

Legacy Mines Unit

October 2024

Annual Statement 2023-24

Mining Remediation Fund



Sandy Flat

Purpose

This Annual Statement outlines the activities and achievements of the Legacy Mines Unit (LMU) and expenditure from the Mining Remediation Fund (the Fund) for the 2023-24 financial year, as well as outlining proposed forward works. Releasing this Statement supports the Government's commitment to strong governance by providing a transparent overview of expenditure and activity under the Fund and addresses a key deliverable from the Legacy Mines Unit Strategic Plan 2021-2025.

The Department of Mining and Energy (formerly known as the Department of Industry, Tourism and Trade) reports on the Fund in its Annual Report, which is available online at <https://industry.nt.gov.au>. This Annual Statement is an expanded summary showcasing the activities undertaken this financial year through the Fund and Legacy Mines Work Program.

The Rum Jungle Project is not managed, nor financed through the Fund.

About us

The Legacy Mines Unit is a specialist operational unit within the Department of Mining and Energy. It is responsible for the identification, assessment and, if required, the remediation of legacy mines and legacy mine features across the Northern Territory. The LMU uses revenue generated through an industry levy to undertake this work on behalf of the Minister for Mining and Energy and in line with the *Legacy Mines Remediation Act 2023*, stakeholder input and leading best practice in legacy mines remediation.

Vision

Territory legacy mine features are managed to minimise safety risks and environmental impacts

Mission

Mining Remediation Fund sustainably used to address legacy mine risks and secures environmental outcomes that minimise mining legacies

Objectives

The Legacy Mines Unit will be guided by the following principles:

- Risk and cost-benefit based approach to prioritise works to reduce or eliminate risk from legacy mine features
- Consistent and transparent processes for assessing legacy mine impacts, and prioritising and implementing works
- Public confidence in safety and environmental performance of mining industry and associated regulations

Mining Remediation Fund

Mining operators authorised under the *Environment Protection Act 2019* (or its predecessor the now repealed *Mining Management Act 2001*) must provide a security to the Northern Territory Government in case the Government needs to take action to prevent, minimise or rectify environmental harm caused by mining activities or complete rehabilitation work. The security can be refunded when the site is rehabilitated by the operator.

Under the *Legacy Mines Remediation Act 2023* (LMRA) mining operators also must pay a non-refundable annual levy equivalent to 1% of the total amount of the security held on 1 July each year. The levy is used to support the Fund and the administration of the LMRA.

The NT Government manages the Fund, which is regulated under the LMRA and is an 'Accountable Officer Trust Account' in accordance with Section 7 of the *Financial Management Act 1995* (NT).



The purpose of the Fund is to hold money in trust to be used 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.

2023-24 Snapshot

During the 2023-24 financial year, the LMU facilitated remediation projects across the Territory, with \$3.3 million (excluding GST) expended from the Fund. This represents a steady upward trajectory in expenditure which is forecast to increase significantly as projects progress towards implementation. Significant contracts totalling \$5.5 million (excluding GST) were awarded during this financial year. Expenditure against contracts often occur over multiple years.



2023-24 Achievements

- **Delivering against the Strategic Plan**
 - ✓ Expanded the Legacy Mines Unit to increase project outputs
 - ✓ Develop the *Legacy Mines Remediation Act 2023* and subordinate legislation
 - ✓ Published the inaugural LMU Annual Statement
- **Sandy Flat Mine (former Redbank Mine)**
 - ✓ Undertook field visits to conduct surface and groundwater monitoring
 - ✓ Installed new water gauging equipment in Hanrahans Creek
 - ✓ Engaged with traditional owners at a meeting in Robinson River
 - ✓ Appointed a dedicated Project Lead to progress the selection of a remediation option
 - ✓ Progressed a multi-criteria assessment to assess the remediation options
 - ✓ Progressed the development of site specific trigger values
- **Small Mines Safety Program**
 - ✓ Awarded and commenced work on a significant contract to remediate over 200 legacy features in the Tennant Creek region
 - ✓ Progressed audits in Pine Creek and Central Australia with planning well underway to audit the Katherine and Darwin regions
- **Other sites**
 - ✓ Progressed preliminary site investigations within the Grove Hill area including the Goodall, Woolwonga and Mount Bonnie mine sites

2024-25 Priorities

- **Delivering against the Strategic Plan**
 - Develop new strategic plan
 - Review and update financial management procedures
- **Sandy Flat Mine (former Redbank Mine)**
 - Finalise a multi-criteria analysis to identify a preferred remediation approach
 - Progress assessment of water treatment options
 - Progress works to implement the preferred remediation approach, including developing site specific trigger values
 - Continue to work with Traditional Owners
- **Small Mines Safety Program**
 - Completion of the small mines safety works around Tennant Creek
 - Finalisation of the Alice Springs and Pine Creek audit reports and risk assessments
 - Review of the delivery model used at Tennant Creek to ensure future safety works programs deliver value for Territory
 - Commencement of small mines safety works at Alice Springs
 - Progress fauna studies to facilitate remediation works at Pine Creek
 - Progress audits in other areas of the Territory including Katherine and the Darwin Rural region
- **Other sites**
 - Undertake baseline assessments at Goodall, Woolwonga and Mount Bonnie to understand the potential environmental impacts from the sites

Legacy Mines – Project updates

Sandy Flat Mine (former Redbank Mine)

Project	Contracts awarded to 30 June 2024 (ex GST) ¹	Expenditure from the Fund to 30 June 2024 (ex GST) ²
Sandy Flat Mine	\$1.2 million	\$1.03 million

¹ Total contract value awarded during the financial year, the work may be undertaken over multiple financial years.

² Expenditure for the financial year includes contracts awarded during previous financial years.

Remediation planning is progressing at Sandy Flat, located approximately 30 km west of the Queensland / NT border and 70 km inland from the Gulf of Carpentaria. Planning for this site is complicated by its remote location and it is cut off during the wet season.

Environmental impacts at the site are primarily caused by acid and metalliferous drainage (AMD), resulting in pollution of Hanrahan's Creek. Remediation of the site is complex and it is essential that the appropriate planning be undertaken to ensure the remediation will deliver long term benefits and value for the Territory.

This financial year has focused on building on the previous work completed at the site to assess the potential remediation approaches. This has included refining the mine waste characterisation and material assessment, and the conceptual hydrogeological model and water load balance model for the site.

Significant work has also been done progressing a multi-criteria assessment to assess the remediation options to deliver environmental improvements while

considering stakeholder expectations, technical limitations and value for Territory. This has involved multiple subject matter experts to provide technical expertise, ensuring a robust remediation plan is developed.

A dedicated Project Lead has been engaged with the objective to deliver a preferred remediation option and progress the supporting works such as the development of site specific trigger guidelines. This is a demonstration of the commitment to advance this project and to deliver a meaningful outcome.

The team continue to build relationships with the Traditional Owners, including through engaging cultural managers for intrusive works onsite. This financial year, senior executives travelled to Robinson River to deliver updates and presentations to the traditional owners and interested parties.

Further information on this site can be found on this [NT Government website page](#).



Visible impacts to the creek downstream of the site

Legacy Mines Unit

A breakdown of expenditure and remediation activity at Sandy Flat during 2023-24:

Activity	Expenditure Excl GST
Site inspections including conducting water monitoring throughout the year, including during the wet season	\$240,721
Ground Water and Surface Water Modelling Assessment of Remediation Options	\$394,742
Engineering services	\$257,201
Development of site specific trigger values	\$71,543
Project lead services	\$38,400
Stakeholder meetings	\$26,007
Total	\$1,028,614



Test pitting works associated with mine waste characterisation

Legacy Mines – Project updates

Small Mines Safety Program

Project Area	Contracts awarded to 30 June 2024 (ex GST) ¹	Expenditure from the Fund to 30 June 2024 (ex GST) ²
Tennant Creek region	\$4.29 million	\$1.82 million
Territory wide	-	\$0.352 million
Total	\$4.29 million	\$2.17 million

¹ Total contract value awarded during the financial year, the work may be undertaken over multiple financial years.

² Expenditure for the financial year includes contracts awarded during previous financial years.

Historic mining activities have left a substantial inventory of legacy mine features across the Territory that present a potential risk to public safety. Typically the public safety risks associated with legacy mine features include injury or death from falls into open mine voids such as shafts (vertical diggings) and open stopes or glory holes (larger voids resembling open pits). Other high risk features include subsiding adits (horizontal diggings) and degraded infrastructure.

The Small Mines Safety Program aims to address risks to public safety through the installation of shaft covers, grates, fences, signage, backfilling of open voids and some minor maintenance works on previously installed safety controls.

Mining and exploration activity has occurred in the Tennant Creek area since the 1930s. The Tennant Creek region is a priority for small mines remediation work due to the proximity and density of mines near the town. A 2022 audit undertaken in the Tennant Creek region inspected over 70 small mines and identified 344 legacy mine features.

During this financial year, a significant contract was awarded to a Darwin based company to remediate these legacy features using a combination of controls including;

- backfilling of 190 mine voids (shafts, costeans, glory holes, open stopes)
- perimeter fencing of 15 open mine voids
- installation of covers at 24 shafts
- grates at 34 adits
- signage across the project area.

A project supervisor was also engaged to oversee the remediation works on the ground to ensure compliance with contract requirements. The remediation works are well progressed and will be completed in 2024.

The learnings from this program of work will be used to inform the delivery of small mines remediation works across the Territory.



Signage used in the Tennant Creek region



Before

Case Study: Golden Forty East

Golden Forty East mine is an example of a significant legacy mine feature, consisting of two large glory holes with connecting shafts and adits. This site is located 20 km from Tennant Creek along a well used access track. The proximity to town, the ease of access and the potential for a fall resulting in serious injury or death is high. Subsequently this site ranked very high in the audit and was identified for backfilling. It took three days and an estimated 3570 tonnes of spoil to backfill this dangerous site. This site will be closely monitored by Legacy Mines Unit over the coming years to ensure the backfill works remain stable with any subsidence being addressed. It is expected that the site will rehabilitate to a natural looking landscape following seasonal rains.



During



After

A breakdown of expenditure and remediation activity under the Small Mines Safety Program during 2023-24:

Activity	Expenditure
Safety works at open mine workings located in the Tennant Creek region	\$1,666,468
Project supervision	\$153,723
Audit services in Pine Creek, Central Australia, Katherine and Darwin region	\$352,064
Total:	\$2,172,255

Controls used in the Tennant Creek region



Grates enabling wildlife access



Combination of Controls: grates, fencing and signage



Adit covers enabling wildlife access

The Small Mines Safety Program is also progressing in other areas throughout the Territory. In 2022, a multiyear contract was awarded to audit over 600 sites across the Territory, including regional scale audits to assess the number and types of sites that need to be remediated. This includes assessing shafts and adits in the field and undertaking a risk assessment. The outcome of the audit informs planning to identify the most appropriate type of remediation such as backfilling or installing grates or covers to prevent public access.

During this financial year, audits have been conducted in Pine Creek and Central Australia around Alice Springs, with planning well underway to finalise the audit in the Katherine and Darwin region in the coming financial year. Once audits are completed, planning remediation works can then commence. The Alice Springs audit inspected 85 mine sites, identified 543 features, 61 of these were identified as high risk. Planning is underway to develop a future works package to address the high risks. The Pine Creek audit identified 519 features, and a risk assessment is in development. As the safety works are completed in each region follow up inspections will be undertaken to ensure the works remain safe and stable.

Further information on this program can be found on the [NT Government website](#).



Case Study: Great Western Mine is a site that consisted of two adjoining large open stopes with several connecting adits and shafts, located only 500 m from Warrego Road, approximately 35 km from Tennant Creek. This site presented a high risk to the public owing to its accessibility and potential for a fall into the voids resulting in death or serious injury. This site is significantly disturbed from the previous mining activities and poorly vegetated despite these disturbances occurring many decades ago. It took 5 days and 2572 tonnes of material to backfill the open stopes, removing the benching in the hill and several stockpiles of fill material in the process. After backfilling the site was contoured to ensure it remains stable and compacted areas were ripped to encourage the establishment of vegetation in the future. This site will be monitored over the coming years to determine if these works were successful in removing the safety risk while returning the area to a more natural landscape.

Legacy Mines – Project updates

Other sites

Project	Contracts awarded to 30 June 2024 (ex GST) ¹	Expenditure from the Fund to 30 June 2024 (ex GST) ²
Preliminary Site Investigations at multiple locations	\$0.051 million	\$0.049 million
Water sampling, monitoring and laboratory analysis		\$0.028 million
Total	\$0.051 million	\$0.077 million

¹ Total contract value awarded during the financial year, the work may be undertaken over multiple financial years.

² Expenditure for the financial year includes contracts awarded during previous financial years.

A Preliminary Site Investigation (PSI) for three legacy mine sites: Goodall, Woolwonga and Mt Bonnie was undertaken to confirm the potential impacts from legacy mine features. The PSI's were designed to further understand potential risks associated with the sites to inform prioritising of future works. The PSI reports are based on historical information including environmental monitoring data, mine management plans, environmental impact statements and site inspection reports. A comprehensive review of existing data and information, a thorough gap analysis, and the development of action plans to address identified gaps are part of this process.

A field trip was also undertaken to collect water samples from seven sites with legacy mine features within the Grove Hill area, including Mt Bonnie, Iron Blow, North Point, Princess Louise, Woolwonga, Fountain Head and Golden Dyke. Based on a desktop review of historic data, a total of 58 sample sites including 40 surface water sites and 18 groundwater bores were identified for investigation.



Legacy Mines Strategic Updates

New legislation

The *Legacy Mines Remediation Act 2023* commenced on 1 July 2024 after the regulation of mining was transferred to the *Environment Protection Act 2019* (EP Act) and the *Mining Management Act 2001* (MMA) was repealed. The purpose of the new legislation is to continue the requirement of the mining remediation levy, the Mining Remediation Fund and the regulatory framework for the remediation of legacy mines in the Northern Territory.

The mining remediation levy is paid by mining operators authorised, or licenced, under the EP Act (and its predecessor the MMA) and will continue to be a non-refundable annual 1% levy calculated on the mining security held by the Government on 1 July of the financial year. The LMRA introduces an offence for not paying the levy and as the payment of the levy is a condition on an environmental mining licence, non-payment may also result in regulatory action under the EP Act and the *Mineral Titles Act*.

The new legislation contemporises terminology from the outdated ‘unsecured mining activities’ under the MMA to a ‘legacy mine site’ and a ‘legacy mine feature’. The definitions are largely the same as the MMA and the liability of legacy mines sites and features has not changed.

The list of allowable activities that can be paid from the MRF have been expanded to realise the full breadth of economic opportunities that can flow from increased remediation activities in regional and remote locations. Additional items include research, industry incentives, consultation with affected people, legal and audit services. The legislation provides for new annual public reporting obligations to have certainty, transparency and accountability when committing significant amounts of industry paid levies towards remediation.

New provisions that have been introduced include the power for the Minister to Gazette a minimum dollar amount that is payable under the mining remediation levy. This has been designed to reduce administrative burden where the amount of levy owed is relatively small compared to government administrative costs. Also introduced is a Ministerial power to declare a “reserved legacy mine site” after consultation with affected stakeholders. Once reserved, this prevents any new mineral titles being granted while the reserved declaration instrument remains in force and provide government with a higher level of certainty and security to enter into long term contractual arrangements when investing substantial monies into major remediation activities.

The legislation, including the *Legacy Mines Remediation Act 2023* and the *Legacy Mines Remediation Regulations 2024* can be found at <https://legislation.nt.gov.au/>

Expanded legacy mines unit

During this financial year the Legacy Mines Unit were approved to use the interest from investing the MRF to create five additional positions that will accelerate and expand legacy mines remediation activities.

The LMU has also been restructured so that there will be three discrete focus areas supported by strong governance and technical field support:

- Inventory and Assessment Team: focusing on developing and monitoring a rolling program of works, including identifying legacy mines and legacy mine features, undertaking risk assessments and prioritisation of works;
- Remediation Implementation Team: responsible for investigations, remediation design and planning and remediation implementation, and comprising specialist skills in remediation, project management and project design and delivery.
- Policy and Governance: responsible for maintaining transparency and ensuring compliance with relevant legislation, including financial management and procurement. This team will provide essential support to the two other teams in the areas of procurement, stakeholder consultation, specifically with Aboriginal people to maximise business and workforce engagement and administrative support. This structure will allow the subject matter specialists to focus on developing and progressing remediation planning and projects.

Legacy Mines Advisory Panel

The Legacy Mines Advisory Panel was established in 2022 to provide industry perspective and advice on legacy mine activities that supports government decision making.

The Panel is chaired by the Senior Executive Director, Mines Branch and includes two representatives from:

- Minerals Council Australia – Northern Australia (MCA NT);
- Association of Mining and Exploration Companies (AMEC); and
- Extractive Industry Association (EIA).

During the 2023-24 financial year the Panel met twice and provided input in to the legislative reform process and specific project work.

Stakeholder engagement

Stakeholder engagement and ensuring information is available to the public about the legacy mines program is a key commitment under the Strategic Plan. The following key engagement activities occurred during the reporting period:

- Participated in partner meetings with Cooperative Research Centre for Transformations in Mining Economies and exploring the development of a project that will provide tangible outcomes for the Territory.
- Meetings with the Land Councils regarding Sandy Flat and legacy mines more broadly.
- Delivered a presentation on the new *Legacy Mines Remediation Act 2023* to the Alligator Rivers Region Advisory Committee (ARRAC), which provides a forum for community liaison and engagement on uranium mining activities in the Alligator Rivers Region.
- Numerous briefings were provided to industry and other stakeholders prior to the introduction of the *Legacy Mines Remediation Bill*.
- Presentation at NT Resources Week on '*Legacy Mines in the Territory*'.
- Interview on the ABC's Country Hour as well as media articles in NT News and Tennant Creek about the contract awarded to a Territorian firm to remediate legacy mines in the Tennant Creek region under the Small Mines Safety Program.
- The Director, Mining Remediation featured in a social licence campaign undertaken under the Minerals industry Plan. The 2.30 minute piece featured the Director explaining the work of the legacy mines unit and the remediation activity in the Northern Territory. The campaign was run on Channels 9, 7Darwin and 7Central and print advertorials were featured in the NT News and Territory Q magazine. A link to the piece can be found here: <https://northernterritoryresources.com.au/local-stories>