$M)	If indexed by CPI		If indexed by PPI	
		Contributions (\$M)	Additional tenements	Contributions (\$M)	Additional tenements
2013-14	26.72	26.72	0	26.72	0
2014-15	27.40	27.82	12	27.71	9
2015-16	27.86	28.57	23	28.46	19
2016-17	28.89	30.20	46	30.02	37
2017-18	30.21	32.29	69	31.87	60
2018-19	32.65	35.46	89	35.14	81
2019-20	35.12	37.96	92	37.66	85
2020-21	37.66	42.21	127	41.27	127
2021-22	40.76	48.52	207	47.20	207
2022-23	43.72	55.22	242	52.61	209
Total	330.99	364.96		358.66	
Difference		33.97		27.67	

Source: Marsden Jacob analysis of MRF published data.

* The disturbance data used has been audited and adjusted so the disturbance values and total amount levy collected may not always match those published at the end of the relevant financial year. This is particularly true for the figures in 2013-14 (first year of collection) as these were adjusted several times (the final being in December 2018).

From this analysis, it was estimated that indexing the values at CPI would have resulted in an additional \$33.97 million contributed by industry to the MRF or an additional \$27.67 million if indexed by PPI. Each year the number of tenements contributing to the MRF would increase, as the RLE values increase but the threshold remains at \$50,000.

Modelling by WA Treasury²⁶ has estimated CPI growth over the next four years. Applying these CPI figures to the current RLE values results in the rates shown in Table 11.

Table 11: Category rates indexed at forward estimates

	2023-24	2024-25	2025-2026	2026-27
<i>Estimated CPI</i>	4.0%	3.0%	2.5%	2.5%
Category A	\$52,000	\$53,560	\$54,899	\$56,271
Category B	\$31,200	\$32,136	\$32,939	\$33,763
Category C	\$18,720	\$19,282	\$19,764	\$20,258
Category D	\$2,080	\$2,142	\$2,196	\$2,251
Category E	\$2,080	\$2,142	\$2,196	\$2,251
Category F	\$20,800	\$21,424	\$21,960	\$22,509
Category G	\$10,400	\$10,712	\$10,980	\$11,254

Source: Marsden Jacob analysis using Treasury estimates.

Applying these rates to the 2022-23 disturbance and tenement number data provides a rough estimate of industry contributions and contributing tenement numbers if the RLE values were indexed from this financial year onwards, with the threshold remaining at \$50,000 (Table 12).

Table 12: Estimated industry contribution and contributing tenements if indexed at estimated CPI

Year	Estimated industry contribution (\$M)	Estimated additional contribution (\$M)	Estimated number of tenements contributing to the MRF	Estimated additional tenements contributing
2022-23	41.51		3,038	
2023-24	45.49	3.98	3,094	56
2024-25	46.87	5.36	3,125	87
2025-26	48.06	6.55	3,156	118
2026-27	49.27	7.76	3,173	135
Estimated additional contribution	23.65			

Source: Marsden Jacob analysis of published MRF data.

Modelling indicates that indexing the category rates in line with estimates in CPI growth would result in an additional industry contribution of \$23.65 million over the next four years (under the current threshold of \$50,000).

²⁶ Government of Western Australia, 2023, *Government mid-year financial projections statement*. (Government of Western Australia, Perth). pp. 3.

Regardless of whether or not the RLE values reflect the true cost of rehabilitation, costs have risen in the years since they were introduced. Reviewing and/or indexing RLE values goes some way to reflecting the rising rehabilitation costs. The effect of the values being too low is that the MRF is not collecting 1% of the true rehabilitation cost and instead would be collecting a fraction of that value. The impact of this is that the MRF might not be able to achieve its objectives.

Recommendation 6: It is recommended that:

- a) **the RLE values be updated (after the categories have been reviewed)**
- b) **the RLE values be reviewed on a regular basis (for example, every five years, depending on advice from Treasury)**
- c) **the RLE values be indexed against a measure of inflation to minimise the drift between the RLE values and the true cost of rehabilitation between reviews.**

5.3.2 1% contribution rate and contribution threshold

As discussed in Section 5.2, setting the contribution rate requires an estimation of the proportion of mines that will become abandoned. In that way, the contribution rate is conceptually similar to an insurance premium.

Is the contribution rate of 1% appropriate?

There was general agreement among stakeholders that the contribution rate of 1% is appropriate. However, it was noted that a regular review of the contribution rate is also appropriate, in keeping with a request for regular statutory reviews of the MRF as a whole. As the contribution is like an insurance premium, a regular review would be appropriate to ensure that the risk does not outweigh the liability.

A risk-based approach is discussed in Section 5.2.3, outlining the Queensland example of linking a project's contribution rate with the assessed risk of the project, and therefore reducing the contribution rate for lower risk categories. As the MRF matures and continues to grow, and projects begin to reach the ends of their lives, it may be appropriate to lower the contribution rate if the assessed risk of the project is declining.

Recommendation 7: While 1% is an appropriate contribution rate, it should be reviewed on a regular basis.

Recommendation 8: DEMIRS should investigate the possibility of reducing or increasing the contribution rate of projects based on risk assessments undertaken by the department using agreed criteria.

Contribution threshold

The contribution threshold is currently set at \$50,000. A tenement with an RLE equal to or greater than that threshold must contribute 1% of the RLE to the MRF. As with the unit rates for the rehabilitation liability categories (Schedule 1 of the regulations), the threshold has not changed since the inception of the legislation.

Some stakeholders questioned the threshold level and suggested revising it to a level closer to \$100,000. Table 13 shows the number of tenements that contributed annually to the MRF (that is, those above the \$50,000 threshold) versus the number that reported annually to the MRF over the past 10 years. The data shows that:

- around 13% of those that consistently report are above the threshold and therefore pay into the MRF
- between 61% and 67% of tenements that report into the MRF have a reported RLE of zero
- between 21% and 26% reported an RLE of greater than zero but less than the \$50,000 threshold.

Table 13: Distribution of tenements reporting into the MRF by RLE value

Financial year ^a	\$0	Less than \$50,000	\$50,000 to \$100,000	Greater than \$100,000	Total reported	Total that contributed to the MRF
2013–14	13,916	4,462	568	1,820	20,766	2,388 (11%)
2014–15	12,719	4,365	584	1,824	19,492	2,408 (12%)
2015–16	11,522	4,386	588	1,855	18,351	2,443 (13%)
2016–17	11,709	4,558	581	1,914	18,762	2,495 (13%)
2017–18	12,015	4,800	602	1,972	19,389	2,574 (13%)
2018–19	12,512	4,930	625	2,072	20,139	2,697 (13%)
2019–20	12,436	5,226	604	2,143	20,409	2,747 (13%)
2020–21	13,370	5,269	638	2,241	21,518	2,879 (13%)
2021–22	14,448	5,489	681	2,340	22,958	3,021 (13%)
2022–23	15,063	5,532	643	2,395	23,633	3,038 (13%)

a The disturbance data used has been audited and adjusted, so the disturbance values and total amount of levy collected might not always match those published at the end of the relevant financial year. That is particularly true for the figures in 2013–14 (the first year of collection), as those were adjusted several times (the final adjustment being in December 2018).

Source: Marsden Jacob analysis of MRF published data.

Table 14 provides an insight into the total contributions to the MRF over its lifetime under three thresholds compared with the current threshold using the current RLE rates. The thresholds modelled were:

- all contribute regardless of the RLE
- contribute only if the RLE is equal to or greater than \$75,000
- contribute only if the RLE is equal to or greater than \$100,000.

Table 14: Estimated contributions under different thresholds (A\$ million)

Financial year ^a	Current threshold (>50,000)	If threshold had been all (i.e. >\$0)	If threshold had been >\$75,000	If threshold had been >\$100,000
2013–14	26.72	27.17	26.52	26.31
2014–15	27.40	27.85	27.18	26.98
2015–16	27.86	28.30	27.65	27.44
2016–17	28.89	29.53	28.68	28.47
2017–18	30.21	30.68	29.99	29.78
2018–19	32.65	33.15	32.42	32.20
2019–20	35.12	35.64	34.90	34.69
2020–21	37.66	38.18	37.43	37.20
2021–22	40.76	41.30	40.52	40.27
2022–23	43.72	44.27	43.50	43.25
Total contributions	330.99	335.90	328.78	326.58
Difference		4.91	-2.21	-4.41

a The disturbance data used has been audited and adjusted, so the disturbance values and total amount levy collected might not always match those published at the end of the relevant financial year. That is particularly true for the figures in 2013–14 (the first year of collection), as those were adjusted several times (the final adjustment being in December 2018).

Source: Marsden Jacob analysis of MRF published data.

An RLE threshold greater than or equal to \$100,000 would have reduced the MRF contribution by about \$4.4 million over the past 10-year period—a reduction of around 1.3%.

Increasing the threshold for contributions to the MRF could be considered, as it does not appear to significantly affect the amount being contributed to the fund and could reduce red tape for smaller stakeholders. Changing the threshold would not affect reporting data, which would still be required to ensure an understanding of the level of disturbance.

Section 5.3.1 discussed reviewing and/or indexing the category rates to provide the RLE value. Table 10 provided estimates on the industry contribution to the MRF if the category rates were indexed under the current \$50,000 threshold. Using the estimates on the indexed category rates Table 15 illustrates how the increased threshold could impact industry contributions.

Table 15: Estimated industry contributions if category values are indexed and thresholds changed

Financial year*	Estimated industry contributions (\$M)					
	CPI at current threshold (> 50,000)	CPI at > \$75,000	CPI at > \$100,000	PPI at current threshold (> 50,000)	PPI at > \$75,000	PPI at > \$100,000
2013-14	26.72	26.52	26.31	26.72	26.52	26.31
2014-15	27.82	27.60	27.39	27.71	27.49	27.28
2015-16	28.57	28.36	28.15	28.46	28.25	28.03
2016-17	30.20	29.99	29.78	30.02	29.81	29.60
2017-18	32.29	32.06	31.84	31.87	31.65	31.42
2018-19	35.46	35.24	34.99	35.14	34.92	34.68
2019-20	37.96	37.73	37.50	37.66	37.43	37.20
2020-21	42.21	41.98	41.73	41.27	41.03	40.78
2021-22	48.52	48.25	48.00	47.20	46.93	46.69
2022-23	55.22	54.98	54.74	52.61	52.37	52.12
Total contributions	364.96	362.70	360.43	358.66	356.39	354.12
Estimated difference from \$50,000 threshold		-2.26	-4.53		-2.27	-4.53

Source: Marsden Jacob analysis of MRF published data.

* The disturbance data used has been audited and adjusted so the disturbance values and total amount levy collected may not always match those published at the end of the relevant financial year. This is particularly true for the figures in 2013-14 (first year of collection) as these were adjusted several times (the final being in December 2018).

Regardless of indexing, the reduced industry contribution with an increase in the threshold is quite similar (Table 14 and Table 15). The modelling estimates:

- A threshold of \$75,000 results in an estimated reduction of industry contribution of between \$2.21 million (no indexing) and \$2.27 million (indexed with PPI).
- A threshold of \$100,000 results in an estimated reduction of between \$4.41 million (no indexing) and \$4.53 million (CPI or PPI indexed).

From the information in Table 16, in 2013-14 approximately 11% of those tenements reporting into the MRF had an RLE of above \$50,000, which rose to 13% at 2015-16. Any indexing for inflation (whether using CPI or PPI) causes the number of tenements exceeding the threshold to rise, as their original RLE values would automatically become larger. However, the numbers contribution to the MRF are estimated to only be an additional 1% of those required to report.

Table 16: Percentage of tenements estimated to contribute under different thresholds

Financial year	Current category rates			Indexed category rates		
	\$50,000	\$75,000	\$100,000	\$50,000	\$75,000	\$100,000
2013-14	11%	10%	9%	11%	10%	9%
2014-15	12%	11%	9%	12%	11%	9%
2015-16	13%	11%	10%	13%	12%	10%
2016-17	13%	11%	10%	14%	12%	10%
2017-18	13%	11%	10%	14%	12%	10%
2018-19	13%	12%	10%	14%	12%	11%
2019-20	13%	12%	11%	14%	12%	11%
2020-21	13%	12%	10%	14%	12%	11%
2021-22	13%	11%	10%	14%	12%	11%
2022-23	13%	11%	10%	14%	12%	11%

Source: Marsden Jacob analysis of MRF published data.

From Table 15 it was estimated that raising the RLE threshold leads to a small decrease in industry contributions, and this is reflected in the slightly lower percentage of tenements which contribute.

Most stakeholders agreed that the RLE categories and associated unit rates need to be reviewed. Changes to the categories and unit rates would also justify a review of the contribution threshold level. Any review of the unit rates will require further modelling to forecast RLEs and contributions for different rate values.

Recommendation 9: If the RLE rates are revised, then the contribution threshold should also be reviewed. It appears appropriate to maintain the proportion of tenements that contribute financially to the MRF.

5.3.3 Use of funds under sections 8(1) and 8(2)

Section 8 of the Act sets out the use of the MRF. Section 8(1) specifies that any money in the fund can be used for the rehabilitation of mines that contributed to the fund. Section 8(2) sets out that interest collected on the fund can be spent on any of the following additional items:

- rehabilitation of mines that did not contribute to the fund (such as legacy mines / exempt mines)
- programs/information on the rehabilitation of abandoned mines
- fund administration
- administering and enforcing the Act.

A broad range of stakeholders agreed that it is important to maintain the MRF for its legislative purpose and ensure that it is not ‘chipped away’ through small changes.

Several stakeholders were of the view that it would be advantageous to implement ways to enable better budgeting for any activities that occur under section 8(2) of the Act. That budget relies on a stable flow of funds through the interest generated by the MRF and is therefore reliant on interest rates. Stakeholders noted that the decline in interest rates during the COVID-19 pandemic had a negative impact on the MRF; however, they acknowledged that scenarios such as that might not have been envisaged when the Act was drafted. Changes that could protect against periods of low interest rates would strengthen the MRF’s ability to deliver activities under section 8(2), including the AMP.

One suggestion was to allow short-term borrowing from the fund’s principal when interest rates fall below a specified level. Funds would be repaid once interest rates rose above the specified level.

The reform proposed by the review team (based on input from stakeholders) is that, if the interest rate drops below the set ‘floor’, then the difference could be borrowed—but must be repaid into the fund when interest rates rise beyond that floor rate. In the example given above, if the interest received were 1%, then a further 1% could be borrowed from the principal. We note that some further constraints may need to be added, such as limits on the duration of the loan and the total value that could be borrowed.

This policy approach appears to maintain the purpose of the fund principal while ensuring that sufficient funding remains available for the purposes set out in section 8(2) of the Act—even when investment income is constrained by adverse economic conditions.

Modelling for a 2% floor for interest rates

During the years affected by the COVID pandemic (2020–2023), interest rates dropped below 2%, reaching a low of 0.34% during 2021–22. Marsden Jacob has modelled a 2% floor for the MRF’s interest component to demonstrate how a floor mechanism can help to ensure that sufficient funds are available to pay for continued works on legacy mines. The conceptual approach to this is explained below.

In any given year:

- if the interest rate is above 2%, whatever interest is generated can be used to fund works on identified sites
- if the interest rate falls below 2%, the deficient amount can be borrowed from the principal of the fund to maintain the 2% floor; when the interest rates go above 2%, the borrowed amount(s) can be repaid over the coming years.

The modelling below outlines how the fund would have operated if the 2% floor had been in place. The results are shown in Table 17 and Figure 8.

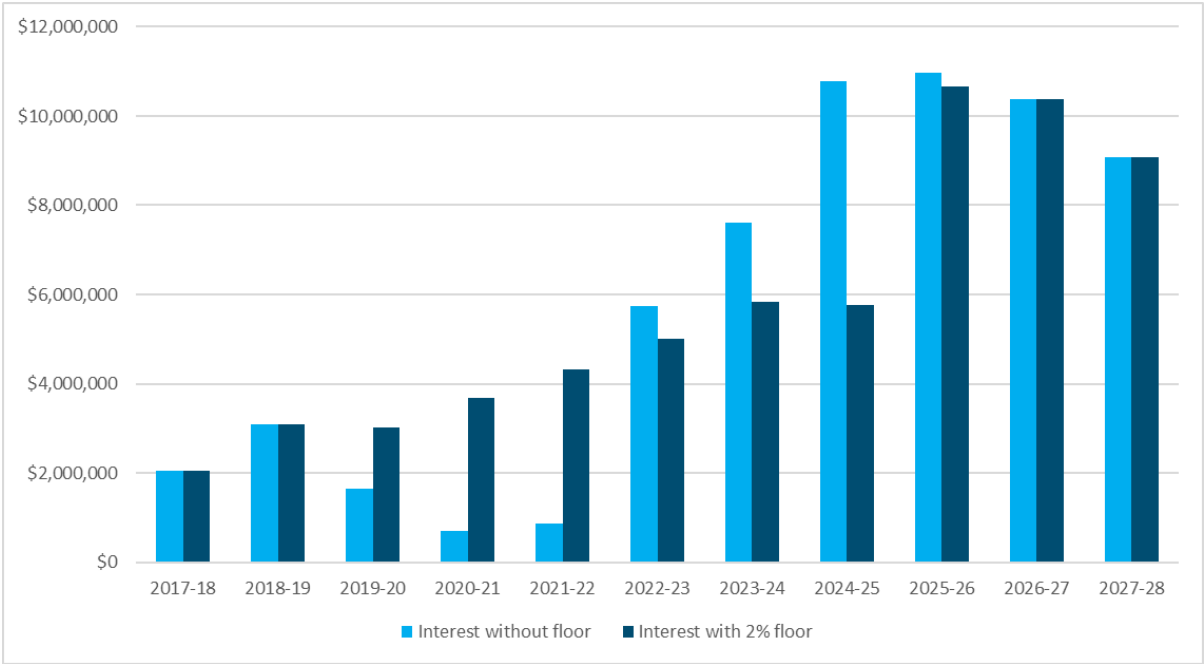
Table 17: Modelling a 2% floor for interest rates

Year	Actual / forecast	Opening balance	Interest rate	Interest without floor	Interest with 2% floor	Difference in interest received
2017–18	Actual	\$92,400,000	2.21%	\$2,038,000	\$2,038,000	\$0
2018–19	Actual	\$122,615,000	2.52%	\$3,094,000	\$3,094,000	\$0
2019–20	Actual	\$150,473,000	1.09%	\$1,644,000	\$3,009,000	+\$1,365,000
2020–21	Actual	\$185,235,000	0.37%	\$694,000	\$3,677,000	+\$2,983,000
2021–22	Actual	\$219,492,000	0.39%	\$859,000	\$4,330,000	+\$3,471,000
2022–23	Actual	\$253,818,000	2.26%	\$5,733,000	\$5,007,000	-\$726,000
2023–24	Forecast	\$291,188,000	2.61%	\$7,615,000	\$5,824,000	-\$1,791,000
2024–25	Forecast	\$288,630,000	3.73%	\$10,774,000	\$5,773,000	-\$5,001,000
2025–26	Forecast	\$273,356,000	4.01%	\$10,968,000	\$10,667,000	-\$301,000
2026–27	Forecast	\$259,271,000	4.01%	\$10,388,000	\$10,388,000	\$0
2027–28	Forecast	\$233,892,000	3.88%	\$9,074,000	\$9,074,000	\$0

Source: Marsden Jacob analysis.

To ensure that the funding for activities under section 8(2) stays at the 2% floor, the AMP would borrow from the principal during years when the interest rate drops below 2%. Once the interest rate goes above 2% (that is, in 2023–24), repayments would begin while still adhering to the 2% floor until all the borrowed amount is repaid.

Figure 8: Total estimated interest generated under the current system and with a 2% floor



Source: Marsden Jacob analysis.

The overall effect of the 2% floor rate, with funds borrowed from and then repaid to the principal of the MRF, is a smoothing of the income. The very low income over the COVID period would have been avoided, and then the funds borrowed would be expected to be repaid in the following years.

Based on the modelling, a total of \$7.8 million would have been drawn over the COVID period and would be expected to be almost entirely repaid over the following three years; a small remainder would be expected to be paid back in the fourth year.

Having a floor on the interest rates received would improve the planning and services delivered by the AMP over low-interest periods while maintaining the key tenet that the principal funds of the MRF are maintained for the rehabilitation of abandoned mines that have contributed to the fund.

Recommendation 10: Section 8 of the MRF Act should be amended to enable flexibility with drawing from the fund, for example to allow funds to be borrowed from the fund’s principal in times of low interest rates—subject to some constraints, such as limits on the duration of the loan and the total value that could be borrowed.

5.3.4 Future review of the Act

This statutory review of the legislation was triggered by section 38 of the MRF Act. Once this report is laid before each House of Parliament, the requirements set out in that section would be discharged, and no further review would be required.

Several stakeholders, from a range of sectors, commented that a further review (such as after another 10 years) would be desirable. The stakeholders noted that the periodic review of legislation is useful to ensure that the legislation remains effective and efficient.

The sentiment expressed by stakeholders aligns with the ‘Principles for Australian government policy makers’ set out in the *Australian Government guide to regulatory impact analysis* published by the federal government’s Office of Impact Assessment.²⁷ In that document, Principle 6 states:

All regulation should be periodically reviewed to test its continuing relevance.

While the minister could seek a review to be undertaken at any time, a legislative trigger ensures that the review is done and can encourage a wholesale review, rather than smaller reforms being implemented in a piecemeal manner.

As a further periodic review aligns with good regulatory practices and is supported by a wide range of stakeholders, we recommend that the MRF Act be amended to require a further review on the 20-year anniversary of the commencement of the legislation.

Recommendation 11: The MRF Act should be amended to require a further review on the 20-year anniversary of the commencement of the legislation.

5.3.5 Location for the AMP

A small number of stakeholders commented on the location and delivery model of the AMP.

The AMP is currently located in the Geological Survey of Western Australia. The two considerations raised for its location were:

- the AMP’s proximity to other experts in mining and mining rehabilitation
- the support available to the AMP in procuring and managing contracts for rehabilitation.

Stakeholders who raised this point noted that there are clear advantages of the current location, in that it sits within the WA Government’s centre of expertise for mining but is separated from the regulatory sections of DEMIRS.

In procurement, the AMP’s role includes overseeing and managing contracts for rehabilitation activities. Such contracts can be large in value, are bespoke and are delivered in remote locations. That role is nearly unique within government, and the procurement undertaken might not align well with other procurement undertaken by DEMIRS.

A small number of stakeholders felt there may be a disconnect between the procurement undertaken by AMP and procurement by other parts of DEMIRS which could result in the AMP’s procurement and contract management not being well supported. These stakeholders suggested that this could potentially result in delays or errors arising in the procurement and management of contracts.

²⁷ Department of the Prime Minister and Cabinet, [The Australian Government guide to regulatory impact analysis](#), Australian Government, 2020.

Given the bespoke and unique nature of mine rehabilitation, the most appropriate approach appears to be retaining the AMP within the Geological Survey of Western Australia and recognising that the AMP requires specialist support for its procurement and contract management.

5.3.6 The role of the Abandoned Mines Program and the Abandoned Mines Policy

During the consultations, a small number of stakeholders commented on the priorities and planning used to determine the activities undertaken by the AMP. One stakeholder group commented that there should be a review of the program's governance, project prioritisation and evaluation criteria, and another commented that there had been regular changes to AMP criteria and processes for selecting sites to be rehabilitated.

The Chamber of Minerals and Energy noted that the AMP is a key part of the MRF Act and has the potential to lead advances in rehabilitation processes/techniques. With regard to the AMP's effectiveness, some stakeholders:

- believe that the level of funding was not always the cause of stalled implementation
- perceive a lack of transparency and a heavy reliance on consultants, rather than using existing internal expertise.

Several stakeholders suggested that the program, including project prioritisation and operation, should be reviewed.

The 2016 Abandoned Mines Policy provides a 'framework for the prioritisation and subsequent rehabilitation and/or management of abandoned mine sites'.²⁸ The policy states that it 'will be reviewed every five years by the [now former] DMP, in consultation with the MRAP, industry and the community'. DEMIRS advised that the policy review has commenced and will be completed following the MRF Act review. That will allow feedback to the MRF Act review to be incorporated into the policy review where appropriate.

In 2021, Queensland released its Risk and Prioritisation Framework for Abandoned Mine Management and Remediation.²⁹ The 'Guiding principles' and 'Risk and Prioritisation Framework' are similar to those outlined in the WA Abandoned Mines Policy but have been expanded somewhat. There are also considerations that have been discussed by stakeholders in WA. They include the specific ability to assess 're-commercialisation and re-purposing potential'. The Queensland program can evaluate the mineral resource potential of the area but also the feasibility of non-mining opportunities.

²⁸ Department of Mines and Petroleum, '[Abandoned Mines Policy](#)', WA Government, January 2016.

²⁹ Department of Resources, '[Risk and Prioritisation Framework for Abandoned Mine Management and Remediation](#)', Queensland Government, March 2021.

The stated qualities for the Queensland Government’s program for assessing abandoned mines and reducing public-health and safety risks are:³⁰

- safe
- secure
- durable
- productive.

Given the discussions about definitions of ‘rehabilitation’ and ‘management’—as well as an increasing acknowledgement that communities and traditional owners should be involved in this process—the Abandoned Mines Policy should be revised and updated.

Revising the policy may result in limited change in the way that risks and potential benefits are reviewed within the AMP but would provide a high level of transparency to stakeholders.

This is captured in recommendation 14 – which is set out in section 5.4.2, below.

5.3.7 Review the role of the MRAP

Section 33 of the MRF Act establishes the Mining Rehabilitation Advisory Panel (MRAP) and sets out that the panel is to provide advice to the CEO on matters prescribed in the regulations. Part 3 of the Mining Rehabilitation Fund Regulations 2013 set out the MRAP’s function and makes provision for its membership and procedures.

The second reading speech for the Act stated that the panel:

*... will provide the CEO with advice on prescribed matters, and matters on which the CEO requests advice, arising under the Act. The panel’s constitution and procedure and related matters will be set out in the regulations.*³¹

DEMIRS’ relevant web page (which reflects the detail set out in the regulations) states that the MRAP is intended to meet ‘quarterly to discuss and provide independent expert advice to the Director General’.³² Summaries of the panel’s meetings are also available on the DEMIRS website.

Some peak bodies, and MRAP itself, suggested reviewing the role of the advisory panel to assess the function of the MRAP and its role in project approval and funding allocation.

One concern raised by the MRAP is that, as the size and complexity of the fund become greater, there is a higher associated risk to the MRF. The MRAP suggested that gaining advice or approval from the MRAP could be seen as a risk-management strategy as well as providing assurances to operators contributing to the fund.

³⁰ ‘[Abandoned mine management in Queensland](#)’, Queensland Government, 7 April 20212.

³¹ ‘[Mining Rehabilitation Fund Bill 2012: introduction and first reading](#)’, *Hansard*, Legislative Assembly, WA Parliament, 15 August 2012, pp. 5011–5012.

³² Department of Energy, Mines, Industry Regulation and Safety, ‘[MRF Advisory Panel](#)’, WA Government, no date.

Some other stakeholders suggested that the value of the MRAP had decreased over time and suggested either that the role of the MRAP should be revised and reinvigorated or that the MRAP could be disbanded.

While only a small number of stakeholders commented on the MRAP, they provided a diversity of views, and it is important that any revision of the role of the MRAP should be consulted upon before revising the relevant parts of the Mining Rehabilitation Fund Regulations 2013.

Recommendation: 12 The role of the MRAP should be reviewed. Any proposed changes to the relevant sections of the regulations should be consulted upon broadly with industry.

5.3.8 Assessments within a two-year period

Section 18 of the MRF Act provides for the reassessment of a levy if it is believed that there is an error in the reported data. Under section 19, the reassessment cannot be made more than two years after the original assessment was made. The result of this is that, if the reassessment is not completed within that time, the reassessment cannot be completed, and the disputed levy cannot be charged (or refunded).

The two-year limit restrains DEMIRS' ability to enforce an adjustment of the information when an error is identified.

It is suggested that the Act be modified to allow the work to be started within the two-year period—but that it can be finished outside that period. To avoid investigations being left open for an indefinite period, a time limit is required. However, the appropriate time limit should be determined following consultation with both the industry and DEMIRS.

The proposed change appears reasonable, but only one view has been put forward and no alternative reforms have been considered. For that reason, our recommendation is limited to undertaking further consultation on this proposal.

It is recommended that the amendment be included in a suite of possible reforms, which would be consulted upon broadly.

Recommendation 13: The proposed extension of the two-year limit set out in section 19 of the MRF Act should be included in a suite of possible reforms, which should be consulted upon broadly.

5.4 On changes to provide improved clarity

As the legislation has been in place for 10 years, a specific question asked by the review team was whether there are elements of the legislation in which additional detail would be beneficial to provide clarity. A small number of possible changes were identified and are discussed below.

5.4.1 Clarify the definition of ‘rehabilitation’

The MRF Act and associated regulations do not define ‘rehabilitation’, and DEMIRS commented that the Act and regulations use the term in different ways. The Abandoned Mines Policy (2016) seeks to prioritise projects that are ‘safe, stable and non-polluting’.

Stakeholders stated that the lack of a clear definition results in confusion about what is meant by the term. Defining ‘rehabilitation’ within the legislation may lead to increased consistency of reporting within the MRF system.

Rehabilitation may mean different things in different locations—it does not have to mean (as may be assumed) a return to how the land looked or was used prior to any disturbance. There may be genuine reasons that a community or traditional owners would like the land rehabilitated to a level that ensures that it can be used for other interests or economic purposes.

Traditional views of rehabilitation, including the return of native vegetation, might not be appropriate for all sites. It has been suggested that a definition of rehabilitation could be broadened to align with the overall objectives of the MRF and therefore include management and works occurring on high-risk sites that have been or may be abandoned.

One mining operator commented that DEMIRS is the custodian of information on best practice in monitoring and metrics associated with rehabilitation—as it is provided with approved mine closure plans. The stakeholder suggested that the use of funds from the MRF principal to develop rehabilitation and closure guidance/standards would improve the clarity about the steps to closing a mining area to the satisfaction of the department.

DEMIRS commented that closure obligations are tied to the agreed end use at a point in time, so ‘rehabilitation’ might not be complete physical rehabilitation but instead making the site safe, stable and non-polluting or converting it to an alternative use, such as farming. A separate, but related, point is the definition of ‘rehabilitation works’ (undertaken by the AMP), which are defined in section 10 of the MRF Act. This is discussed in Section 5.4.3 below.

5.4.2 Rehabilitation standard for work undertaken by the AMP

Multiple stakeholder groups commented that the rehabilitation standard for work undertaken by the AMP is not clearly defined.

Some industry members commented that the WA Government should use MRF funds to demonstrate best practice both for the rehabilitation carried out on abandoned mine sites and in publishing up-to-date guidance on best practice. Other stakeholders commented that spending funds beyond ensuring that a site is safe, stable and non-polluting would be inefficient, given the other current and potential uses of the funds.

Stakeholders acknowledged that the minimum criteria (safe, stable and non-polluting) should be expanded to include input from traditional owners.

In order to provide clarity to all stakeholders and avoid accusations by those who contribute to the MRF of either overworking rehabilitation or underachieving, there would be value in clearly defining

the standard that the AMP seeks to return sites to. That may be best set out in a guidance document that is regularly reviewed and updated, for example every five years.

Recommendation 14: DEMIRS should define the standard that the AMP seeks to return sites to. That definition should be set out in a guidance document that is periodically reviewed and updated, for example every five years.

5.4.3 Clarity in the Act on the AMP's powers

The lack of a definition of 'rehabilitation' in the Act also affects the work carried out by the AMP and therefore does not articulate what tasks or activities can and should be funded from the MRF. That can limit the options available to make an abandoned site safer because the preferred activity (for example, fencing and signage) is excluded from the definition of rehabilitation.

Stakeholders raised concerns that section 10 of the MRF Act, which gives the AMP the ability to gain site access and restrict access by others, can limit rehabilitation efforts. Stakeholders suggested modifying section 10 to decouple the 'power to enter' from the requirement that the rehabilitation work carried out be funded by the MRF. The link to the MRF prevents rehabilitation being undertaken using alternative funding sources, such as those available through unconditional performance bonds / mining securities. Additionally, removing the definition of 'rehabilitation work' from the section, but maintaining the power to enter, would enable the AMP to carry out the MRF's objectives.

Site access by other parties was also discussed, as the AMP does not currently have the ability to restrict access to abandoned mine sites—which may be useful in some instances.

The AMP raised concerns that the abandonment of a mine results in a loss of site data and that reports that can aid rehabilitation are lost. Mine closure plans submitted to DEMIRS do not contain all the data, reports and studies required to inform rehabilitation treatment options. The studies are generally undertaken by expert consultants who still hold copies of those reports. The AMP suggested expanding section 29 of the MRF Act to allow the request of information and records from third parties, which could support RLE calculation, could inform the rehabilitation of an abandoned mine site, and may help avoid the cost of duplicating work.

Because of the nature of this review, Marsden Jacob has not been able to test the changes to the Act and regulations suggested by DEMIRS. Therefore, while we consider that those changes would support the AMP to carry out its role more efficiently, they would certainly need to be put to industry for discussion.

We recommend that the proposed reforms set out in this section (5.4) should be consulted upon.

Recommendation 15: DEMIRS has identified a range of reforms that seek to clarify the AMP's powers. They include clarifying and broadening the definition of 'rehabilitation works', restricting entry, and obtaining data and reports for abandoned mines. Those reforms should be clearly defined and consulted upon with industry, with a view to implementing legislative reforms.

5.5 On changes to increase the efficiency of the MRF

Through the consultation, we asked questions about strategies to improve the efficiency of the MRF and the delivery of the AMP.

The key focus of industry was on improving the efficiency of the MRF by reducing the costs imposed on industry. Beyond financial contributions (discussed in Section 5.3), the reporting burden is the largest cost imposed on industry. The reporting burden is particularly important for smaller mining operations, which might not be contributing financially to the MRF.

Two key points were raised by industry members on changes to DEMIRS reporting systems that would reduce reporting costs.

The first suggestion is to introduce 'No change' as an option for mines that have been on care and maintenance. This would populate the system with the previous year's data.

The second suggestion is to improve linkages between the annual environmental reporting (AER) that occurs under the Mining Act and reporting occurring under the MRF Act.

This would need to be considered in any review of the calculation of RLEs—which is considered and recommended in Section 5.3.1.

Recommendation 16: DEMIRS should consider the process and system changes proposed to ease the reporting burden and consider whether system and process changes would be beneficial.

6. Conclusions

6.1 Overview

The general view from most parties is that the MRF Act and regulations remain a relevant and well-targeted legislative approach to minimising the imposition of the costs of abandoned mines on the Western Australian public.

Stakeholders broadly agreed that the legislation is either effective or appears to be effective at this stage, noting that 10 years of operation is a relatively short period compared with the lifespan of many mining operations, and in the history of mining in WA.

On that basis, Marsden Jacob has concluded that the MRF Act and supporting elements do not require wholesale reform, but would benefit from a range of incremental improvements that seek to:

- minimise the risk of new abandoned mines
- increase the effectiveness of the MRF
- provide improved clarity
- increase the efficiency of the MRF.

6.2 Specific questions raised in the terms of reference

As set out in Section 1.3, the terms of reference for this review are to:

1. consider the purpose(s) for which the Mining Rehabilitation Fund was established
2. determine whether, since its commencement, the Act and its supporting legislation has operated effectively in support of that purpose (or those purposes)
3. identify what changes may be required to the Act and its supporting legislation in order to achieve its stated purpose(s) more effectively, including but not limited to:
 - a) the appropriateness of the existing rehabilitation liability categories and unit rates and the extent to which they recognise the relative rehabilitation cost of mining activities
 - b) mechanisms for providing greater incentive to rehabilitate disturbed land
 - c) mechanisms for ensuring that sufficient funding remains available for the purposes set out in section 8(2) of the Act, particularly when investment income is constrained by adverse economic conditions
 - d) examine the issue of the optimal size of the Mining Rehabilitation Fund, including undertaking any required economic modelling for this purpose.

6.2.1 Points addressed in the body of the report

Points 1 and 2 of the terms of reference are addressed in Section 5.1.

Within Point 3 of the terms of reference:

- a general discussion on improving the effectiveness of the Act is set out in sections 5.3 and 5.4 of this report
- Point 3a (rehabilitation liability categories) is discussed in Section 5.3.1
- Point 3b (incentives to rehabilitate disturbed land) is discussed in Section 5.2
- Point 3c (funding remains available for the purposes set out in section 8(2) of the Act) is discussed in Section 5.3.3
- Point 3d (optimal size of the MRF) has not been specifically discussed previously and instead is set out below.

6.2.2 Optimal size of the MRF

There was limited input from stakeholders on the optimal size of the fund. One peak body suggested that a cap of \$2.5 billion may be appropriate on the basis that that is the upper estimate of the cost to rehabilitate the Ranger Mine in the NT.

A range of stakeholders noted that, while the fund had a value of around \$300 million, that value could be overwhelmed if one or more large mines in remote areas became abandoned at the same time.

Based on our analysis, we recommend that DEMIRS consider the following factors if attempting to determine an optimal value of the fund:

- minimising the cost impact on mines so as not to unreasonably burden mine operations
- maintaining sufficient value in the fund to allow the remediation of abandoned mines that have contributed to the fund (activities under section 8(1) of the Act).
- generating sufficient interest to fund research as well as the remediation of legacy abandoned mines.

Modelling based on current contributions (assuming current mining activity levels and RLE contributions) and current expenditure indicates that the fund will continue to grow steadily. At the end of the 2033–34 financial year, the fund's value would be around \$620 million.

This modelling suggests that it will be several years before an upper limit for the fund would need to be considered. As this report has recommended that the MRF Act be amended to include another review in 10 years, the issue of an upper value can be considered again at that time.

6.3 Recommendations

The recommendations arising from this report are set out in the Executive summary and recommendations ahead of the body of the report.

Appendix 1. Other jurisdictions

A1.1. Northern Territory

The NT has a process for the rehabilitation of legacy mines similar to WA's—the Mining Remediation Fund. However, there are also a number of key differences between the NT and WA processes, and the recent review of NT legislation has resulted in significant changes to its process.

Mining security

In the NT, all mining operators must pay a 'security' to obtain a mining authorisation. Previously, the authorisation was granted under the *Mining Management Act 2001*. However, under the new regulatory framework (the *Environmental Protection Legislation Amendment Act 2023*), the Environment Minister sets the security amount payable, and the Minister for Mining and Industry retains responsibility for the receipt and administration of the security.

The purpose of the security is to:

- ensure that an operator complies with the Act, the mining licence and any applicable mining approval
- provide funds to prevent, minimise or remediate environmental harm resulting from any phase of the mining activity to which the environmental (mining) licence and any environmental approval applies
- pay for the costs and associated expenses to complete the remediation and rehabilitation or closure of the mining site
- pay the costs of post-closure monitoring, management and reporting.

The amount set is an attempt to reflect the potential cost of rehabilitating a mine site and is currently based on the amount of disturbance likely to be caused by the authorised mining activities.

As of October 2023, the NT had:

- 185 authorised exploration projects
- 113 authorised extractive mining projects
- 62 authorised mining projects.³³

As of 1 October 2023, the NT held \$1,744,223,366.78 in mining securities (Table 18).³⁴ Of the \$1.74 billion in bonds, \$1.66 billion is held against open-pit mines, of which just under \$1 billion is the bond against RTA Gove Pty Limited's Gove Operations (a bauxite mine on the Gove Peninsula).

³³ ['Authorised mining sites'](#), NT Government, no date.

³⁴ ['Securities held for mining sites'](#), NT Government, no date.

Table 18: Mining security held by the NT Government

Activity	Total amount (A\$ m)	Site numbers	Maximum site bond (\$A)	Minimum site bond (\$A)
Open-pit mine	1,662.434	34	974,231,600	5,000
Underground mine	47.975	3	40,633,648	53,250
Exploration	22.436	178	6,189,683	800
Open-pit / underground mine	3.847	2	3,840,080	6,908
Extractive	3.701	97	596,629	1,000
Quarry	2.344	16	444,810	14,113
Processing/treatment only	0.867	7	257,927	4,346
Alluvial mine	0.436	8	254,631	3,600
Rehabilitation or mothballed	0.155	1	154,648	154,648
Prospector	0.028	9	11,000	400
	1,744.22	355		

Source: Marsden Jacob analysis of NT data.

Under section 132F of the *Environmental Protection Legislation Amendment Act 2023*, the unused mining security is refundable if either:

- a mining closure certificate is issued for the mining site or the part of the mining site to which the mining security applies
- the remediation, rehabilitation and closure requirements of the environmental (mining) licence for the site or the part of the site for which the refund is requested have been completed to the minister's satisfaction.

Legacy mines

The NT's stand-alone *Legacy Mines Remediation Act 2023* was assented to on 6 December 2023, replacing the provisions for the Mining Remediation Fund in the *Mining Management Act 2001*.

The *Legacy Mines Remediation Act 2023* is an 'Act to provide for the Mining Remediation Fund, payment of the mining remediation levy, the remediation of legacy mine sites and legacy mine features and for related purposes'.

The Act defines a legacy mine site as an area of land:

- (a) on which mining activities have been carried out but no mining security is held under Part 7, Division 1A of the *Environment Protection Act 2019* in relation to those activities; and
- (b) in respect of which there is no current:
 - i. extractive mineral lease; or
 - ii. extractive mineral permit; or
 - iii. mineral authority; or
 - iv. mineral lease; or
 - v. non-compliant existing interest.

Mine operators pay an annual, non-refundable levy of 1% of their security (at 1 July) into the Mining Remediation Fund. This funds the remediation of legacy mines as well as the Legacy Mines Unit within the Department of Industry, Tourism and Trade.

The amount in the Mining Rehabilitation Fund at the end of the 2022–23 financial year was \$74.814 million.³⁵

Unlike arrangements for abandoned mines in WA, and the AMP within DEMIRS, which relies on the interest generated from WA's MRF, the amount in the NT MRF is available to the Legacy Mines Unit for the administration of the group and rehabilitation works on legacy mines.

Improvements to legislation from the review

One change from the previous legislation under which the fund operated is that interest is now payable to the fund.

The 'purpose of the fund' has been expanded to remove confusion about the term 'unsecured mining leases'. The purpose, as drafted, now reads:

8. Purpose of Fund

- (1) The purpose of the Fund is to hold money in trust to be used by the Agency in connection with:
 - (a) minimising or remediating environmental harm caused by mining activities carried out on legacy mine sites or by legacy mine features; and
 - (b) conducting investigations and research related to environmental harm caused by mining activities carried out on legacy mine sites or by legacy mine features.
- (2) To avoid doubt, money held in the Fund must not be used to carry out a remediation activity in relation to:
 - (a) environmental harm caused by a mining activity for which mining security is held; or
 - (b) environmental harm caused by a legacy mine feature on a mining site if the mining operator for the site caused or contributed to the harm.

³⁵ Department of Industry, Trade and Tourism, [Annual report 2022–23](#), NT Government, 2023, p. 95.

The legislation is seen to have tightened the definition of ‘rehabilitation’ by explaining the usage of the fund, as follows:

9 Payments from Fund

- (1) This section does not limit the purposes for which money in the Fund may be used under section 8(1).
- (2) Payments may be made from the Fund for costs and expenses incurred in relation to any of the following activities (each a remediation activity):
 - (a) investigating the condition of a legacy mine site or legacy mine feature or anything on, in or near a legacy mine site or legacy mine feature;
 - (b) assessing any risk of environmental harm related to a legacy mine site or a legacy mine feature;
 - (c) decommissioning, removing, destroying, modifying or making safe any legacy mine feature;
 - (d) monitoring, mitigating, managing, removing, treating or cleaning up any waste or other materials, including water, on a legacy mine site or land affected by mining activities carried out on a legacy mine site or by a legacy mine feature;
 - (e) maintaining, managing, repairing, improving or monitoring the condition of land affected by mining activities carried out on a legacy mine site or by a legacy mine feature, including the following:
 - (i) physically stabilising terrain;
 - (ii) revegetating the land;
 - (iii) restoring ecosystem functions on the land;
 - (f) mitigating, managing, removing or monitoring any risks to public health or safety or to the environment caused by mining activities carried out on a legacy mine site or by a legacy mine feature.
- (3) Payments may be made from the Fund for costs and expenses incurred in relation to any of the following:
 - (a) conducting research or scientific studies in relation to environmental harm, or the remediation of environmental harm, caused by mining activities carried out on a legacy mine site or by a legacy mine feature;
 - (b) providing incentives to parties to facilitate the carrying out of remediation activities in relation to legacy mine sites and legacy mine features;
 - (c) legal and audit services required to manage legacy mine sites or legacy mine features.

A1.2. Queensland

The Queensland rehabilitation fund mechanism was introduced in 2019 under the *Mineral and Energy Resources (Financial Provisioning) Act 2018* and utilises both financial assurances and a levy.³⁶

The process is overseen by the Scheme Manager (an independent statutory position employed by the Queensland Government), whose role is to oversee the financial assurances and the risk factors

³⁶ Department of Environment, Science and Innovation, ‘[Mining rehabilitation reforms](#)’, Queensland Government, 1 October 2022.

allocated to mining operations. A key difference from the WA scheme is that it applies to all resource activities (mining and petroleum tenures).

Progressive rehabilitation and closure plans

All mines operating under an environmental approval, as well as holders of small-scale mining tenure permits, are required to apply for an estimated rehabilitation cost. If the application is accepted, the Scheme Manager determines the financial assurance payable.³⁷

Through the application process, all mines are required to develop and maintain progressive rehabilitation and closure plans (PRCPs). The plans set out the mine operational plan and cover a period of up to five years.

The PRCP is then the basis for calculating financial assurances (provided as a bank guarantee) and the allocated risk.³⁸

The risk is assessed based on a ‘financial soundness assessment’ and a ‘resource project characteristics assessment’. The resource project characteristics assessment is weighted by:³⁹

- project strength (remaining economic life and off-take agreements): 80%
- progressive rehabilitation: 15%
- compliance: 5%.

The annual levy payable is based on the risk allocated by the Scheme Manager (very low risk, 0.5%; low risk, 1%; medium risk, 2.75% of the rehabilitation estimate).

When mines update their PRCPs, they are also required to update the estimated rehabilitation cost (ERC). The ERC is calculated using an Excel spreadsheet, although mines may upload third-party cost estimates if they choose.

Industry experts commented that the data collected through the ERCs would be significantly more detailed and accurate than the WA data—but would also be more onerous for resource companies to report.

The Queensland model also requires small mining tenures with ERCs of less than \$100,000 to pay a surety equal to the ERC amount, as well as the annual levy. Marsden Jacob has modelled what this approach would look like in WA if those tenements with RLEs of \$50,000 or less were required to pay a similar surety (based on the 2022–23 tenement information from the MRF dataset). This is shown in Table 19.

³⁷ Business Queensland, ‘[Financial assurance for resource activities](#)’, Queensland Government, 11 January 2024.

³⁸ Business Queensland, ‘[Progressive rehabilitation and closure plan for mined land](#)’, Queensland Government, 11 January 2024.

³⁹ Queensland Treasury, ‘[Financial Provisioning Scheme](#)’, Queensland Government, no date.

Table 19: Hypothetical surety for small mining tenures

Estimated RLE	Number of tenements	Total surety collected	Average per tenement
\$0	5,532	0	0
\$1 – \$10,000	3,715	\$9,838,444	\$2,648
\$10,001 – \$20,000	795	\$11,696,926	\$14,713
\$20,001 – \$30,000	442	\$10,886,341	\$24,630
\$30,001 – \$40,000	344	\$11,949,974	\$34,738
\$40,001 – \$50,000	236	\$10,682,792	\$45,266

Note: Considered up to \$50,000, as that is current threshold.

Source: Marsden Jacob analysis of MRF data for 2022–23.

A1.3. South Australia

SA has legislation and a process for the rehabilitation of abandoned mines similar to WA’s. Although the overarching purpose and intent of the legislation and processes in SA and WA are similar, there are several differences in the way they operate and are applied.

Similarly to the *WA Mining Act 1978*, the *SA Mining Act 1971* provides a framework for environmental protection and financial assurance to safeguard the environment and the state. Unlike WA, SA does not have a stand-alone Act for rehabilitation funds. Instead, the *Mining Act 1971* provides for the state’s financial assurance mechanisms, which are:

- the Extractive Areas Rehabilitation Fund (EARF), which is funded through extractive minerals royalties to the state
- bonds paid by non-extractive miners and extractive mining operators and exploration programs on a case-by-case basis
- the Mining Rehabilitation Fund, which is funded through penalties and expiation fees for offences against the Act.

Regulatory framework

South Australia’s regulatory framework for mineral exploration and mining comprises:

- the *Mining Act 1971*
- the Mining Regulations 2020
- the *Mines and Works Inspection Act 1920*
- the Mines and Works Inspection Regulations 2013
- the *Opal Mining Act 1995*
- the Opal Mining Regulations 2012.

The Acts and Regulations are administered by the Minister for Energy and Mining, the Director of Mines and authorised officers and delegates in the Department for Energy and Mining.

Mining Act 1971

The *Mining Act 1971* is an Act to regulate and control mining operations and for other purposes. Under section 7, the Act is applicable only to mineral land, unless otherwise provided for.

Section 6 of the Act classifies mineral exploration and mining into two distinct segments: extractive and non-extractive. This is a key difference between the SA and WA Acts. This distinction influences the calculation of royalties and an operator's rehabilitation responsibilities, and determines an operator's contributions and access to the EARF.⁴⁰

Section 6(1) defines:

- extractive minerals as sand, gravel, stone, shell, shale or clay, but does not include minerals mined for a prescribed purpose; fire clay, bentonite or kaolin; or proppant sand
- minerals as any naturally occurring deposit of metal or metalliferous ore, precious stones or any other minerals, including those defined as extractive minerals; metal, metalliferous substance or mineral recoverable from the sea or a natural water supply; and metal, metalliferous ore or mineral that has been dumped or discarded during mining operations or operations incidental to mining operations, or in other prescribed circumstances.

Part 1 of the Mining Regulations 2020 identifies the following as the 'prescribed purposes' that exclude certain minerals from being defined as extractive minerals under section 6(1):

- (a) chemical, cement, lime and glass manufacture
- (b) metallurgical flux, refractories and industrial fillers
- (c) foundries, fertiliser, agricultural, jewellery and crafted ornamental uses
- (d) the production of dimension stone.

The Mining Act does not regulate:

- petroleum or any other substance, the recovery or production of which is governed by the *Petroleum and Geothermal Energy Act 2000* (section 6(e))
- operations for the recovery of precious stones if those operations are carried out under the authority of a permit or tenement issued under the *Opal Mining Act 1995* (section 7(3)).

Mine rehabilitation and closure

The *Mining Act 1971* provides a framework for environmental protection and financial assurance to safeguard the environment and the state (Figure 9). Under the Act:

- mining tenement holders are responsible for rehabilitating the land disturbed by an authorised

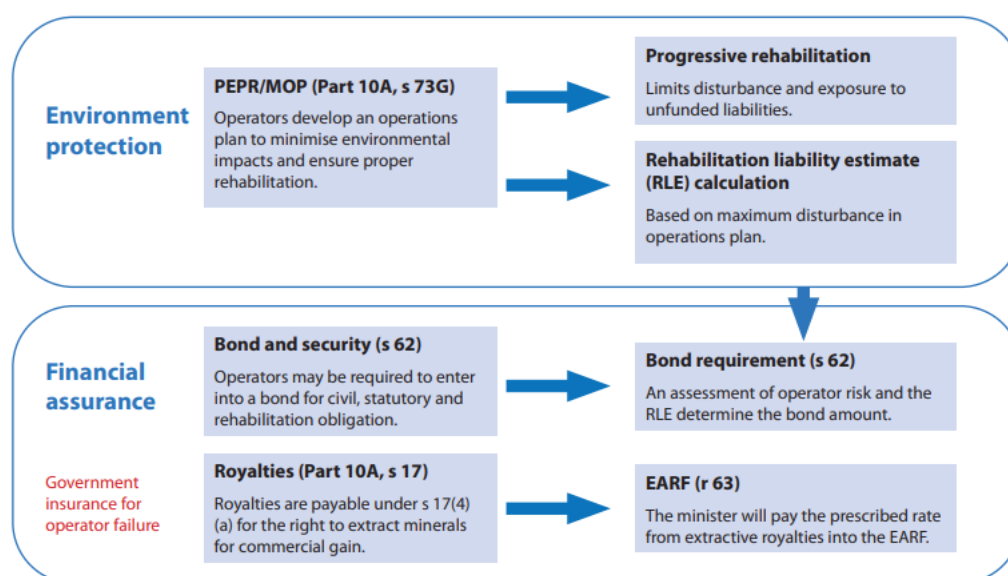
⁴⁰ Department of Energy and Mining, '[Mineral royalties](#)', SA Government, no date.

operation (Part 10A)

- the Department for Energy and Mining is responsible for ensuring that financial liabilities from non-rehabilitated mining activities do not become the state's responsibility.

The above allocation of responsibilities to operators and the state is similar to WA's.

Figure 9: South Australia's environmental protection and assurance framework



Source: Department for Energy and Mining, 'Extractive Areas Rehabilitation Fund', SA Government, August 2021.

Environmental protection mechanisms of the framework

Programs for environmental protection and rehabilitation, and mine operations plans

The *Mining Act 1971* requires:

- mining leases, extractive minerals leases and miscellaneous purposes licences to be operated in accordance with an approved program for environmental protection and rehabilitation (PEPR) (Part 10A)
- operations at a private mine are to be in accordance with an approved mine operations plan (MOP) (section 73G).

Mining operation approval happens in two stages:⁴¹

- Stage 1: A mining lease application, which must be accompanied by a mining proposal (section 36 of the *Mining Act, 1971*). Applications are assessed by the Department for Energy and Mining.
- Stage 2: Development of a PEPR (section 70B) or MOP (section 73G), which must be assessed and approved before mining can begin.

PEPRs and MOPs must demonstrate how the tenement or mining lease holder will:

⁴¹ Department for Energy and Mining, 'Extractive Areas Rehabilitation Fund (EARF)', SA Government, August 2021.

- operate the mine according to the requirements and conditions of their lease
- undertake progressive rehabilitation and closure operations during the life of the mine to achieve appropriate mine completion outcomes.

Financial assurance mechanisms of the framework

The *Mining Act 1971* requires extractive mineral tenement holders, whether extractive minerals leaseholders or private mines, to meet their legal obligations for rehabilitating disturbed land. The Act includes financial assurance mechanisms to protect the state from taking on post-mining rehabilitation liabilities where a tenement holder fails to meet their legal obligations, including for mine closure and completion.

Financial assurance mechanisms include a bond (section 62) and the EARF (section 63).

The purpose of, obligations under, and mechanisms available through the SA framework are similar to WA's.

Extractive Areas Rehabilitation Fund

SA and WA finance their rehabilitation schemes differently. SA's EARF is a royalty-financed scheme that protects the state against extractives operators who cannot meet their rehabilitation obligations due to insolvency, administration, liquidation or bankruptcy.⁴²

EARF income is assigned from the royalties received or recovered from extractive minerals. Under section 17(4)(a) and regulation 9 of the Mining Regulations 2020, operators are required to pay royalties to the state government for the right to extract minerals for commercial gain.

Section 63(1) requires the responsible minister to pay a prescribed rate of royalties received or recovered into the EARF. Section 63(5) sets the prescribed rate as 25 cents per ton of extractive minerals, or a lesser amount as may be prescribed by regulation 61.

SA and WA have similar approaches to applying and determining the need for bonds. In SA, the extractive industry is not generally required to provide a bond. However, section 62 of the Act enables the minister to determine the need for a bond on a case-by-case basis. A bond may be set if it is determined that the site rehabilitation liability poses a disproportionate risk to the state.

Section 63(3) provides that EARF funding may be used to meet the cost of:

- a) rehabilitation of land disturbed by authorised operations for recovering extractive minerals, or any costs associated with ensuring that land is rehabilitated in accordance with the requirements of the Act
- b) implementing measures designed to prevent or limit damage to, or impairment of, any aspect of the environment by authorised operations to recover extractive minerals, or any costs associated with ensuring that these measures are implemented or monitored

⁴² Department of Energy and Mining, '[Mineral policy 003: Extractive Areas Rehabilitation Fund](#)', SA Government, August 2021.

- c) promotion of research into methods of mining engineering and practice to reduce environmental damage or impairment resulting from authorised operations for extractive minerals recovery.

EARF funds can be used for extractive mineral operations rehabilitation works only if:

- a tenement holder or private mine operator does not have the financial capacity to meet their rehabilitation obligations
- all other enforcement measures have been exhausted.⁴³

EARF funding may be paid to:

- owners of land that was disturbed by the mining of extractive minerals where the tenement holder has not met their rehabilitation obligations
- holders of a mining lease for the recovery of extractive minerals who do not have the financial capacity to meet their rehabilitation obligations
- proprietors or operators of private mines from which extractive minerals are recovered who do not have the financial capacity to meet their rehabilitation obligations
- suitably qualified experts, academics or students who want to research mining engineering and practice relating to environmental impact reduction for operations involving the recovery of extractive minerals.

EARF funds may be used for the following eligible rehabilitation project costs:

- the costs associated with the actual undertaking of the work, as approved
- contingencies for unexpected events that are substantiated and verified for up to 10% of the value of the project
- maintenance costs for 12 months from the date of completion of a project that are included in the project plan and approved along with the project
- project supervision costs for approved projects.

The reported mineral production royalties for 2022–23 were \$287 million,⁴⁴ which was an increase of \$47 million from 2021–22. The closing balance of the EARF at 30 June 2023 was \$35,284,305.⁴⁵

Non-extractive operations—bonds

Under section 62 of the *Mining Act 1971*, a mineral tenement holder may be required to enter into a bond for civil/statutory liability or rehabilitation. There is no EARF equivalent for non-extractive operations; therefore, bonds protect the state from assuming the risk of post-exploration and mining

⁴³ Enforcement measures are outlined in Department of Energy and Mining, '[Mineral policy 004: Mining Act regulation, compliance and enforcement](#)', SA Government, November 2021.

⁴⁴ Department of Energy and Mining, '[Resource royalties](#)', SA Government, no date.

⁴⁵ Department of Energy and Mining, '[Mine rehabilitation and closure](#)', SA Government, no date.

rehabilitation liabilities. This is a key difference between the SA and WA approaches to mine rehabilitation.⁴⁶

A decision to apply a bond to an exploration program is made based on the project’s risk. Risk criteria include, but are not limited to, the sensitivity of the local environment, the scale and intensity of the project, the level of environmental impact, and the previous performance of the operator.

The lodgement of a bond does not negate the need for the tenement holder to meet their legal obligations relating to the rehabilitation of disturbed land.

The Department of Energy and Mining uses its ‘rehabilitation liability estimation calculator’ to determine an operation’s RLE. The estimates inform the bond amount, terms, conditions and type of financial security required.

SA’s use of an RLE is similar to WA’s; however, unlike WA, SA does not apply an RLE threshold.

In SA, the bond is equal to 100% of the maximum rehabilitation liability of approved PEPR activities. Liability estimates are based on reasonable third-party costs of undertaking the rehabilitation and include costs for project management, inflation, normal project variations, and contingency provisions for risk associated with the strategies and uncertainty in the cost estimates.⁴⁷

In accordance with section 62 of the Act, the required bond must be lodged before authorised operations can commence. Bonds for mineral exploration may be paid within 30 days of operations commencing if approved by the department and will be assessed on a case-by-case basis.

Acceptable forms of a financial assurance bond are:

- cash
- an irrevocable unconditional bank guarantee with no end date
- an irrevocable unconditional insurance bond with no end date.

Tenement holders may apply for the return of the bond once all approved PEPR closure and completion outcomes have been achieved and demonstrated. The SA Government may use any portion of the financial assurance to meet the outstanding tenement holder obligations.

Table 20: Summary of bond types and amounts held by the Department for Energy and Mining for mineral tenements, 30 June 2023 (\$ million)

Bond type	Exploration	Mining	Total
Bank guarantee	2.1	301.6	303.7
Currency	2.4	13.2	15.6
Other—deed poll	0	9.2	9.2
Total	4.5	324	328.5

⁴⁶ Department of Energy and Mining, ‘[Mineral policy 008: Bonds](#)’, SA Government, August 2023.

⁴⁷ Department of Energy and Mining, ‘[Mine rehabilitation and closure](#)’, SA Government, 2023.

Mining Rehabilitation Fund

SA's Mining Rehabilitation Fund is different from WA's with regard to its establishment, funding and purpose.⁴⁸

Section 62A of the *Mining Act 1971* establishes the MRF. As per section 89B, the MRF is funded through administrative penalties and expiation fees and penalties for offences against the Act and the Mining Regulations 2020.

Section 91 enables the Department of Energy and Mining to impose administrative penalties of up to \$15,000 for defined offences. Penalty amounts are fixed under Schedule 3 of the Mining Regulations.

Section 92(1)(r) of the Act, and Mining Regulation 90, enable the department to fix an expiation fee not exceeding \$7,500.⁴⁹

Under section 62AA (10), the responsible minister may use money from the MRF for all or any of the following purposes:

- a) to fund monitoring and maintenance of any land in relation to which a requirement under this section has been imposed
- b) to fund programs, including the collection or provision of information and carrying out of work, relating to the rehabilitation of any land in relation to which a requirement under this section has been imposed
- c) to achieve any other environmental outcomes that are related to the ceasing of authorised operations
- d) to fund other programs, or to achieve other outcomes, prescribed by the regulations
- e) to provide for the costs of administering the fund.

Former mines

Former mines are those where an authorised operation for the recovery of extractive minerals or private mine no longer exists, and responsibility for rehabilitation cannot be allocated to any individual, company or organisation responsible for the original mining operations.

The SA Government Mine Completion Group within the Mineral Resources Division has a comprehensive program that manages several former mine sites and addresses issues of environmental and public safety.

EARF funding may be available to landowners, who were not the holders of extractive minerals leases or extractive private mines, if all reasonable efforts to have the former leaseholder, mine proprietor or operator do the work are exhausted.

⁴⁸ Department of Energy and Mining, '[Mineral policy 004: Mining Act regulation, compliance and enforcement](#)', SA Government, 11 November 2021.

⁴⁹ Relevant offences and fee amounts are outlined in Department of Energy and Mining, '[Expiation of offences](#)', SA Government, January 2021.

A1.4. Other reviews

Body	Subject	Timing
Australian Parliament Senate inquiry	<u>Rehabilitation of mining and resources projects as it relates to Commonwealth responsibilities</u>	2017–2018
	<u>Proposed amendments to the Mining Rehabilitation Fund Regulations 2013 for the administration of minerals in brine operations</u>	

Appendix 2. Consultation slides and questions

MARSDEN JACOB ASSOCIATES

economics
public policy
markets
strategy

Statutory Review of the Mining Rehabilitation Fund Act

Consultation with stakeholder groups

A Marsden Jacob Consultation



Background

The Mining Rehabilitation Fund Act 2012 commenced in November 2012

The Act allowed for:

- the establishment of the Mining Rehabilitation Fund;
- the declaration of abandoned mine sites; and
- a levy payable in respect of mining authorisations, and for related purposes.

Section 38 of the MRF Act requires that after 10 years, the Minister review of the operation and effectiveness of the Act & prepare a report for Parliament

Terms of Reference for the review

The review is to:

1. consider the purpose(s) for which the Mining Rehabilitation Fund was established;
2. determine whether, since its commencement, the Act and its supporting legislation has operated effectively in support of that purpose (or those purposes);
3. identify what changes may be required to the Act and its supporting legislation in order to achieve its stated purpose(s) more effectively, including but not limited to:
 - a) the appropriateness of the existing rehabilitation liability categories and unit rates and the extent to which they recognise the relative rehabilitation cost of mining activities
 - b) mechanisms for providing greater incentive to rehabilitate disturbed land;
 - c) mechanisms for ensuring that sufficient funding remains available for the purposes set out in section 8(2) of the Act, particularly when investment income is constrained by adverse economic conditions;
 - d) examine the issue of the optimal size of the Mining Rehabilitation Fund, including undertaking any required economic modelling for this purpose.

Statutory Review of the MRF Act

Marsden Jacob

Marsden Jacob have been commissioned to undertake the statutory review of the MRF Act. Our project will align with the WA Guidelines for reviewing legislation

We will conduct the review using the following methods:

- a. Interviewing key internal staff
- b. Interviewing key stakeholders
- c. Viewing relevant records
- d. Modelling of MRF values
- e. Consideration of other policy & legislative approaches

Purpose of the Act

The Long Title of the Act states that the MRF Act was determined to provide for:

- the establishment of the Mining Rehabilitation Fund;
- the declaration of abandoned mine sites; and
- a levy payable in respect of mining authorisations, and for related purposes.

Section 6 of the Act states the purpose of the fund as follows:

The main purpose of the Fund is to provide a source of funding for the rehabilitation of abandoned mine sites and other land affected by mining operations carried out in, on or under those sites.

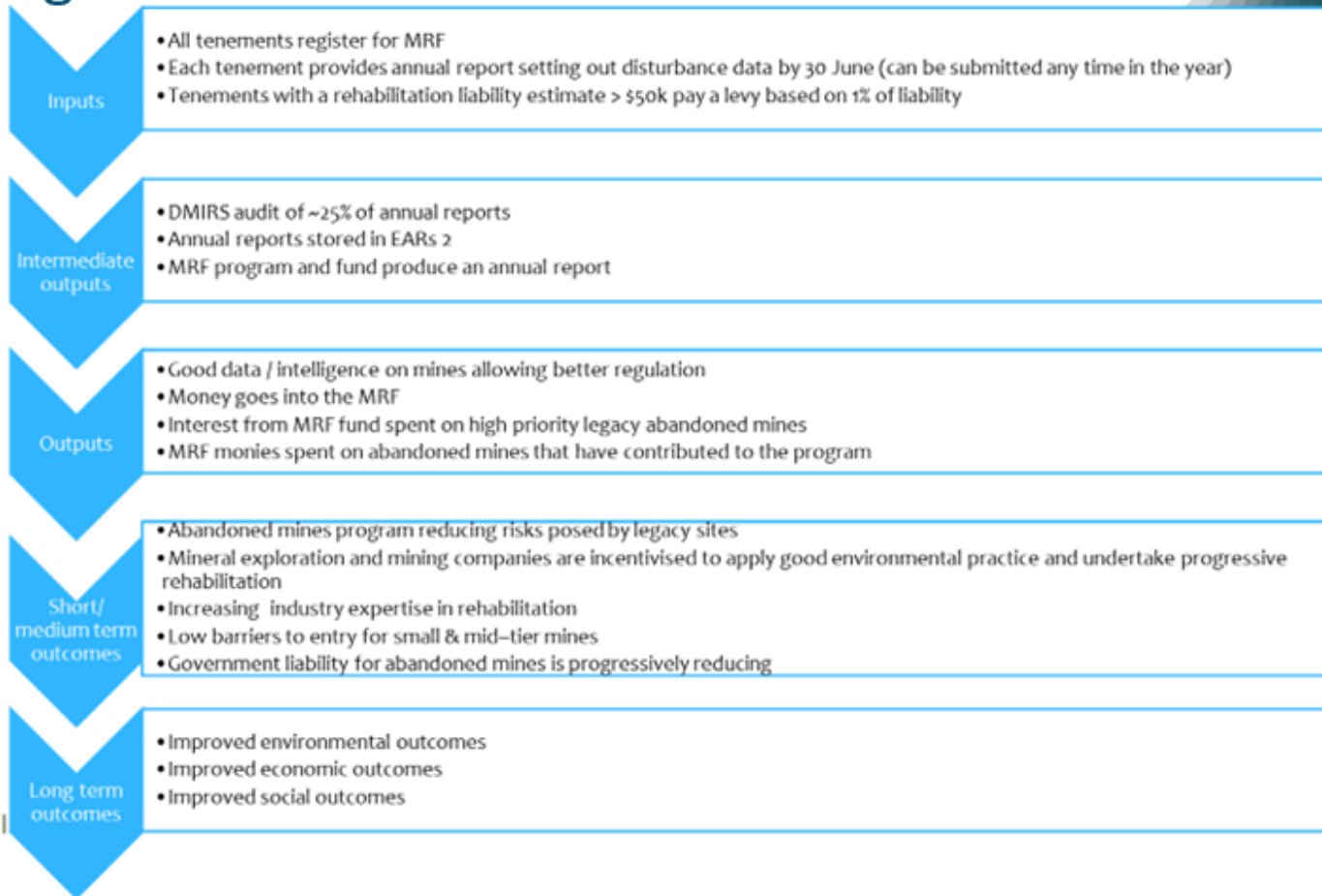
Key questions (objectives and purpose)

1. Do you think the MRF Act objectives and purpose remain relevant today?
Would any changes improve the Act's clarity?
2. Do you think the MRF Act is effective in achieving its purpose? (Noting the purpose of the Act provided on the previous slide).
3. Has the MRF Act & supporting legislation been operated effectively over the last 10 years?
Are there any changes which would improve its effectiveness in the future?

Draft program logic

A 2018 review proposed a “program logic” to link the program output to outcomes

4. Do you think the program logic reflects the MRF Act (e.g. does the MRF Act effectively link **outputs** to the **short/ medium/ long term outcomes**)?



Key questions-2 (changes to increase effectiveness)

5. What changes would enhance the MRF's effectiveness?
 - a) Should the rehabilitation liability categories & unit rates be altered?
 - i. Are the categories appropriate? (Do they reflect current practices / are they flexible to deal with future changes?)
 - ii. Are the liability unit rates appropriate?
 - b) Are the incentives to rehabilitate disturbed land suitable (e.g., strengthen / more targeted?)
 - i. Does the MRF create appropriate and sufficient incentives for businesses to progressively rehabilitate?

Key questions-3 (changes to increase effectiveness)

- c) Would ensuring that sufficient funding remains available for Abandoned Mines Program enhance the MRF's effectiveness?

Currently funds collected can be spent in two ways:

s. 8(1) - Any money in the fund can be used for rehabilitation of mines that contributed to the fund

s. 8(2) - Interest collected on the fund can be spent on any of the following additional items:

- Rehabilitation of mines that did not contribute the fund (Legacy mines / exempt mines)
- Programs/information on rehabilitation of abandoned mines
- Fund administration
- Administering and enforcing the act

- i. Should changes be made to the funding arrangements or activities undertaken that are paid for by the levy (i.e., Section 8(1) of the Act.)?
- ii. Should changes be made to the funding arrangements or activities undertaken that are paid for by the interest that is collected from the fund (Section 8(2)).

Statutory Review of the MRF Act

Key questions-4 (changes to increase effectiveness)

- d) Should the Government identify the optimal size (value) of the fund?
 - i. Yes / No
 - ii. What factors should be considered in identifying/considering an optimal size for the fund?

e) Any other changes?


Should the rules about use of the funds versus interest earned be loosened?

What happens in a time of low interest rates? Should there be clauses around funding activities and the program itself, if the interest generated is low (and rehabilitation works therefore put on hold?)

Key questions-5 (changes to increase effectiveness)

6. Are there elements of the Act / regulations / policies
 - a) that are overly prescriptive?
 - b) that would benefit from increased detail or clarification?

 7. Are there elements of the Act
 - a) that work better than expected /
 - b) that could be improved?

 8. Are there any unintended consequences of the current version of the Act that could/should be removed if the Act is amended?
- 

Key questions 6 - efficiency

9. Could the Act / Regulations / processes be amended to reduce the cost of reporting or compliance, but maintain (or improve) the delivery of the objectives?
 - a) From an industry point of view
 - b) From a Government point of view

10. Do you have any other comments or statements you would like to make?

How to contribute

An online questionnaire with suggested questions and prompts is available on Microsoft Forms here: <https://forms.office.com/r/s7d5NkCGgW>


Any interested parties can provide feedback via email:


MRFreview@marsdenjacob.com.au

The consultation phase will run until the end of October 2023.


Contact us


Alex Marsden
Associate Director


 amarsden@marsdenjacob.com.au


 0406 763 918

Marsden Jacob Associates Pty Ltd

 03 8808 7400

 Marsden Jacob Associates

 economists@marsdenjacob.com.au

 www.marsdenjacob.com.au