GOVERNMENT OF WESTERN AUSTRALIA

mriwa
Minerals Research Institute of Western Australia

Minerals Research Institute of Western Australia

Annual Report 2025-26

Minerals Research Advancing WA

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Acknowledgement of Country

The Minerals Research Institute of Western Australia (MRIWA) acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of Aboriginal communities and their cultures; and to Elders past and present.

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Statement of Compliance

For year ended 30 June 2026

HON. DANIEL PASTORELLI MLA

Minister for Mines, Petroleum and Exploration; Water

In accordance with section 63 of the *Financial Management Act 2006 (WA)*, we hereby submit for your information and presentation to Parliament, the Annual Report of the Minerals Research Institute of Western Australia (MRIWA or the Institute) for the financial year ended 30 June 2026.

The Annual Report has been prepared in accordance with the provisions of the *Financial Management Act 2006 (WA)*.

The financial statements comply with Australian Accounting Standards – Simplified Disclosures issued by the Australian Accounting Standards Board.

Vanessa Torres
Chairperson of the Board

Date: 17 August 2026

Gerard Danckert
Deputy Chairperson of the Board

Date: 17 August 2026

Message from the Chairperson of the Board

It is my privilege, on behalf of the Board, to present the MRIWA Annual Report for 2025-26, my first as Chairperson of the Institute.

It has been a pleasure to learn about the activities of the Institute, its pivotal role in minerals research in Western Australia, and the capability of the team.

The defining development of 2025-26 has been the progression of the Minerals Research Institute of Western Australia Amendment (Clean Energy) Bill, which, once passed, will transform MRIWA into the Clean Energy and Minerals Research Institute of Western Australia (CEMRI). The Bill has passed the Legislative Assembly and is currently awaiting debate in the Legislative Council.

This proposed expansion of our legislative mandate to encompass clean energy and emissions reduction research is both timely and significant. For years MRIWA has operated at the intersection of minerals research and the decarbonisation agenda through our green steel focus area, our mineral carbonation program, and our advocacy for net-zero emissions mining. Our transition to CEMRI, once the legislation is passed, will formalise this broader role and position the Institute to make an even greater contribution to Western Australia's economic diversification and long-term prosperity.

Alongside this legislative milestone, the Institute continued to advance its impact through a strong program of research investment and strategic engagement. The Feasibility Study into the Critical Minerals Advanced Processing (CMAP) Facility is now well progressed, jointly funded by the Commonwealth and State through a $3 million investment secured in the previous year.

Our Impact Assessment provided clear evidence of the value our research programs deliver to the State. The assessment reinforces what the Board has long believed: that well-targeted, collaborative research investment generates economic, social and environmental returns that far exceed the cost.

The Board has also directed its attention to succession planning and skills composition, endorsing a revised Board Charter and Skills Matrix that reflects the proposed expanded CEMRI remit, incorporating expertise in clean energy and emissions reduction alongside our traditional minerals industry knowledge base.
With additional Board representation anticipated following legislative proclamation, including a nominee from the Coordinator of Energy, we are ensuring the governance architecture of the Institute is fit for its expanded purpose.

I extend my sincere thanks to Minister David Michael for his strong and continued support of the Institute, and to his office for the active engagement that makes our work more effective. I also wish to commend the MRIWA team, led with skill and dedication by CEO Nicole Roocke, for their commitment to excellence, innovation and the community.

I conclude by acknowledging the outstanding contribution of my predecessor, Miriam Stanborough, who served as Chairperson from January 2020 and whose term concluded at the end of December 2025. Under Miriam's stewardship, MRIWA grew in stature, rigour and ambition. She guided the Institute through a period of significant change, from the disruptions of the pandemic to the expansion of MRIWA's strategic scope, and leaves a legacy of strong governance and clear purpose.

I also acknowledge the departure of Linda Tompkins, who concluded her tenure as Deputy Chairperson in February 2026. Linda brought a unique combination of legal, geological and corporate expertise to the Board over six years. I thank them both sincerely.

This year has seen meaningful renewal of the Board. Michelle Carey joined in March 2026, strengthening our capabilities at a pivotal moment for the organisation. Gerard Danckert has taken on the role of Deputy Chairperson, and I look forward to working closely with him and the full Board, including our continuing members Rylee Campbell, Michele Spencer, Hongqi Sun and Sheryl Frame, as we navigate an exciting period of organisational evolution.

The year ahead will be exciting and a significant step change. Going forward we will have the mandate, the capability and the momentum to make a meaningful difference for Western Australia.

Vanessa Torres
Chairperson of the MRIWA Board

Message from the CEO

Over the 2025-26 financial year, the MRIWA team has continued to grow, adapt and deliver; advancing a research program of real consequence for Western Australia while navigating a period of significant organisational and legislative transformation.

Significant Issues and Trends

Legislative Transformation: Impending Expanded Scope

The most consequential development of the year has been the consideration of the Minerals Research Institute of Western Australia Amendment (Clean Energy) Bill by the Legislative Assembly with it now awaiting debate in the Legislative Council. If approved, it will formally expand the Institute's research mandate beyond minerals to encompass clean energy and emissions reduction research.

The implications of this change are significant and far-reaching. Planning has commenced to review the Institute’s Research Priority Plan, amend Board Charter and Skills Matrix, and investigate steps to proceed with legal name changes.

Confirmation of funding for the new research domains has been provided from 2026-27 onwards.

Critical Minerals: Securing Western Australia's Position

Global demand for critical minerals continues to intensify, driven by the energy transition and the strategic priorities of governments worldwide seeking to secure sovereign supply chains. Western Australia is exceptionally well-positioned in this environment, and MRIWA's research program has directly supported the State's capacity to respond.

The Critical Minerals Advanced Processing (CMAP) Facility remains a flagship initiative. The Feasibility Study is progressing, and the facility, designed to provide common-use pilot plant equipment to support upstream and midstream critical minerals processing, has the potential to significantly strengthen Western Australia's competitiveness in this global race.

Domestically and internationally, geopolitical shifts are reshaping critical minerals investment flows. MRIWA's research portfolio, spanning scandium, rubidium, gallium, lithium, and vanadium, among others is directly relevant to these dynamics, and the Institute continues to attract strong interest from researchers and industry partners seeking to develop viable processing pathways in Western Australia.

Artificial Intelligence and Data Management

Broader global trends in artificial intelligence are increasingly relevant to the resources research sector. AI enabled computational methods are creating new possibilities for exploration, processing optimisation and predictive maintenance, areas directly relevant to MRIWA's research programs.

During the year, the organisation initiated work on a data management strategy, recognising effective data stewardship is now a strategic capability rather than an operational function. Research and organisational data generated across multiple programs, systems and partners requires a consistent governance framework to maximise its value, ensure compliance and enable responsible data sharing.

The Risk Register has also been updated to incorporate AI related risks, reflecting the Audit and Risk Committee's direction and the organisation's commitment to proactive risk identification.

Environmental, Social and Governance Expectations

Community and investor expectations regarding ESG performance continue to rise across the resources sector. MRIWA's research programs, including our alternative use of tailings and waste focus area and mineral carbonation program, directly address these expectations.

Outlook

The year ahead will be one of considerable opportunity. Subject to the passage of the legislative amendments it will be possible for the Institute to pursue a broader and more ambitious research agenda, better aligned with the full spectrum of challenges facing Western Australia's resources and energy sectors. Our people, our research networks and our governance foundations are well placed for this next chapter.

I thank Minister David Michael and his team for their ongoing support, and acknowledge the contributions of the outgoing Chairperson, Miriam Stanborough and incoming Chairperson, Vanessa Torres, and the full Board for their thoughtful engagement throughout the year.

I am proud of the MRIWA team and the difference their work makes for Western Australia.

Nicole Roocke
Chief Executive Officer

MINERALS RESEARCH ADVANCING WESTERN AUSTRALIA

Driving economic growth, environmental and social benefits through minerals research that supports a globally competitive and sustainable minerals sector.

NEW RESEARCH

36

APPROVED PROJECTS

TOTAL NEW PROJECT VALUE

$24.2 MILLION

KNOWLEDGE TRANSFER

RESEARCH OUTCOMES

45

PROJECTS COMPLETED

$68.9M

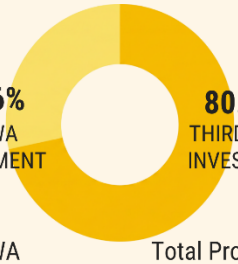
TOTAL VALUE OF COMPLETED PROJECTS

- Improved decision-making in industry
- Building engagement and knowledge-sharing networks

SUCCESS MEASURES

- Industry satisfaction
- Research adoption
- New capability identified

IMPACTFUL RESEARCH DELIVERED TO WESTERN AUSTRALIA



19.6% MRIWA INVESTMENT

80.4% THIRD PARTY INVESTMENT

MRIWA Investment **$15.1M**	Total Project Value **$62.1M**
MRIWA Managed Funds **$20.5M**	Total Number of Current Projects **83**

BUILDING FUTURE CAPABILITY

WORKFORCE DEVELOPMENT

$2.2

MILLION

INVESTED

PROGRAMS DELIVERED:

- Research internships
- Industry placement
- Indigenous participation activities
- Postdoctoral support
- Development programs
- Team collaboration

TRANSLATING RESEARCH INTO INDUSTRY APPLICATION

3 INTERNATIONAL DELEGATIONS HOSTED

3 WOMEN ADVANCING MINERALS RESEARCH EVENTS

2 RESEARCH SHOWCASES

6 TECHNICAL DEVELOPMENT WORKSHOPS

OUTCOME ASSESSMENT FRAMEWORK

RESEARCH OUTCOMES MEASURED THROUGH:

- Economic impact
- Knowledge created
- Environmental benefits
- Workforce created
- Commercialisation potential

$47M

Third party contributions to Research Projects

MRIWA RESEARCH SCOPE

- Find more viable resources
- Infrastructure and logistics
- Expand the mining envelope
- New products and markets
- Increase recovered value through processing
- Remediation and mine closure

About Us

The Responsible Minister is the Hon. David Michael MLA, Minister for Mines and Petroleum; Finance; Electoral Affairs; Goldfields-Esperance; Leader of the House.

The Minerals Research Institute of Western Australia (MRIWA) is a statutory body established by the Western Australian Government in 2013 under the *Minerals Research Institute of Western Australia Act 2013 (WA)* (the MRIWA Act).

MRIWA's primary function is to promote, coordinate and undertake minerals-related research and development which will benefit the State.

It is anticipated the MRIWA Act will be amended to expand the Institute's remit to include clean energy. This proposed change reflects the evolving policy environment and the State Government's focus on energy transition and economic diversification. Broadening MRIWA's functions would enable it to support research, innovation and collaboration in areas such as critical minerals for energy storage, low-emissions technologies, and emerging clean energy industries.

The proposed legislative expansion is expected to enhance MRIWA's contribution to Government priorities by:

- supporting the development of clean energy and low-carbon technologies;
- strengthening linkages between the resources and energy sectors; and
- facilitating innovation and investment in new and emerging industries.

This anticipated reform positions MRIWA to play an expanded role in advancing Western Australia's transition to a more diversified, sustainable and resilient economy, while continuing to support the long-term competitiveness of the minerals sector.

Although the Institute operates as a separate legal entity, it is not represented as a standalone division within the Consolidated Account Expenditure Estimates. The Institute receives administered funding through the Department of Mines, Petroleum and Exploration.

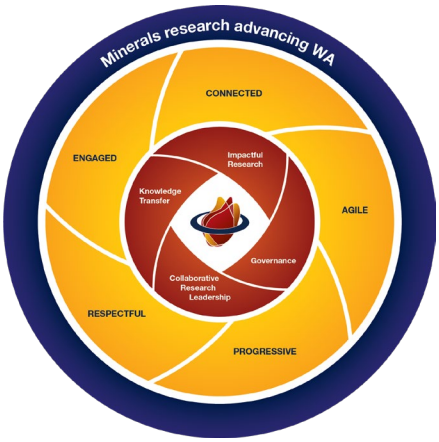
Our Work

MRIWA fosters and promotes minerals research for the benefit of Western Australia by commissioning and managing research projects, supporting student placements, and collaborating with industry, government and research institutions.

It administers and co-invests in research initiatives locally, nationally and internationally to deliver economic, environmental and social outcomes, while also promoting public awareness of minerals research and providing advice to the Minister.

Through its Education and Workforce Program, MRIWA further supports sector capability by funding postgraduate scholarships and delivering targeted professional development to build a skilled future workforce.

Vision and Values



MRIWA's activities are underpinned by a values framework that supports effective collaboration, innovation and accountability.

The organisation demonstrates these values by maintaining strong partnerships across industry, government and research institutions (connected and engaged), responding to emerging priorities such as critical minerals and alternative use of tailings and waste (agile and progressive), and fostering inclusive and transparent practices (respectful).

These behaviours are reinforced through robust governance, merit-based funding processes and a focus on delivering measurable outcomes, ensuring alignment with Government priorities and the effective stewardship of public resources.

Legislation

Enabling and Administered Legislation

MRIWA was established as an agency in February 2014, under the *Minerals Research Institute of Western Australia Act 2013 (WA)*.

The Institute administers the *Minerals Research Institute of Western Australia Act 2013 (WA).*

Other Key Legislation Impacting on our Activities

In the performance of its functions, the Institute complies with other relevant written laws including the following Western Australian legislation:

Auditor General Act 2006

Corruption, Crime and Misconduct Amendment Act 2024

Disability Services Act 1993

Electoral Act 1907

Equal Opportunity Act 1984

Financial Management Act 2006

Freedom of Information Act 1992

Government Employees Superannuation Act 1987

Industrial Relations Act 1979

Interpretation Act 1984

Library Board of Western Australia Act 1951

Limitation Act 2005, State Superannuation Act 2000

Minimum Conditions of Employment Act 1993

Privacy and Responsible Information Sharing Act 2024

Procurement Act 2020

Procurement Regulations 2022

Public Interest Disclosure Act 2003

Public Sector Management Act 1994

Salaries and Allowances Act 1975

State Records Act 2000

Superannuation Guarantee (Administration) Act 1992

Work Health and Safety Act 2020

Work Health and Safety (General) Regulations 2022

Workers Compensation and Injury Management Act 2023

Hon David Michael MLA
Minister for Mines and Petroleum; Finance; Electoral Affairs; Goldfields-Esperance; Leader of the House

Vanessa Torres
Board Chairperson

Gerard Danckert
Deputy Chairperson; Audit and Risk Committee Member

Rylee Campbell
Board Member; Audit and Risk Committee Chairperson

Sheryl Frame
Board Member; Audit and Risk Committee Member

Michelle Carey
Board Member

Michele Spencer
Board Member

Hongqi Sun
Board Member

Nicole Roocke
CEO

Fauziah Antonio
CFO, Manager Finance and Corporate Services

Stephanie Ahlfeld
Coordinator Executive Services

Bartosz Cybulski
Communications and Projects Officer

Alice Heydon
Events Coordinator

Sarah Morrison
Project Officer

Tim Walton
Director Research Strategy

Paul Beukes
Strategic Project Manager

Lauren Williams
Project Officer

Melissa Cianfrini
Acting Research Portfolio Manager

Salwan Al-Assafi
Research Portfolio Manager

Zafu Teferi
Principal Project Officer

Geoffrey Batt
Research Portfolio Manager

Helen Anderson
Principal Project Officer

David Trotter
Research Portfolio Manager

Angelica Reyes
Project Officer

Olivia Gilbert
Acting Principal Project Officer

Linda Crew
Research Portfolio Manager

Performance Summary

Outcome Based Management Framework

The Institute operates within the Outcome Based Management Framework and supports the State Government's priority of "*Diversifying our economy for the future, creating local jobs for the future*".

The Institute's activities directly support the State Government's priority by advancing research, development and innovation in the minerals sector.

This includes:

- supporting the midstream processing and development of emerging industries (e.g. battery and critical minerals);
- enhancing productivity, competitiveness and sustainability of the resources sector; and
- facilitating collaboration between industry, research institutions and government to drive innovation and investment.

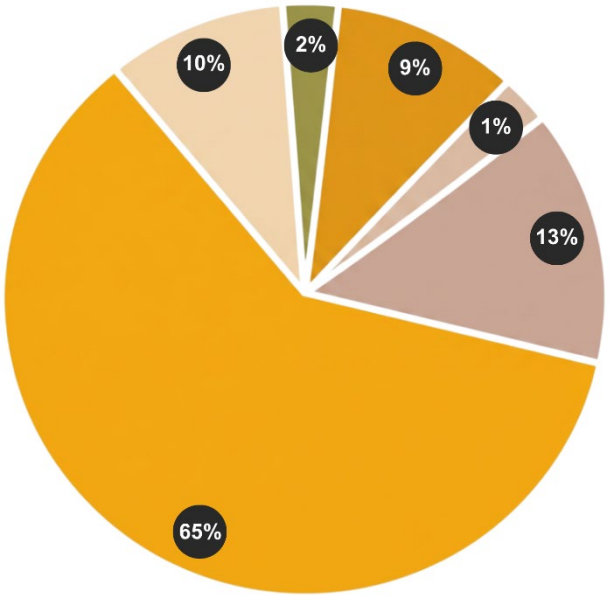
Changes to outcome based management framework

The Agency's outcome based management framework did not change during 2025-26.

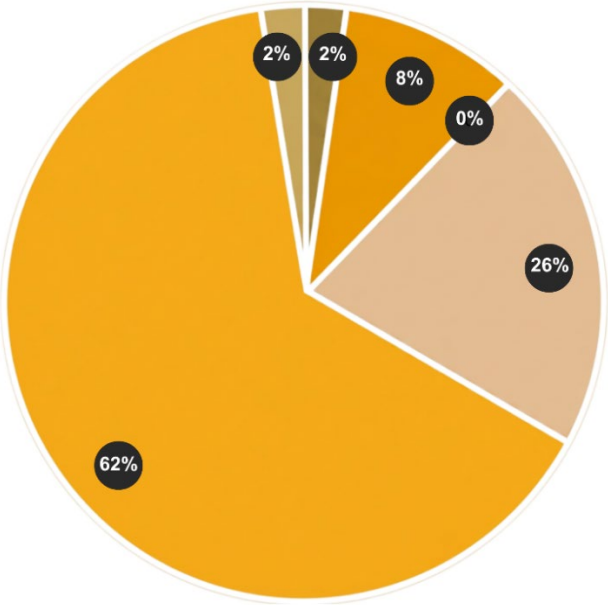
Shared Responsibilities with Other Agencies

The Institute did not formally share any responsibilities with other agencies during the year.

Summary of Financial Performance



Income		$
State government grant	65%	6,544,000
Income from other public sector entities	10%	981,779
Resources received free of charge	2%	220,173
Revenue from sponsorship	13%	1,351,182
Interest revenue	9%	956,004
Other revenue	1%	60,128
Total		**10,113,266**



Expenditure		$
Research and scholarships	62%	6,087,259
Employee benefits expense	26%	2,619,151
Supplies and services	8%	803,181
Other expenses	2%	186,292
Accommodation expenses	2%	217,041
Depreciation expense	0%	2,600
Total		**9,915,524**

Total income for 2025–26 was **$10.1 million**. The organisation remained primarily funded through **State Government grants**, which contributed **$6.5 million (65%)** of total income. Additional revenue was generated from **sponsorships $1.4 million (13%)**, **other public sector entities $1.0 million (10%)**, and **interest revenue $956,000 (9%)**, reflecting strong cash management and investment returns. Resources received free of charge and other revenue sources contributed the remaining **3%** of total income.

Total expenditure for the year was **$9.9 million**. Consistent with the organisation's purpose, the largest area of expenditure was **research and scholarships**, amounting to **$6.1 million (61%)** of total expenditure. **Employee benefits expenses** represented **$2.6 million (26%)**, supporting the delivery of programs and operational activities. The remaining expenditure related to **supplies and services $803,000 (8%)**, **accommodation expenses $217,000 (2%)**, **other expenses $186,000 (2%)**, and **depreciation $3,000**.

The organisation recorded an operating surplus of approximately **$198,000**, reflecting sound financial management and the continued alignment of resources with strategic priorities.

Actual performance compared to budget targets	2026 Target [a] $	2026 Actual $	Variation $
Total cost of services	19,076,162	9,915,524	(9,160,638) [b]
Net cost of services	13,892,487	7,548,210	(6,344,277) [c]
Total equity	14,404,022	19,951,473	5,547,451
Net increase / (decrease) in cash held	(5,590,094)	(576,945)	5,013,149
Agreed salary expense level	1,245,000	1,901,827	656,827 [d]
Agreed executive salary expense	449,000	434,504	(14,496)

(a) Target figures are based on budget approved by MRIWA Board and annual estimates presented in 2024-25 annual report.
(b) Total cost of services was significantly below budget due to the combination of the variation in the project timelines for Critical Minerals Advanced Processing (CMAP) Feasibility Study and the reprofiling of research payments to future years in line with project delivery schedules.
(c) Sponsorship revenue is lower than budget as fewer sponsorship contributions are managed by the Institute and portion of the sponsorship revenue has been reprofiled to future years in line with project delivery schedules.
(d) The target did not adequately reflect the approved organisational structure, including approved staffing levels (FTE) and associated salary budgets. During the year, the Institute progressed recruitment activities and filled previously vacant positions, resulting in employee costs aligning more closely with the approved workforce establishment.

For detailed information on MRIWA's financial performance, refer to the *Financial Statements and Notes* section of this report.

Summary of Key Performance Indicators

Key Effectiveness Indicator	2025-26 Target	2025-26 Actual	Result[(a)]
Government Goal: Diversifying our economy for the future and creating local jobs			
Outcome 1: Fostering and promoting minerals research for the benefit of the State			
Ratio of total cash value of research projects to total MRIWA cash investments in those research projects	≥4	5.42	✓

Key Efficiency Indicator	2025-26 Target	2025-26 Actual	Result[(a)]
Government Goal: Diversifying our economy for the future and creating local jobs			
Service 1: Administer research grant applications and manage approved projects efficiently			
Total administration cost for the year as a percentage of the total cash value of research projects and scholarships under management during the year.	≤3.5%	2.99%	✓

(a) The following symbols indicate the outcome of the key performance indicators:
- ✓ Performance target achieved or exceeded
- X Performance target not achieved

MRIWA's Outcome Based Management Framework did not change during 2025-26.

For detailed information on MRIWA's Key Performance Indicators refer to the *Our Performance* section of this report.

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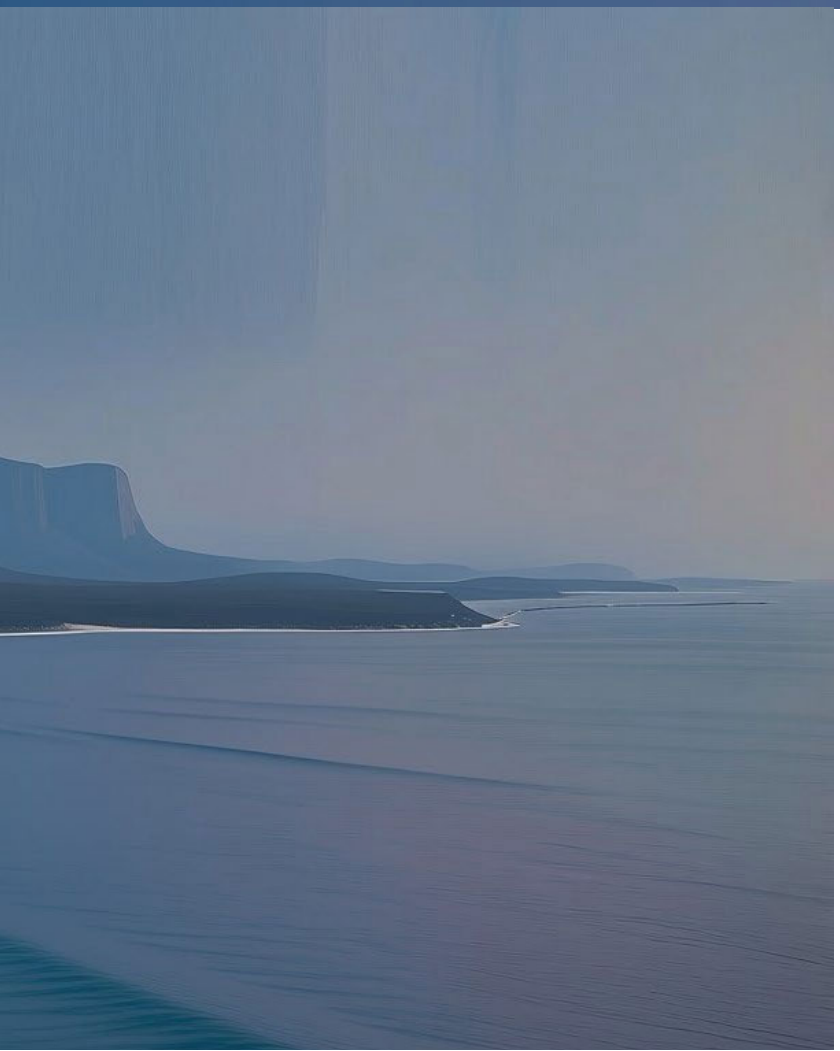
Our Performance



This section presents the audited key performance indicators for 2025–26 and outlines MRIWA's performance against its key objectives, demonstrating the impact of its investments and activities in supporting innovation, research and sustainable growth across the minerals industry.

Audited Key Performance Indicators

Certification of Key Performance Indicators

For the year ended 30 June 2026

We hereby certify the key performance indicators are based on proper records, are relevant and appropriate for assisting users to assess the Minerals Research Institute of Western Australia's performance, and fairly represent the performance of the Minerals Research Institute of Western Australia for the financial year ended 30 June 2026.

Vanessa Torres
Chairperson of the Board

Date: 3 August 2026

Gerard Danckert
Deputy Chairperson of the Board

Date: 3 August 2026

Key Effectiveness Indicator

Government Goal Diversifying our economy for the future and creating local jobs

Outcome 1: Fostering and promoting minerals research for the benefit of the State.

One measure of the impact of MRIWA's research investments is the value of minerals royalties accruing to Western Australia and the broader economic benefits generated from research outcomes. However, directly attributing these benefits to individual research projects is challenging due to the long duration of research activities, the range of factors influencing the adoption and implementation of research outcomes, and the time lag between the creation of new knowledge and the realisation of economic benefits and royalty revenues.

Given MRIWA's role in supporting research that advances the Western Australian minerals industry, the Institute seeks to maximise the value of State Government investment by attracting co-investment from industry, research organisations and other funding partners. Accordingly, MRIWA's key effectiveness indicator measures the extent to which its funding leverages additional external investment in research projects. A target leverage ratio of 3:1 means that for every $1 invested by MRIWA, a further $3 is contributed by external parties, resulting in a total project value of $4.

An increase in the ratio indicates that MRIWA is attracting a greater level of external investment for each dollar of State Government funding, thereby increasing the overall value and scale of research undertaken. Conversely, a decrease in the ratio indicates that a lower level of external funding has been secured relative to MRIWA's investment, reducing the leverage achieved on State Government funding. This indicator demonstrates MRIWA's effectiveness in amplifying State Government investment and increasing the value of research delivered for the benefit of Western Australia.

Key Effectiveness Indicator	2024-25 Actual	2025-26 Target	2025-26 Actual
Ratio of total cash value of research projects to total MRIWA cash investments in those research projects (a) (b) (c)	5.23	≥4	5.42

Notes:

a) Investment totals are for projects with an executed contract and for completed projects, where completion date is within the reporting year.
b) Measure reported as a multiple.
c) Total cash value of research projects for current period is $125,821,970 and MRIWA total cash investment in those research projects is $23,209,559.

Key Efficiency Indicator

Government Goal Diversifying our economy for the future and creating local jobs

Service 1: Administer research grant applications and manage approved projects efficiently.

The primary service provided by MRIWA is to identify research opportunities, facilitate the development of grant applications, and manage a portfolio of approved research projects. To maximise the benefits of State Government investment, MRIWA seeks to ensure that the majority of its resources are directed toward research activities rather than administration.

The key efficiency indicator measures the cost of administering MRIWA's research portfolio relative to the total value of research projects managed. This indicator demonstrates MRIWA's ability to support and oversee research activity while maintaining efficient administrative operations.

A target ratio of 3.5% means that administration costs comprise no more than 3.5% of the total value of the research portfolio managed by MRIWA. A lower ratio indicates greater efficiency, with a larger proportion of available resources directed to research activities and outcomes. Conversely, a higher ratio indicates that administration costs represent a greater proportion of the research portfolio value and may reflect reduced operational efficiency or changes in portfolio scale. This measure provides an indication of MRIWA's success in maximising research investment while minimising administrative overheads.

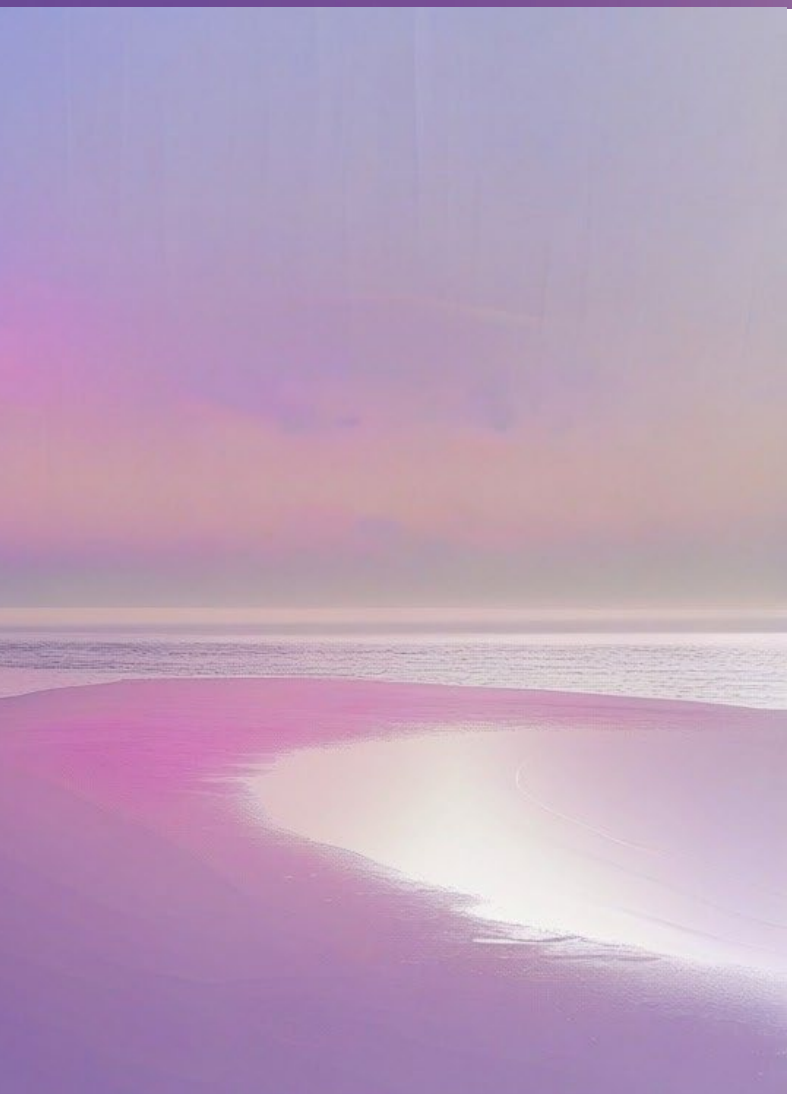
Key Efficiency Indicator	2024-25 Actual	2025-26 Target	2025-26 Actual
Total administration cost for the year as a percentage of the total cash value of research projects and scholarships under management during the year (a) (b)	2.72%	≤3.5%	2.99%

Notes:

a) Total cash value is for projects and scholarships with an executed contract and for completed projects, where completion date is within the reporting year.

b) Total cash value of research projects and scholarships for current period is $128,130,196 and total administration cost is $3,825,665.

Our Research Portfolio



MRIWA's research portfolio advanced minerals innovation through collaborative projects addressing exploration, resource development, processing, infrastructure, remediation and workforce capability. Our funding strengthened Western Australia's competitiveness, delivered practical outcomes, attracted co-investment and supported sustainable growth across the sector, statewide priorities.

Research Portfolio

The Minerals Research Institute of Western Australia supports the State's economic position by fostering and delivering minerals research that matters, working across industry, government and academia to turn ideas into practical outcomes which deliver benefit to the State.

Whether supporting new exploration technologies, advancing processing methods, or enabling new mineral products and markets, MRIWA ensures research moves beyond theory and into real-world application. Through targeted funding and collaboration, the Institute delivers applied research to build capability and generate economic and social value for the State, strengthening Western Australia's global competitiveness in mining and resources.

MRIWA is helping shape the future of responsible resource development. Its research priorities include Green Steel, Net Zero Emission Mining, Exploration Amplification, Precision and Low Impact Mining, Alternative Use of Tailings and Waste and Critical Minerals. By supporting innovations such as cleaner processing and circular approaches to resources, MRIWA contributes to a mining sector that is more efficient, resilient and environmentally responsible.

Western Australia's economic resilience and sovereign capability are closely tied to its minerals sector, and MRIWA plays a critical role in strengthening that foundation. The Institute funds and coordinates research across the full value chain, from discovery to extraction, processing and market development, supporting critical minerals, emerging technologies and new supply chains essential for future industries. Through its programs, MRIWA helps ensure the State remains a global leader in resources while adapting to changing economic and technological conditions.

Beyond research outcomes, MRIWA invests in people and knowledge systems that sustain long-term growth. Through scholarships, partnerships and industry collaboration, the Institute supports skills development, workforce capability and knowledge transfer, ensuring innovation is embedded across the sector. Its programs connect researchers with industry challenges, accelerating the uptake of new technologies and strengthening Western Australia's research ecosystem.

Research does more than solve today's technical challenges, it underpins the future of the State. MRIWA's work demonstrates how science and innovation can drive prosperity, sustainability and opportunity for Western Australia.

The Institute's 2025-26 Annual Report highlights a strong pipeline of collaborative projects and continued delivery of measurable benefits, reflecting its role in shaping a modern, innovative and internationally competitive minerals sector.

As Western Australia navigates evolving global conditions, MRIWA continues to respond to emerging economic, technological and environmental trends. By aligning its research with future risks and opportunities, the Institute ensures the minerals research system remains responsive, forward-looking and capable of addressing the challenges of the next decade and beyond.

Impact Assessment

An independent impact assessment of MRIWA funding was completed in 2025-26. The assessment evaluated the outcomes and benefits generated through MRIWA research investments and to demonstrate the value delivered to Western Australia. The assessment examined how MRIWA-funded projects contribute to economic growth, improved industry performance, enhanced safety, environmental sustainability and the development of research capability across the resources sector.

Building on previous assessments, the study analysed a portfolio of MRIWA-funded projects completed between 2018–19 and 2023–24. Using cost–benefit analysis modelling, Deloitte Access Economics quantified the economic value generated through improved operational efficiency, stronger safety outcomes and reduced environmental impacts. The assessment also considered broader benefits arising from industry collaboration, knowledge creation and the translation of research into practical industry applications.

Nine case studies, comprising both quantitative and qualitative analyses, were selected to illustrate the diverse impacts of MRIWA-funded research across the minerals sector and demonstrate the breadth of benefits delivered through collaborative innovation.

Key Findings

$1 INVESTED RETURNED

$4.35 IN BENEFITS

1 Strong Return on Investment

The assessment demonstrated MRIWA-funded research delivers substantial value to industry and the broader community. Across the quantitative case studies, every dollar invested generated an average return of $4.35 in economic, social and environmental benefits.

2 Improved Productivity and Operational Performance

Research investments have enabled innovations that enhance efficiency, optimise processes and reduce operating costs. These outcomes support industry efforts to address technical challenges and maintain global competitiveness.

3 Enhanced Safety Outcomes

Several projects delivered practical solutions to improve workplace safety and reduce operational risk. Advances in monitoring technologies, automation and hazard management are contributing to safer mining operations.

4 Environmental and Sustainability Benefits

MRIWA-funded research is supporting more sustainable mining practices through improved resource efficiency, reduced environmental impacts and technologies that help industry respond to evolving sustainability expectations.

5 Collaboration and Co-Investment

MRIWA continues to play a catalytic role in bringing together industry, researchers and government. This collaborative approach attracts additional investment, strengthens partnerships and accelerates the adoption of new technologies and practices.

6 Accelerating Research Translation

The assessment highlighted MRIWA's role in bridging the gap between research and implementation. Funding and stakeholder engagement help move promising research outcomes more quickly from development to industry application.

7 Building Capability

Research projects contribute to the development of highly skilled researchers, industry practitioners and future leaders. These outcomes strengthen Western Australia's innovation ecosystem and support the long-term capability of the resources sector.

8 Supporting Industry Competitiveness

By addressing industry-prioritised challenges, MRIWA-funded research supports the ongoing productivity, sustainability and competitiveness of Western Australia's mining industry.

9 Long-Term Strategic Benefits

Beyond immediate project outcomes, MRIWA funding generates enduring value through knowledge creation, stronger research networks, enhanced innovation capacity and lasting industry partnerships.

10 Independent Validation of Impact

The assessment provides independent evidence of MRIWA's long-term impact, stronger future, and more sustainable resources sector.

Research Portfolio Summary 2025-2026

Research Priority Plan

No. Projects	16	7	17	2	12	5
MRIWA Contribution[1]	$3.8 M	$1.1 M	$5.6 M	$275 K	$2.1 M	$791 K
Third-Party Contribution	$21.6 M	$1.4 M	$12 M	$250 K	$4.1 M	$7.6 M
Total Research Value	**$25.4 M**	**$2.5 M**	**$17.6 M**	**$525 K**	**$6.2 M**	**$8.4 M**

Note: Due to rounding, some totals may not correspond with the sum of the separate figures
Does not include scholarships

The Research Priority Plan (RPP) is the Institute's strategic framework that guides investment in minerals research to maximise long-term economic, social and environmental benefits for Western Australia.

The RPP identifies medium- to long-term knowledge and technology needs of the State's minerals industry, ensuring that research funding addresses critical challenges and opportunities impacting sector performance and competitiveness.

The Plan targets areas where coordinated research can:

- Remove barriers limiting the full economic potential of the minerals sector
- Enable innovation and technological advancement
- Strengthen global competitiveness and sustainability outcomes

The RPP is currently under review to ensure it remains aligned with evolving industry needs, emerging technologies and global trends. In parallel, legislative amendments to expand the Institute's remit to include clean energy and emissions reduction research will be reflected in a revised RPP, ensuring future research priorities are captured in the RPP.

[1] Includes the contribution from Department of Energy and Economic Diversification for the FBI CRC ($500,000) and HILT CRC ($1 million)

PROGRAM 1: Find More Viable Resources

As near-surface mineral deposits become increasingly depleted, Western Australia faces the challenge of discovering new economically viable resources in concealed and complex geological settings. Program 1 focuses on improving exploration productivity through advanced mineral systems science, detection technologies, data analytics, and predictive modelling.

Key priorities include enhancing orebody targeting, characterising geological structures, developing new exploration datasets, and applying machine learning to resource prediction. The program also supports efficient regulatory processes, sustainable exploration practices, and workforce development. These initiatives aim to attract investment, strengthen exploration capability, reduce discovery risk, and position Western Australia as a global leader in mineral exploration and resource discovery.

PROGRAM 2: Expand the Mining Envelope

Future mineral resources in Western Australia are increasingly located in deeper, more complex geological environments, requiring innovative and cost-effective extraction methods. Program 2 focuses on expanding the mining envelope through advanced extraction systems, geotechnical engineering, automation, artificial intelligence, and machine learning technologies.

Key priorities include improving mining in highly stressed rock conditions, enhancing recovery from low-grade deposits, enabling precision mining, and strengthening real-time data-driven decision-making. The program also promotes lower-emission energy use, efficient regulatory processes, improved safety and environmental outcomes, and workforce capability development. These initiatives aim to increase productivity, extend mine life, reduce costs, and position Western Australia as a global leader in mining innovation.

PROGRAM 3: Increase Recovered Value Through Processing

More complex and lower grade orebodies, rising energy costs, and environmental pressures are driving the need for advanced mineral processing technologies. Program 3 focuses on increasing yield, throughput, and resource efficiency by integrating research across operational areas. Priorities include developing innovative processing technologies, AI and machine learning applications, predictive modelling, and interoperability standards.

The program aims to improve recovery from low grade ores and waste streams, reduce costs and emissions, strengthen safety and sustainability outcomes, streamline regulatory processes, enhance asset reliability, and build a skilled workforce. Together, these initiatives will position Western Australia as a global leader in mineral processing innovation.

PROGRAM 4: Infrastructure and Logistics

Western Australia's export-focused mining industry relies on extensive infrastructure and logistics networks that require significant long-term planning and investment. Program 4 focuses on improving supply chain efficiency, haulage, export logistics, communications, and positioning technologies to reduce costs and support increasing automation.

Key priorities include enhancing data transfer capabilities, reducing network bandwidth requirements, improving geo-positioning accuracy, developing scalable mapping and modelling platforms, and adopting lower-emission energy sources. The program also promotes safer, more sustainable infrastructure planning by considering environmental impacts and post-mining land use. These initiatives will optimise shared infrastructure, improve operational efficiency, and support the future needs of the mining sector.

PROGRAM 5: New Products and Markets

Rapid growth in advanced technologies is increasing demand for critical minerals essential to renewable energy, batteries, electronics, telecommunications, and defence applications. Program 5 focuses on developing new products, markets, and industries by leveraging Western Australia's diverse mineral resources. Priorities include strategic market foresight, innovative downstream processing technologies, conversion of mine waste into valuable products, improved understanding of future supply and demand, and adoption of lower-emission energy sources.

The program also supports efficient regulatory frameworks, sustainable production practices, and workforce development. These initiatives aim to create premium products, expand domestic processing, and position Western Australia as a leading global supplier of critical minerals.

PROGRAM 6: Remediation and Mine Closure

As more Western Australian mines approach closure, uncertainty around land relinquishment, rehabilitation outcomes, and long-term liabilities highlights the need for improved mine closure strategies. Program 6 focuses on developing innovative technologies and approaches for mine remediation, sustainable post-mining land use, and evidence-based decision-making.

Key priorities include preventing acid mine drainage, treating tailings, improving data management and predictive capabilities, streamlining regulatory processes, and enhancing environmental and social outcomes. The program aims to reduce remediation costs, minimise risks and environmental impacts, create positive post-mining legacies for communities, and position Western Australia as a global leader in mine closure and rehabilitation.

Our Focus Areas

MRIWA Focus Areas are targeted initiatives designed to stimulate and enhance high-value activities that benefit Western Australia. These areas may address specific segments of the mining value chain or span the entire chain, depending on where the greatest impact can be achieved.

MRIWA uses these Focus Areas to foster collaboration between industry, academia, and government, aiming to activate innovation networks, support research, and attract investment. Each Focus Area has its own set of objectives, calls to action, and expected outcomes.

Focus Area Summary 2025-2026

	Alternative Use of Tailings and Waste	Critical Minerals	Exploration Amplification	Green Steel	Net Zero Emission Mining	Precision and Low Impact Mining
No. Projects[2]	9	14	16	5	3	4
MRIWA Contribution	$651 K	$6.0 M	$3.8 M	$680 K	$460 K	$735 K
Third-Party Contribution	$1.3 M	$7.3 M	$21.6 M	$5.1M	$2.7 M	$585 K
Total Research Value	**$1.96 M**	**$13.3 M**	**$25.4M**	**$5.8 M**	**$3.2 M**	**$1.3M**

[2] Active projects only; drawdown amounts included; Includes scholarships; does not include as yet unallocated funds within CRCs/ Research Centres

Alternative Use of Tailings and Waste

Mining generates some of the world's largest industrial waste streams, and Western Australia's continued growth means that volume will keep rising. At the same time, tailings and residual materials once written off as waste are increasingly recognised as a source of latent value containing recoverable metals, usable bulk material, and untapped potential for carbon capture. MRIWA's Alternative Use of Tailings and Waste focus area is directed at turning that liability into an asset.

Problem

Without effective reprocessing and valorisation pathways, tailings and mine waste remain a long-term environmental liability rather than an asset. They consume land for storage, pose risks to surrounding ecosystems, and leave value bearing material permanently unrecovered.

Objective

To recover critical minerals from tailings, upcycle and downcycle mine waste into valuable construction materials, and investigate accelerated mineral carbonation for permanent carbon capture. Underpinning this work is a commitment to circular economy thinking, turning mine waste from a disposal liability into a valuable resource.

2025-26 Achievements

Advancement of the beneficial reuse of mine waste, spanning construction sand alternatives and carbon-negative mineral carbonation, generating evidence to support regulatory frameworks and scalable tailings management:

- Alternative Sands (M10469, M10607): Advanced characterisation, modelling, and field trials of de-lithiated beta-spodumene (DBS) as a virgin sand alternative for infrastructure and roads, generating dust, groundwater, and lithium mobilisation data to inform regulatory frameworks for industrial tailings reuse.
- Mineral Carbonation for CO_2 Sequestration (M10624, M10619): Identified mineralogical properties supporting carbonation potential and reduced acid mine drainage (AMD) risk and developed a hybrid electrocoagulation–carbonation–membrane system for combined water treatment, metal removal, and CO_2 sequestration — progressing a scalable pathway for carbon-negative tailings management.

Total Research Value

$1.96M

MRIWA Contribution

$651K

Total Projects

9

Investigating the Valorisation Potential of Mine Waste for Mineral Carbonation

THE CHALLENGE

The challenge for Western Australian mining operations is to convert large volumes of tailings from a long-term environmental liability into a practical asset for carbon dioxide removal. While mineral carbonation is a promising pathway, implementation is constrained by limited site-specific data on tailings mineralogy, geochemistry, particle size and storage characteristics, making it difficult to prioritise facilities, quantify CO_2 uptake potential, and design scalable processing routes.

Program 6 – Remediation & mine closure

STATUS: Completed[3]

Project No: M10615

KEY FINDINGS

This project delivered a desktop-based assessment of WA tailings resources for mineral carbonation by integrating mine-waste databases (MINEDEX, Atlas of Australian Re-mining Potential, Global Tailings Portal) with Geological Survey of Western Australia (GSWA) geological mapping and the polygon-based Mining Residue dataset.

A Geographic Information System (GIS) screening workflow was used to identify Tailings Storage Facility (TSF)s located within mafic–ultramafic lithologies (as proxies for Mg- and Ca-rich silicates), and international pilot-scale evidence was synthesised into a multi-criteria conceptual framework to guide future site ranking, data collection, and pilot design.

BENEFIT TO WA

The work strengthens WA's evidence base for carbon-neutral mining by identifying where the State's largest and most prospective tailings inventories coincide with favourable host lithologies, and by clarifying the key data fields needed to assess sequestration potential with confidence.

The outcomes allow regulators and industry target sampling and pilot trials (particularly for nickel and diamond tailings), accelerate development of a fit-for-purpose tailings database, and support future investments that reduce closure liabilities while creating new CO_2 utilisation and storage opportunities in WA.

Lead Organisation

University of Western Australia

Research Contact

Nikhil Kumar

Sponsors

Fully funded by MRIWA

Total Research Value

$18,000

MRIWA Contribution

$18,000

Funding Digital Object Identifier (DOI)

10.71342/113894459559

Report DOI

10.71342/138881155988

[3] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/investigating-the-valorisation-potential-of-mine-waste-for-mineral-carbonation/

Evaluating the Potential of Mine Waste for Construction Solutions

THE CHALLENGE

The challenge is finding low-cost ways to turn mine waste, particularly iron ore and gold tailings into construction materials that meet Australian Standards. This is made more difficult by variable tailings quality between sites, limited long-term durability and leaching data, and the need to scale laboratory results into practical applications across Western Australia.

Program 5 – New Products and Markets

STATUS: Completed[4]

Project No: M10617

KEY FINDINGS

This project synthesised peer-reviewed literature and case studies to evaluate where and how tailings can substitute conventional construction inputs.

The review found tailings can be effective as fine aggregate in concrete, with an optimum replacement range commonly improving compressive strength, but with decreasing workability as replacement increases.

Use as a supplementary cementitious material (SCM) generally reduced compressive strength unless activation methods were employed. Brick outcomes were more variable and appeared more sensitive to site-specific chemistry and particle-size effects, highlighting the need for targeted validation.

BENEFIT TO WA

The project provides a consolidated evidence base to guide WA stakeholders on high-potential tailings reuse pathways particularly aggregate substitution in concrete supporting reduced tailings storage burden and enabling circular-economy outcomes. By clarifying technical trends, standards considerations, and key knowledge gaps (durability, leaching, and WA site-specific testing), the findings can help prioritise future research and de-risk pilot trials, with the longer-term potential to lower material costs and environmental impacts across WA's mining and construction sectors.

Lead Organisation

University of Western Australia

Research Contact

Sarah Scott

Sponsors

Fully funded by MRIWA

Total Research Value

$13,500

MRIWA Contribution

$13,500

Funding DOI

10.71342/533138389000

Report DOI

10.71342/776967846322

[4] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/evaluating-the-potential-of-mine-waste-for-construction-solutions/

Critical Minerals

As demand for critical minerals grows and grades decline, Western Australia's advantage will depend less on extraction and more on recovery, processing, and value creation. MRIWA's Critical Minerals focus area is helping close that gap.

Problem

Western Australia holds significant critical mineral reserves but limited midstream and downstream processing capacity. Without coordinated investment in recovery and processing technology, the State risks losing higher-value supply chain activity to other jurisdictions as global competition intensifies.

Objective

To improve recovery and processing efficiency across critical mineral ore bodies and tailings, build local processing and refining capability so that more value is captured onshore, reduce waste and environmental impact across the value chain, and strengthen Western Australia's position in global value-added critical minerals supply chain.

2025-26 Achievements

As global demand for critical minerals accelerates and grades decline, Western Australia's position as a major resource holder is no longer sufficient on its own.

Competitive advantage now depends on what happens after extraction: how efficiently minerals are recovered, how much processing occurs onshore, how effectively waste streams are converted into value, and how far the State moves into higher-value downstream processing rather than exporting raw material.

The Critical Minerals focus area achieved strong technical and commercial progress across rubidium, lithium, and rare earth element projects:

- Rubidium (M10623): Developed a novel extraction process achieving up to 99% leach recovery and 89% rubidium extraction, while reducing reagent use by 67% and operating temperature by 200°C. The project is now at pilot scale, with an international patent filed.
- Lithium (M10521): Advanced the first application of Direct Lithium Extraction (DLE) to WA hard rock spodumene. Phase 1 reached TRL 3 and generated two patents. Phase 2 has attracted $1.23 million in industry co-investment alongside MRIWA support.
- Rare Earths (M10528): Completed a leading study of organic acid leaching for Australian clay-hosted rare earth deposits. Testing achieved up to 90% rare earth oxide recovery within 24 hours, providing a strong platform for future processing development.

Total Research Value

$13.3M

MRIWA Contribution

$6M

Total Projects

14

The effect of water quality on rare earth minerals flotation

THE CHALLENGE

Developing effective alternative water treatment methods to replace the costly reverse osmosis-purified water currently used in processing. This reliance on an expensive solution hampers operational efficiency and drives up costs for mining companies.

Program 3 – Increase recovered value through processing

STATUS: Completed[5]

Project No: M0537

KEY FINDINGS

This research highlighted the significant adverse effects of dissolved ions, acting as impurities, on rare-earth mineral flotation. The interaction of divalent cations with flotation reagents and the alteration of pulp rheology by anions in the flotation pulp both contributed to reduced separation efficiency between valuable minerals and gangue.

BENEFIT TO WA

The project provided insights into how water quality affects processing efficiency in rare-earth mining in WA. It also suggested alternative water treatment methods to lower costs. This research may encourage companies to explore lower-grade deposits if alternative water sources are available, addressing water scarcity issues.

Lead Organisation

Curtin University

Research Contact

Bogale Tadesse

Sponsors

Lynas Rare Earths Limited

Total Research Value

$210,000

MRIWA Contribution

$70,000

Funding DOI

10.71342/837210245430

Report DOI

10.71342/642754334956

[5] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/the-effect-of-water-quality-on-rare-earth-minerals-flotation/

New Opportunities for the PGM Industry in WA

THE CHALLENGE

Platinum Group Metals (PGMs) are needed for a range of new applications including hydrogen electrolysis and industrial chemical production. In Western Australia the industry is not well understood despite the abundance of resources.

Program 1 – Increase recovered value through processing

STATUS: Completed[6]

Project No: M10481

KEY FINDINGS

Platinum Group Metals (PGMs) are found in the Yilgarn and Kimberley regions of Western Australia. They are also present as co-products of nickel, lithium, vanadium, and gold production.

The key resource holders are Podium Minerals, Chalice Mining, and Future Metals. The commercially viable portions of these resources contain ruthenium, rhodium, and iridium (PGM 6E). It is unlikely that platinum and palladium alone would support a viable industry in Western Australia. There are legacy resources within BHP Nickel West nickel concentrate and smelter tailings that may hold notable value.

Modelling has shown that achieving a saleable PGM concentrate of approximately 600 ppm would require virgin resources to be supplemented by lower-cost PGM 6E recovery from tailings. A smelter operated through a consortium of producers is a likely pathway for further study.

BENEFIT TO WA

The benefit of a PGM industry would be to support the co-product streams of gold, nickel, and lithium production, making these minerals more economic while creating a new industry.

A collaborative processing centre in the Mid-West and Eastern Goldfields would be expected to generate significant long-term revenue for the state and help support other industries by providing a second revenue stream.

Lead Organisation

ACIL Allen

Research Contact

Ryan Buckland

Sponsors

Fully funded by MRIWA

Total Research Value

$292,678

MRIWA Contribution

$292,678

[6] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/new-opportunities-for-the-pgm-industry-in-wa/

Green Steel

The iron ore industry is the State's largest and most important industry, providing direct and indirect economic and social contributions which are greater than any other industry to the State. Its contribution is also significant to the national economy.

With the steel industry generating more than 7% of global carbon emissions, there is a significant focus on the development of green steel technology.

Problem

Western Australia iron ores are predominately used in the blast furnace pathway with corresponding high emission profiles using coal.

Understanding the use of these ores in lower emissions iron pathways is not yet mature. Ore Processing knowhow, new technologies and use of WA energy options needs further research and then demonstration at scale. The iron ore requirements of the greener iron future are needed.

Objective

MRIWA's objectives for the Green Steel Focus Area is to

1. Support Western Australian process facilities and capabilities for multiple green steel producers.
2. Support development of low emission processing technologies for Australian iron ores.
3. Develop opportunities for downstream industries and innovation to support green steel.

The intended outcomes are to increase economic value from WA's iron ore resources, increase royalties for the state of WA and to develop a green steel practice and knowledge base in WA.

2025-26 Achievements

Release of an updated green steel model including electric smelting scenarios is now online and being used as a workshop and industry resource tool.

MRIWA has given support to industry and government for the NEOSMELT Electric Smelting Furnace project and CALIX direct reduction project which are due to final approval in 2026.

MRIWA continues to support the Heavy Industry Low-carbon Transition Cooperative Research Centre (HILT CRC) (on behalf of the Department of Energy and Economic Diversification (DEED)) and supports 6 active drawdown projects.

Projects completed include:

- M10497 Green pyromet/hydromet pathways.
- M10504 The upgrading of iron ore for DRI production using products from seawater.
- M10505 Intermediate product exports for Australia-China green steel.
- M10506 Analysis of market, cost and locational factors for green iron and steel in Australia.

Total Research Value

$5.8M

MRIWA Contribution

$680K

Total Projects

5

Analysis of market, cost and locational factors for green iron and steel in Australia

THE CHALLENGE

Iron and steel production contributes over 7% of global CO_2 emissions. While demand for green alternatives is rising, high costs and uncertain market support for low-carbon processes remain major barriers.

Program 5 – New products and markets

STATUS: Completed[7]

Project No: M10506

KEY FINDINGS

This project assessed locational factors, scrap availability, and market dynamics to clarify future iron ore needs.

Locational Factors

- Availability and cost of energy
- Regulation & policies
- Ore types
- Labour costs
- Proximity to facilities
- Transport infrastructure
- H2 storage/transport costs
- Current production setup

Scrap Availability

Steel scrap recycling and remelting plays a vital role in the overall decarbonisation strategy of iron and steelmaking if shifting from Blast Furnace (BF) - Basic Oxygen Furnace (BOF) route to Electric Arc Furnace (EAF) route pathways is to be taken. The project work reveals approximately 4 million tonnes of steel scrap were recovered annually in Australia, and that on average, Victoria and New South Wales together contribute about 63% of the total. Between 2016 to 2020, roughly half of steel scrap originated from Municipal and Solid Waste collection while 30% and 20% originated from Construction and Demolition, and Commercial and Industrial sources, respectively. Roughly 2 Mt of scrap was utilised locally, and the other 2 Mt was exported overseas with Bangladesh, Vietnam, and Indonesia the top three export destinations.

Market Dynamics

Share of steel demand that is green is expected to rise from 18%-46% in 2030 to 41%-76% in 2050. Regional demand for green steel led by China, followed by Europe, North America, and Southeast Asia. Benchmarking uncovers scenarios with significant projected shortfalls in regional supply of green steel particularly in China. Demand for primary green steel in the automotive industries led by China, followed by Japan, Korea and Taiwan (JKT).

BENEFIT TO WA

Understanding global green iron markets will help WA producers align with downstream investors, enabling local processing technologies and boosting Australia's competitiveness in low-carbon steel exports.

Lead Organisation

The Australian National University

Queensland University of Technology

Swinburne University of Technology

University of Adelaide

Research Contact

Frank Jotzo

Sponsors

HILT CRC

Onesteel Manufacturing Pty Ltd

FMG Procurement Services Pty Ltd

Roy Hill Holdings Pty Ltd

Total Research Value

$261,517

MRIWA Contribution

$20,000

Funding DOI

10.71342/845420259982

[7] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/analysis-of-market-cost-and-locational-factors-for-green-iron-and-steel-in-australia-2/

Intermediate product exports for Australia-China green steel

THE CHALLENGE

Direct Reduced Iron (DRI) production is set to grow from 8% to 24% by 2050. To make this production economically viable, higher grade iron ores will be required. An increasing proportion of mined iron ore in Western Australia will not be of suitable grade for DRI.

Program 5 – New products and markets

STATUS: Completed[8]

Project No: M10505

KEY FINDINGS

The project delivered techno-economic and environmental models of individual process steps in conventional as well as decarbonised iron and steel making scenarios. The modelling allowed different steps of the process to occur in different countries, including with Australian exports of intermediate products such as 30, 50 or 70% metallised DRI.

Emissions from different process steps were determined in a Life Cycle Assessment (LCA). Transport costs and capacity constraints are included in a highly granular network representation. These components were combined in an optimisation model to find cost-optimal solutions for different levels of decarbonisation of Chinese steel demand.

The model results show the Electric Smelter Furnace (ESF) will be of key importance to the cost-competitiveness of Australian iron ore in future green steel value chains, regardless of whether the production of iron occurs in Australia or China. It suggests that in scenarios with high green steel demand in China, Australian iron ore consumption would climb together with ESF capacity, from near zero in scenario with no or very little ESF capacity, to 380 Mt of Australian iron ore consumption in a scenario with an ESF capacity of 400 Mt or above. It is therefore imperative Australian industry and government work to stimulate the technological development of the ESF, which is currently still in the demonstration stage, and help support their industrial-scale rollout.

BENEFIT TO WA

The assessment provides a basis for future decision makers and for policy makers to determine the best pathways for green iron and steel.

The results highlight the role for further technology development, such as novel technologies for beneficiation or reduction via electrolysis of ores, in improving the competitiveness of Australian ores in a future Chinese market for green steel.

They also highlight the importance of exploring the development of green iron markets beyond China, as the results presented here say nothing about the cost-competitiveness of Australian green iron production for supply into the Japanese, Korean, Indian, Taiwanese, European, or other markets.

Lead Organisation

The Australian National University

Curtin University

Research Contact

Jorrit Gosens

Sponsors

HILT CRC

FMG Procurement Services Pty Ltd

Grange Resources (Tasmania) Pty Ltd Industry

Onesteel Manufacturing Pty Ltd

Roy Hill Holdings Pty Ltd

Total Research Value

$254,461

MRIWA Contribution

$20,000

Funding DOI

10.71342/017161370721

[8] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/intermediate-product-exports-for-australia-china-green-steel-2/

The upgrading of iron ore for DRI production using products from seawater

THE CHALLENGE

Direct Reduced Iron (DRI) production is set to grow from 8% to 24% by 2050. To make this production economically viable, higher grade iron ores will be required. An increasing proportion of mined iron ore in Western Australia will not be of suitable grade for DRI.

Program 3 – Increased recovery through processing

STATUS: Completed[9]

Project No: M10504

KEY FINDINGS

The use of renewable energy and reagents derived from seawater desalination brines has been investigated to upgrade treated and leached lower-grade waste iron ores. Removing impurities that affect steel quality, such as phosphorus and gangue minerals, could enable lower-cost steel production.

The results obtained from this study showed that silica and alumina levels could be reduced by more than 60%, while phosphorus levels could be reduced by up to 70%. By-products, including calcium-alumina-silicates produced during these trials, may also improve the economics of the process.

It was also found that pre-heating ores can lead to improved results, and that the combined processes could increase iron recoveries.

BENEFIT TO WA

If commercialised, this process will allow Western Australian ores to be increasingly used for DRI production by increasing iron grades. It will also produce significant quantities of potable water as a by-product, which is particularly valuable given that many iron ore resources are located in some of the driest parts of Western Australia.

Recovery of brines will greatly reduce the volume of brine requiring ocean disposal. The project outputs were used to progress Project M10522, which will apply these findings to the design of a potential pilot plant for a new brine processing technology.

Lead Organisation

Curtin University

Research Contact

Jacques Eksteen

Sponsors

HILT CRC

FMG Procurement Services Pty Ltd

Roy Hill Holdings Pty Ltd

Onesteel Manufacturing Pty Ltd

Total Research Value

$455,000

MRIWA Contribution

$20,000

[9] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/the-upgrading-of-iron-ore-for-dri-production-using-products-from-seawater/

Green pyromet/hydromet beneficiation pathways

THE CHALLENGE

Direct Reduced Iron (DRI) production is set to grow from 8% to 24% by 2050. To make this production economically viable, higher grade iron ores will be required. An increasing proportion of mined iron ore in Western Australia will not be of suitable grade for DRI.

Program 3 – Increased recovery through processing

STATUS: Completed[10]

Project No: M10497

KEY FINDINGS

This project explored the potential of renewable energy-powered beneficiation flowsheets to upgrade Pilbara Bedded Iron Deposit (BID), Channel Iron Deposit (CID) and Detrital Iron Deposit (DID) fine iron ores to greater than 65% Fe, and preferably greater than 67% Fe. The flowsheet options assessed included combined low- to mid-temperature pyrometallurgical-hydrometallurgical processes, pyrometallurgical-dry magnetic separation (DMS), low-temperature fluidised-bed magnetisation roasting (FBMR)-hydrometallurgical processing, and FBMR-DMS processing.

The performance of a novel, thermally assisted beneficiation process was demonstrated at pilot scale. The process combined a drop tube reactor (DTR) for flash heating with wet high-intensity magnetic separation (WHIMS) and was tested on a low-grade iron ore powder with an initial iron content of 54.8 wt.% Fe. An in-depth analysis was undertaken to assess the impact of flash heating on ore conversion, mineralogy, and associated chemical and physical characteristics.

The main findings from the study were as follows:

- The proposed process produced a hematite-rich concentrate using moderate heating temperatures of 400-500°C, demonstrating effective ore upgrade performance.
- Iron grades of up to 60 wt.% Fe were achieved, with iron recoveries exceeding 90%.
- The process generated a high specific surface area (SSA), reaching up to five times that of the untreated ore.
- Ore conversion, mineralogy, and chemical and physical properties were significantly influenced by both heating rate and particle residence time.
- Samples subjected to flash heating in the DTR exhibited different thermal decomposition behaviour from samples heated at slower rates in a thermogravimetric analyser (TGA).
- These differences resulted in variations in mineralogy and product characteristics, including measured SSA values and SSA-conversion relationships.
- The degree of calcination was lower in samples processed in the DTR than in those heated in the TGA.

BENEFIT TO WA

This project has the potential to enable more efficient upgrading of Western Australian iron ores and support the increased utilisation of Pilbara goethite ores in downstream processing. This includes applications in pellet production, DRI manufacture, and green iron production.

Lead Organisation

University of Adelaide

Research Contact

Alfonso Chinnici

Sponsors

HILT CRC

Onesteel Manufacturing Pty Ltd

FMG Procurement Services Pty Ltd

Roy Hill Holdings Pty Ltd

CALIX Limited

South32

Total Research Value

$504,350

MRIWA Contribution

$20,000

[10] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/green-pyromet-hydromet-pathways/

Precision and Low Impact Mining

Western Australia's mining industry is under increasing pressure to improve productivity while reducing environmental impacts. Maintaining competitiveness requires more precise resource extraction, reduced waste and disturbance, and safer, more efficient operations. MRIWA's Precision and Low Impact Mining (PLIM) focus area supports the development and adoption of technologies and practices that enable this transition.

Problem

The adoption of precision mining technologies remains fragmented, with limited integration of high-resolution data and ongoing gaps between research and operational implementation. These challenges can reduce productivity and contribute to increased waste, energy and water consumption, and environmental and operational risks.

Objective

To improve resource extraction efficiency through advanced technologies and data-driven approaches, while reducing waste, disturbance, and emissions. The focus area aims to accelerate the delivery of practical mining solutions that enhance productivity, environmental performance, and the long-term competitiveness of Western Australia's mining sector.

2025-26 Achievements

The PLIM portfolio delivered advances in mine optimisation, precision technologies, automation, and environmental management.

Key achievements include:

- Sustainable optimisation of mining complexes through innovative algorithms (M10430): Improved mining selectivity through advanced optimisation algorithms.
- OptiClino Precision Drill Alignment System (M10660): Enhanced drilling accuracy and data quality to reduce dilution and improve resource recovery.
- Corrosion Monitoring and Protection System (M10585) and Automated Flange Bolting Robot (M10529): Progressed automation and digital technologies towards operational deployment, supporting safer and more efficient mining operations.
- AMD/NMD Site Remediation and Closure (M10442) and Mine Pit Lake Assessment and Management (M10458): Delivered tools and knowledge to improve mine closure outcomes and support sustainable post-mining land use.

Total Research Value

$1.3M

MRIWA Contribution

$735K

Total Projects

4

Precision and Low Impact Mining Technologies Inventory

THE CHALLENGE

To ensure the minerals industry meets Environmental, Social and Governance (ESG) principles, a focus on responsible mining practices, reduced footprints and mitigation of environmental impacts are essential. Despite technological advancements, legislative bodies and research institutes lack knowledge on novel and emerging Precision and Low Impact Mining (PLIM) technologies.

Program 1 – Expand the mining envelope

STATUS: Completed[11]

Project No: M10599

KEY FINDINGS

In Western Australia, underground and solution mining exhibited significantly higher extraction and spatial precision than open pit mining. Underground mining also demonstrated the lowest overall environmental impact, while solution mining achieved comparable results.

The greatest potential to improve material extraction precision was demonstrated via phyto-mining, solution mining, and in-situ recovery. Autonomous haulage, dry stacking and the Jameson Concentrator demonstrated greater reductions in disturbance footprints compared to conventional technologies. Adoption barriers included scalability, geological suitability and groundwater contamination risks.

BENEFIT TO WA

Preliminary quantitative baselines to characterise the Western Australian mining industry were developed. It established quantifiable precision and environmental impact metrics to support the identification of potential PLIM technologies, providing a foundation for strategic decision making on future research investments in technologies with the greatest environmental benefit.

Lead Organisation

University of Western Australia (UWA)

Research Contact

Keely Gausten

Sponsors

Fully funded by MRIWA

Total Research Value

$18,000

MRIWA Contribution

$18,000

[11] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/precision-and-low-impact-mining-technologies-inventory/

Algae-based technologies for improved environmental outcomes and sustainable post-mining futures

THE CHALLENGE

To use algae to turn mine water and waste into tools for clean-up, carbon reduction and lasting post-mining opportunities for communities and industry.

Program 6 – Remediation & mine closure

STATUS: Completed[12]

Project No: 10501

KEY FINDINGS

Algae can safely grow in many mine-affected waters and be used to treat contaminated water, capture carbon and stabilise mine waste.

Further, algae can support dust control, soil recovery and faster rehabilitation, while producing useful products such as bio-fertilisers and other bio-products.

Together, these findings demonstrate a practical pathway to turn ongoing mine liabilities into sustainable environmental and economic assets.

BENEFIT TO WA

Algae-based technologies help reduce mine closure costs by improving water treatment and stabilising mine waste, which are major cost drivers in rehabilitation. For example, algae can remove contaminants and increase pH in mine water, reducing reliance on chemicals.

Lead Organisation

Commonwealth Scientific Industrial Research Organisation (CSIRO)

Research Contact

Anna Kaksonen

Sponsors

CRC for Transformations in Mining Economies (CRC TiME)

Fortescue Ltd T/As Fortescue Metals Group Ltd

Heidelberg Materials Australia Pty Ltd T/As Hanson Construction Materials

Rio Tinto Services Limited

South32 Group Operations Pty Ltd

Department of Environment Science and Innovation (Office of the Queensland Mine Rehabilitation Commissioner)

Energy Australia Yallourn Pty Ltd

Murdoch University

Total Research Value

$270,000

MRIWA Contribution

$30,000

[12] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/algae-based-technologies-for-improved-environmental-outcomes-and-sustainable-post-mining-futures/

Towards a Mechanistic Understanding of Electrokinetic In Situ Leaching

THE CHALLENGE

Electrokinetic In Situ Recovery (EK-ISR) has the potential to become a transformative mining technology through eliminating many of the problems threatening the industry's social license to operate. Upscaling and commercialisation of the technology need to be underpinned by a refined scientific understanding of the process.

Program 1 – Expand the mining envelope

STATUS: Completed[13]

Project No: M0544

KEY FINDINGS

This work provided significant insights into the physical and geochemical processes by which EK-ISR of metals is controlled. Gold extraction efficiency varied significantly among tested ore types, with iron-oxide copper gold deposits relatively amenable to gold recovery while extraction was more challenging from sulfide-rich ores.

Favourable copper recoveries were obtained for all ore materials tested. Life cycle assessment indicates EK-ISR would deliver sustainability benefits with respect to both emissions and land use.

BENEFIT TO WA

EK-ISR will enable extraction of metals from a wide range of low-permeability media such as intact ore, clays and tailings without the need for excavation. This will provide access to otherwise stranded Western Australian assets that cannot be mined economically with conventional mining technologies, while reducing the environmental impact of mining.

Lead Organisation

University of Western Australia

Research Contact

Henning Prommer

Sponsors

BHP Billiton

Evolution Mining Ltd

Newcrest Mining Ltd

Newmont Mining Services Pty Ltd

Total Research Value

$842,605

MRIWA Contribution

$290,605

Report DOI

10.71342/428543721325

[13] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/towards-a-mechanistic-understanding-of-electrokinetic-in-situ-leaching/

Automatic Knowledge Extraction from Industrial Maintenance Short Text Using Deep Learning

THE CHALLENGE

Maintenance is essential for efficient operation and preventing asset failures which can present safety and environmental hazards, risk regulatory non-compliance and lead to significant financial loss. Within this context, the unstructured data captured by operations and maintenance technicians and stored in historical maintenance work order records is of immense value. The inherent value of these unstructured texts proves a compelling case for automated Information Extraction (IE) as the task of manually processing the data is fraught with challenges, such as large volume of generated content, unique linguistic characteristics and low quality of textual data, and complex technical nature of maintenance domain itself.

Program 1 – Remediation & mine closure

STATUS: Completed[14]

Project No: M0508a

KEY FINDINGS

The thesis addresses these challenges by developing a novel annotation software, language resources, and methods tailored to applying Natural Language Processing (NLP) to short text descriptions of maintenance work order records. Two novel tools are presented:

- LexiClean: a multi-task annotation tool for lexical normalisation, enhancing text quality and preserving privacy; and
- QuickGraph: enabling collaborative, multi-task IE.

Leveraging of these tools, the development of MaintNorm, MaintIE and MaintNorm IE tools set the benchmarks for deep learning-based lexical normalisation and IE within the maintenance domain, specifically, entity recognition and relation extraction.

BENEFIT TO WA

The research proposes a novel method for constructing maintenance property graphs that systemically capture both explicit information and implicit domain knowledge through a combination of automated extraction and expert-guided annotation.

The thesis advances both the field of NLP within industrial maintenance and the practical extraction of actionable insights from maintenance records, paving the way for more informed asset management decision-making.

Lead Organisation

University of Western Australia

Research Contact

Tyler Bikaun

Sponsors

Fully funded by MRIWA

Total Research Value

$120,000

MRIWA Contribution

$120,000

Report DOI

10.26182/hhg8-ra38

[14] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/automatic-knowledge-extraction-from-industrial-maintenance-short-text-using-deep-learning/

Net Zero Emission Mining

Western Australia is on the cusp of a unique economic and global leadership opportunity through transforming its greenhouse-gas-intensive, export-focused mining industry into a world-leading exporter of low-emissions raw materials and value-added commodities.

Technological innovation holds the key to this opportunity, with significant investment in research, development and demonstration (RD&D) required to de-risk emerging technologies critical to overcoming the technical and commercial barriers to implementing low emissions technologies in the mining sector.

Problem

Western Australia's minerals industry is a major contributor to the State's carbon emissions.

Objective

Support decarbonisation of the resources sector to achieve the State Government's commitment to net zero emissions by 2050, and to ensuring our mineral exports remain competitive and our communities prosper in a low-emissions global economy.

2025-26 Achievements

MRIWA research in the Net Zero Emission Mining focus area delivered significant advances in the electrification of mine plant and equipment, low-emissions water treatment, and improving the efficiency of bulk material transport. Our work also developed an inventory of the research and development ecosystem supporting heavy industry decarbonisation in Western Australia.

Key achievements include:

- Development and testing of digital tools and intelligent battery control strategies for integrating renewable energy use at mine sites (M10443).
- Validation of an innovative energy-saving bulk-material conveyor system to Australian standards (M10549).
- Demonstration of a smart nature-based water treatment system to support the decarbonisation of water in mining (M10447).

Total Research Value

$3.2M

MRIWA Contribution

$460K

Total Projects

3

Big Roller™, energy efficient overland conveying with negative marginal cost of abatement energy efficient overland conveyor development

THE CHALLENGE

Pilbara iron ore mines face growing pressure to cut carbon emissions as diesel haulage becomes more energy intensive. With practical electrification of the haulage fleet years away, a significant opportunity exists through the potential of larger-diameter conveyor rollers to deliver immediate energy efficiency improvements.

Program 5 – New products & markets

STATUS: Completed[15]

Project No: M10549

KEY FINDINGS

Testing confirmed increasing conveyor idler roller diameter from the current standard dimensions of 152 mm to 508 mm reduces energy-wasting indentation rolling resistance by 68% for steel rollers and 57% for lightweight nylon composite rollers.

A commercial batch of 50 nylon rollers weighing under 25 kg was manufactured, establishing the potential for supplying rollers suitable for safe, practical field handling.

Relocatable conveyor ground modules incorporating larger-diameter rollers were independently validated to Australian structural standards.

BENEFIT TO WA

Installation of the Big Roller™ conveyor technology solution could support approximately 25 skilled WA jobs per project, and the technology creates significant IP export potential.

The demonstrated efficiency gains from the system could cut up to 1.5 MW of installed power demand or 12,500 tonnes of CO_2 annually per 13.5 km conveyor installed – providing the potential for rapid emissions savings.

Lead Organisation

Big Roller™ Overland Conveyor Company

Research Contact

Shawn Ryan

Sponsors

Big Roller™ Overland Conveyor Company

Total Research Value

$500,000

MRIWA Contribution

$250,000

[15] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/big-roller-energy-efficient-overland-conveying-with-negative-marginal-cost-of-abatement-energy-efficient-overland-conveyor-development/

Net Zero Research, Development & Deployment Roadmap Inventory

THE CHALLENGE

The current WA heavy industry decarbonisation R&D landscape consists of multiple organisations and projects. The lack of a shared understanding poses a potential risk to long-term emissions reduction and the strategic direction for investment in the development of technologies crucial for decarbonising heavy industry in WA. This could impede effective and efficient use of public and private funding.

Program 4 – Infrastructure & logistics

STATUS: Completed[16]

Project No: M10600

KEY FINDINGS

Findings indicate there is currently strong support for the development of a new low emissions economy in WA in iron and steel making, hydrogen and ammonia manufacturing, and cement and concrete production.

Funding gaps identified were linked to the uneven distribution of funding within universities-led research compared to industry led-research. An assessment found that a technology readiness gap between bench top laboratory component testing and pilot scale/demonstration plants (TRL 4 to TRL6/7).

Future research should focus on improving inventory maintenance and keeping pace with rapid research developments. Ongoing data collection, collation, and commitment to long-term management are essential for demonstrating the value of the inventory and sustaining stakeholder engagement. The use of machine learning, AI, and automated systems, using targeted keywords and known data sources, will be crucial for efficient and continuous data gathering.

Future work in expanding the inventory to include commercial and social readiness measures for better investment evaluation, with new parameters developed alongside stakeholders.

BENEFIT TO WA

The inventory will provide an understanding of the heavy industry decarbonisation R&D landscape in WA, and could contribute to developing a strategic, coordinated direction for heavy industry RD&D investment.

Lead Organisation

University of Western Australia

Research Contact

Thi Bao Tram (Phoebe) Tran

Sponsors

Fully funded by MRIWA

Total Research Value

$18,000

MRIWA Contribution

$18,000

Funding DOI

10.71342/303515157895

[16] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/net-zero-research-development-deployment-inventory/

Cooling System for Retrofitted Electric Mining Truck (EPCA-E100 project)

THE CHALLENGE

Retrofitted electric haul trucks must operate reliably in extreme mining conditions, including very high ambient temperatures. Batteries and power electronics have narrower temperature limits than diesel engines, so a purpose-designed cooling system is essential to maintain performance, safety and component life.

Program 4 – Infrastructure & logistics

STATUS: Completed[17]

Project No: M10550

KEY FINDINGS

EPCA developed and tested a cooling system and control strategy for a retrofitted 100-tonne electric Caterpillar 777D truck. Mine-site testing demonstrated that coolant flow distribution (via orifice settings) can keep inverter temperatures below first-derating thresholds.

Results also showed that a battery thermal management chiller is not well suited to sustained high heat loads from motors/inverters, with cooling effectiveness reducing over time as thermal load exceeds chiller capacity.

BENEFIT TO WA

The work supports lower-emissions mining by enabling retrofit pathways for heavy haul trucks using a circular-economy approach. Improved thermal management helps electric haul trucks operate more reliably in WA's hot mining environments, accelerating electrification uptake and strengthening local METS capability and innovation.

Lead Organisation

Electric Power Conversions Australia (EPCA)

Research Contact

Clayton Franklin

Sponsors

Electric Power Conversions Australia (EPCA)

Total Research Value

$500,000

MRIWA Contribution

$250,000

Report DOI

10.71342/359794298652

[17] https://www.mriwa.wa.gov.au/news-and-events/cooling-system-designed-for-retrofitted-electric-mining-truck/

Wetland in a Box (EnphytoBox®) - a smart water treatment system to support the decarbonisation of water in mining

THE CHALLENGE

Reducing the carbon footprint of water supply is an emerging issue for the WA mining sector, particularly in light of the challenge of transitioning to net-zero emissions. Scalable, net-zero emissions water treatment technologies with real-time monitoring and data-driven remote operational capabilities are needed across the sector.

Program 6 – Remediation & mine closure

STATUS: Completed[18]

Project No: M10447

KEY FINDINGS

Syrinx developed the EnPhytoBox®, a modular, net-zero wastewater treatment unit using nature-based methods. The EnPhytoBox® operates via an Industrial Internet of Things (IIoT) system enabling remote monitoring and control to allow real-time data visualisation and control of water quality and operations. Syrinx is now preparing to deploy the technology widely for uses including end-of-mine restoration.

BENEFIT TO WA

Deployment of the EnPhytoBox®, could deliver sustainable treatment of remote mine waste waters and enable data-driven sustainable water decisions within the mining and METS sectors.

The transparency of real-time data provided could also help improve relationships between mining and adjacent communities and sectors, supporting State and industry goals of reducing carbon emissions.

Lead Organisation

Syrinx Environmental Pty Ltd

Research Contact

Kathy Meney

Ljiljana Pantelic

Sponsors

Syrinx Environmental Pty Ltd

Total Research Value

$86,600

MRIWA Contribution

$43,400

Report DOI

10.71342/111134055303

[18] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/wetland-in-a-box-enphytobox-a-smart-water-treatment-system-to-support-the-decarbonisation-of-water-in-mining/

Exploration Amplification

Advancing mineral exploration technology and knowledge, and the understanding of Western Australia's mineral endowment to reduce exploration risk and accelerate mineral resource discovery in Western Australia.

Problem

The future productivity of mineral exploration in Western Australia requires discovery and characterisation of ore bodies deeper below the surface and hidden from traditional methods of discovery, pushing industry to reduce both the cost and the environmental footprint of exploration.

Objective

Amplification of exploration capacity and outcomes by accelerating the delivery and adoption of innovative research and development, strengthening capability pipelines, and positioning Western Australia as the home of next-generation exploration research and talent.

2025 -26 Achievements

Research projects in MRIWA's Exploration Amplification portfolio delivered new understanding of Western Australia's mineral endowment and advanced the development of innovative exploration technologies reducing the risk and uncertainty in discovering and developing new mineral resources in the state.

Key achievements include:

- Definition of a new integrated model for the development of high-grade gold mineralisation to help guide exploration and resource estimation in the WA gold sector (M10412).
- Application of new Machine Learning methods to deliver consistent and objective mapping of granitic rocks across the Yilgarn region – supporting exploration targeting for gold and critical mineral resources (M10587).
- Pre-commercial validation of a prototype coiled tubing (CT) drilling system for mineral exploration (M10444). Through lowering the cost and environmental footprint of drilling, this system offers a path to supporting future mineral exploration in Western Australia, where many exciting exploration targets lie below deep cover.

Total Research Value

$25.4M

MRIWA Contribution

$3.8M

Total Projects

16

Primary and secondary high-grade gold mineralisation processes in orogenic systems: key to sustainable mining?

THE CHALLENGE

Zones of gold mineralisation can sometimes contain tiny and/or irregularly distributed veins of ultra high-grade gold. Where present, these high-grade intervals can significantly improve mine profitability, but current models of gold transport and deposition do not account for their formation. This leaves the presence and distribution of these zones unpredictable, posing a challenge for industry exploration and resource estimation.

Program 2 – Find More Viable Resources

STATUS: Completed[19]

Project No: M10412

KEY FINDINGS

Discrete high-grade concentrations of gold accumulate where sustained fluid flow, rock deformation, and repeated remobilisation of gold coincide.

Localised ultra high-grade gold mineralisation develops as a consequence of multiple interacting chemical and physical processes.

These can include the development and mechanical transport of gold nanoparticles, deformation-induced electricity, and the influence of crystal defects and silica chemistry on the precipitation and remobilisation of gold within mineralised zones.

BENEFIT TO WA

Improved understanding of the formation and distribution of high-grade gold mineralisation will help the WA gold industry improve the quality and accuracy of resource estimation, reducing the footprint and improving the profitability of future mines.

Lead Organisation

University of Western Australia

Research Contact

Nicolas Thebaud

Sponsors

The Australian Research Council

Fosterville Gold Mine Pty Ltd

Karora Resources Pty Ltd

Newmont Australia Pty Ltd

Northern Star Resources Ltd

Monash University

University of Western Australia

Total Research Value

$1,942,114

MRIWA Contribution

$450,417

DOI

10.71342/232918258291

[19] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/primary-and-secondary-high-grade-gold-mineralisation-processes-in-orogenic-systems-key-to-a-sustainable-mining/

Evolution of Proterozoic multistage rift basins – key to mineral systems

THE CHALLENGE

The long-lived sedimentary basins of the North Australian Craton are increasingly recognised as important hosts for major metal deposits – particularly copper and gold – but understanding of the processes governing metal mobilisation and mineralisation during basin fill and subsequent tectono-thermal events affecting this region is incomplete.

Program 2 – Find more viable resources

STATUS: Completed[20]

Project No: M0554

KEY FINDINGS

The North Australian Craton formed through multiple stages, with long-lived crustal structures controlling basin geometry, faulting, and mineralisation.

Analogue and numerical models show regional Proterozoic basins evolved under elevated geothermal gradients, progressing from wide to narrow rifts, and with inherited structures strongly governing extension and inversion.

Integrated geophysical imaging reveals deep lithospheric corridors linked to major mineral belts across the region, providing a predictive framework for targeting concealed mineral systems.

BENEFIT TO WA

The enhanced understanding this study provides of the mineralisation history of Northern Australia's Proterozoic sedimentary basins will support greater confidence in mineral exploration planning across this emerging mineral province, supporting investment and increasing the probability of future mineral discoveries.

Lead Organisation

The University of Western Australia

Research Contact

Mark Jessell

Sponsors

Anglo American Exploration (Australia) Pty Ltd

Anglo American Plc

Australian Research Council

BHP Group Operations Pty Ltd

IGO Ltd

Monash University

Teck Australia Pty Ltd

Total Research Value

$2,041,040

MRIWA Contribution

$540,837

Report DOI

10.71342/573576910654

[20] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/evolution-of-proterozoic-multistage-rift-basins-key-to-mineral-systems/

A multi-scale approach to controls on mineralisation in the Fraser Zone, Western Australia

THE CHALLENGE

Although hosting some of the most significant recent mineral discoveries in Western Australia, deformation and high-grade metamorphism have largely obscured the primary controls on mineralisation of this of the Fraser Zone in the State's south. This lack of understanding represents a significant challenge to exploration of the Fraser Zone, despite its high fundamental prospectivity.

Program 2 – Find more viable resources

STATUS: Completed[21]

Project No: M0470a

KEY FINDINGS

Integrated tectonic, geochemical, and regolith insights improve understanding of mineralisation. The fundamental geological framework of the Fraser Zone formed in a back arc setting ~1390 Ma, with variable crustal thickness and metamorphism representing key influences on primary mineralisation.

Ni–Cu–Co deposits are controlled by crustal assimilation and local sulfur mixing, with inefficient silicate–sulfide mixing locally limiting mineralisation. Weathering processes create distinctive Ni–Cu dispersion halos that can represent key exploration markers.

BENEFIT TO WA

The enhanced multi-scale understanding of the processes driving mineralisation in the Fraser Zone will support more effective exploration targeting and decision making in this frontier mineral province, helping to drive future economic discoveries.

Lead Organisation

Curtin University

Research Contact

Katy Evans

Sponsors

Curtin University

Department of Mines, Petroleum and Exploration (GSWA)

IGO Ltd

Legend Mining Ltd

Mark Gareth Creasy

Total Research Value

$1,023,300

MRIWA Contribution

$341,300

Report DOI

10.71342/299587366637

[21] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/a-multi-scale-approach-to-controls-on-mineralization-in-the-fraser-zone-western-australia/

Machine-Assisted Granite Mapping in the Archaean Yilgarn Craton

THE CHALLENGE

Much of the Yilgarn's remaining mineral potential lies beneath cover, where exploration is costly and high-risk. Traditional mapping methods are subjective and limited by surface data, creating a need for consistent, scalable approaches to accurately classify granites and target prospective mineral systems beneath cover.

Program 2 – Find more viable resources

STATUS: Completed[22]

Project No: M10587

KEY FINDINGS

Machine learning can successfully combine large geophysical datasets to consistently map granites across the entire Yilgarn Craton. This process identified new geological patterns, refined existing boundaries, and revealed hidden greenstone belts beneath cover.

These results improve understanding of the region and highlight new areas with potential for gold, lithium and rare earth mineral exploration.

BENEFIT TO WA

By making the mapping of granite geology across the Yilgarn more objective and consistent, the outputs of this work will help geologists target mineral exploration more efficiently and with less risk. This increased efficiency will support new discoveries under cover, reduce unnecessary environmental disturbance, and strengthen Western Australia's position as a global leader in exploration technology.

Lead Organisation

RSC Global Pty Ltd

Research Contact

Yongjun Lu

Sponsors

Department of Mines, Petroleum and Exploration (GSWA)

SQM Australia Pty Ltd

Terrain Minerals

Total Research Value

$255,000

MRIWA Contribution

$85,000

Report DOI

10.71342/560531747294

[22] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/machine-assisted-granite-mapping-in-the-archaean-yilgarn-craton/

CuBAS - Structural and sedimentological reconstruction and fluid flow simulations for copper exploration in the Yeneena Basin – Paterson Orogen, WA

THE CHALLENGE

Copper deposits in sedimentary basins can lie deep and often under thick cover, which makes their exploration difficult. Integrated multidisciplinary approaches are needed to help reduce the search space and overcome the limitations of traditional surface-based methods.

Program 2 – Find more viable resources

STATUS: Completed[23]

Project No: M10502

KEY FINDINGS

This project showcases an integrated workflow combining structural restoration, stratigraphic forward modelling, and fluid flow simulation to improve exploration for sedimentary-hosted copper in the Yeneena Basin (WA). The study identified Officer Basin evaporites as a likely brine source, with sub-basin architecture and permeability anisotropy controlling fluid migration. Thermal convection and blind faults were shown to be critical for mineralisation in the Broadhurst Formation. The approach enhances predictive targeting and is applicable to other sedimentary basins.

BENEFIT TO WA

This project enhances Western Australia's global leadership in mineral exploration by developing advanced, integrated modelling tools that reduce exploration risk and cost. It supports more efficient discovery of copper resources critical to the clean energy transition, strengthening the state's economic resilience and contribution to a low-carbon future.

Lead Organisation

Commonwealth Scientific Industrial Research Organisation (CSIRO)

Research Contact

Thomas Poulet

Sponsors

BHP Metals Exploration Pty Ltd

Department of Mines, Petroleum and Exploration (GSWA)

Total Research Value

$600,000

MRIWA Contribution

$150,000

Funding DOI

10.71342/996392307336

Report DOI

10.71342/106693231035

[23] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/cubas-structural-and-sedimentological-reconstruction-and-fluid-flow-simulations-for-copper-exploration-in-the-yeneena-basin-paterson-orogen-wa/

Characterisation of clay-hosted rare-earth element deposits in Australia

THE CHALLENGE

Rare Earths are at the heart of the mineral requirements for new low emission technologies from permanent magnets in wind turbines to new high efficiency electrical conductors and components in batteries. The rate of the discovery of clay hosted Rare Earth Elements (REE) deposits in Western Australia exceeds the industry knowledge base and ability to characterise these minerals. This has resulted in a lack of common practices and reporting of resources and the opportunity.

Program 2 – Find more viable resources

STATUS: Completed[24]

Project No: M10500

KEY FINDINGS

The project aims to characterise samples from a comprehensive suite of Western Australian clay-hosted REE deposits to answer these questions.

1) What controls REE distribution in the weathering profile?
2) What portion of REE are ionically bound to clays versus present in refractory minerals?
3) What refractory mineral phases are present?
4) What controls spatial variation in the degree to which REE are ionically bound?

Collaboration and sponsorship from 10 high potential deposits will help answer these questions.

BENEFIT TO WA

A reliable supply of REE is crucial for the world to make the green energy transition. Demand for electric vehicles and energy storage, all requiring REEs, is forecast to increase 30-fold over the next 20 years; the wind energy industry is forecast to experience similar rapid growth.

However, the extraction of REE in Chinese clay-hosted deposits has caused severe environmental damage. In contrast, REEs sourced under WA's strict regulatory framework are guaranteed to meet strict environmental, social and governance (ESG) standards, allowing WA to compete worldwide.

The growth of the REE resources in WA will help knowledge in processing and extraction of a critical Western Australian development industry. If this project is successful, the study of extraction of these REE will be able to proceed.

Lead Organisation

RSC Global Pty Ltd

Research Contact

Nishka Piechocka

Sponsors

Auric Mining

Dreadnought Resources

Golden Mile Resources

Heavy Rare Earths Ltd

Mt Ridley Mines

MTM Critical Metals

Terrain Minerals

Voltaic Strategic Resources

Total Research Value

$202,500

MRIWA Contribution

$67,500

[24] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/characterisation-of-clay-hosted-rare-earth-element-deposits-in-western-australia/

CRC/Research Centre Participation

The Cooperative Research Centre for Transformations in Mining Economies (CRC TiME), is a national, industry-led research collaboration established in 2020. It brings together mining companies, research organisations, governments and regional and community stakeholders to address the complex challenges associated with mine closure and relinquishment.

CRC TiME's mission is to enable sustainable post-mining transitions by developing the data, tools, technologies and partnerships required to support resilient economic, environmental and social outcomes. The program focuses on maximising the long-term value of mining regions through improved closure planning, rehabilitation, and post-mine land use.

During 2025-26, MRIWA supported three CRC TiME research projects. These projects contribute to advancing knowledge, capability and technology in mine closure and post-mine transition, with a focus on outcomes relevant to Western Australia's mining regions.

Commenced operation:	2020
Funding duration:	10 years
Participants:	74 participants including leading mining and METS companies, regional development organisations, government and research partners
Total Project Value:	$130M comprised of: $29.5M cash from the CRC Program $30.5M cash from industry and research participants $70M in-kind support
MRIWA contribution: (M0558)	$300,000 over 10 years Additional $480,000 in project funding
Projects supported by MRIWA	Mine Pit Lake Assessment and Management: A National Initiative to Support Mine Closure and Regional Opportunities (M10458) Improved Prediction, Remediation and Closure of Acid and Neutral Metalliferous Drainage (AMD/NMD) Sites (M10442)
Projects Completed in Period	Algae-based technologies for improved environmental outcomes and sustainable post-mining futures (M10501)

Mineral Exploration Cooperative Research Centre (MinEx CRC) is developing more productive, safer and more environmentally-friendly technologies supporting the discovery and definition of mineral deposits, including coiled tubing drilling technology and new technologies for collecting and interpreting data while drilling. MRIWA is a participant in the MinEx CRC on behalf of the State government, supporting the delivery of projects addressing the specific exploration needs of Western Australia.

MinEx CRC is currently in its third and final phase of research activity, which is scheduled to conclude at the end of December 2027. MRIWA currently supports four projects in this third phase of CRC activity.

Commenced operation:	2018
Funding duration:	10 years
Participants:	Over 40 partners from mining and METS companies, government, and research organisations
Total Project Value:	$218M comprised of: $50M cash from the CRC Program $42M cash industry and research participants $52M non-staff in-kind $74M staff in-kind
MRIWA contribution: (M0509)	$1M over 10 years Plus additional project contributions of $658,436
Current Projects supported by MRIWA	Drilling Optimisation - Phase 3: MinEx CRC Project 1 (M10582) Seismic in the Drilling Workflow - Phase 3: MinEx CRC Project 5 (M10554) Petrophysics for Mineral Discovery during Drilling - Phase 3: MinEx CRC Project 4 (M10553) Coiled Tubing Drilling for definition of Mineral Deposits - Phase 3: MinEx CRC Project 2 (M10552)
Projects Completed in Period	Seismic in the Drilling Workflow - Phase 2: MinEx CRC Project 5[25] Petrophysics for Mineral Discovery during Drilling - Phase 2: MinEx CRC Project 4[26] Coiled Tubing Drilling for definition of Mineral Deposits - Phase 2: MinEx CRC Project 2[27]

[25] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/seismic-in-the-drilling-workflow-phase-2-minex-crc-project-5/
[26] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/petrophysics-for-mineral-discovery-during-drilling-phase-2-minex-crc-project-4/
[27] https://www.mriwa.wa.gov.au/research-projects/project-portfolio/coiled-tubing-drilling-for-definition-of-mineral-deposits-phase-2-minex-crc-project-2/

Heavy Industry Low-carbon Transition Cooperative Research Centre (HILT CRC) will enable Australia's heavy industry sector to compete in the low-carbon global economy for carbon-neutral materials such as 'green' iron, alumina, cement and other processed minerals. The Australian heavy industries sector will benefit substantially from a carefully considered mix of electrification and hydrogen-based fuels.

HILT CRC has continued with project and outcome delivery in line with its 2023-2027 research focus areas. In 2025 a total of 24 projects were active while 26 projects had been completed. Four (4) new projects were supported by allocation of MRIWA funds in 2025 bringing the total MRIWA drawdown projects to 10, including direct investment to support the stage two ARENA project for the beneficiation of fines to direct reduced iron (DRI grade using brines.

Commenced operation:	2021
Funding duration:	10 years
Participants:	Partners from mining and METS companies, government, and research organisations
Total Project Value:	$176M comprised of: $39M cash from Department of Industry, Science and Resources $43M cash industry and research participants $54M non-staff in-kind $55M staff in-kind
MRIWA contribution: (M10425)	$1M over 10 years[28] Additional $500,000 in direct project funding by MRIWA
Projects supported by MRIWA	Hydromet beneficiation of iron ore using brines implementation (ARENA Funding) (M10522) Derisking of electric smelting furnaces for Australian Ores (M10563) Almina refineries "Next Generation Transition" (ALUMINEX) project (M10591) Optimal fast start pathways to Green Steel via Magnetite (M10605) Australian intermediate product exports in a decarbonised global steel making industry-Phase 2 (M10629) Upscaling of novel green thermally assisted beneficiation pathways and impact of beneficiation on DRI and pellet production (M10636)
Projects Completed in Period	Green beneficiation pathways (M10497) The upgrading of Iron Ore for DRI production using products from seawater RO Brines (M10504) Intermediate product exports for Australia-China green steel (M10505) Analysis of market cost and location factors for green iron and steel in Australia (M10506)

[28] Funding provided in full by the Department of Energy and Economic Diversification and managed by MRIWA.

The ARC Training Centre in Critical Resources for the Future (CCRF) brings together four of Australia's leading universities to deliver applied research and postgraduate training to secure Australia's future critical resource needs.

Supported by a consortium of industry sponsors together with state and federal government funding under the ARC Industrial Transformation Training Centre program, the CCRF is working to address real industry challenges in the critical minerals sector, supporting the free exchange of researchers, students, trainees and mentors – along with the knowledge they carry – across participating academic institutions and industry partners.

The work of the CCRF will generate new knowledge and understanding to enable the detection of mineralised systems through cover with unprecedented accuracy and precision, and improve understanding of the behaviour of critical ore minerals and controls on their distribution – both in the formation of economic ore systems in nature, and in industrial processing to liberate and purify value metals.

Commenced operation:	2024
Funding duration:	5 years
Participants:	Consortium of 25 partners from mining and METS companies, government, and research organisations
Total Project Value:	$10.5M comprised of: $5.0M from the Australian Research Council $5.5M from industry and research participants
MRIWA contribution: (M10479)	$696k over 5 years

Facilities

Cathode Precursor Production Pilot Plant

The Cathode Precursor Production Pilot Plant (C4P) is a partnership between Curtin University, CSIRO, and the Minerals Research Institute of Western Australia.

Formerly funded by the Future Battery Industries Cooperative Research Centre (FBI CRC) and its partners, the C4P operates as a pilot plant to facilitate adoption, commercialisation and dissemination of precursor cathode active material (pCAM) production. During the current funding period, opportunities were identified to simplify processing, reduce costs, and lower environmental impacts across the battery materials supply chain. Local capabilities for producing alternative battery chemistries and conducting computational fluid dynamics (CFD) modelling of the process were also demonstrated, and the automation of analytical workflows was initiated. Overall, the C4P contributes to the development of high performance, cost effective and environmentally sustainable materials for energy storage applications.

The C4P has been pivotal in demonstrating that the battery and critical minerals industry in Western Australia is able to move beyond “dig and ship” mining.

Commenced operation:	2024
Funding duration:	1 year and 3 months
Participants:	Curtin University CSIRO
Total Project Value:	$1.5M comprised of:
MRIWA contribution: (M01569)	$1.5M

Critical Minerals Advanced Processing Common User Facility

A feasibility and detailed business case study is being conducted to investigate the possible establishment of a circa $200M Critical Minerals Advanced Processing common user facility (CMAP) in Western Australia, to support the development of the State's critical minerals processing industry and contribute to national objectives for increasing onshore value-adding and supply chain resilience. This study is co-funded by the Western Australian and the Federal Government, via the Critical Minerals National Productivity Initiative (CMNPI).

The study aims to determine CMAP's technical, commercial, financial and strategic viability. The investigation further aims to identify industry demand for common user pilot and demonstration-scale processing infrastructure, assess potential facility location(s), operating model(s), the types of equipment and services required to support critical minerals processing activities, commercial sustainability, circular economy and environmental considerations, and potential economic benefits for Western Australia and Australia more broadly.

The findings will inform a future government investment decision regarding CMAP.

Study commenced:	2026
Funding duration:	1 year
Participants:	Department of Industry, Science and Resources (DISR)
Total Project Value:	$3.0M
MRIWA contribution: (M10626)	$1.5M

PROGRAMS

METS Innovation Program

Problem

Western Australia's mining sector faces increasing pressure to improve productivity, safety, sustainability and resource recovery while maintaining its position as a globally competitive resources jurisdiction.

The Mining Equipment, Technology and Services (METS) sector is critical to meeting these challenges by transforming research and new knowledge into practical technologies that can be deployed across mining operations. However, the commercialisation and adoption of emerging technologies often require targeted support, industry collaboration and access to development pathways.

Objective

In 2025–26, MRIWA strengthened its support for industry-led innovation by evolving the METS Focus Area into the dedicated *METS Innovation Program*. The program provides matched funding, project facilitation and collaboration support to accelerate the development, validation and commercialisation of innovative products and services by Western Australian METS companies. The program is aligned with MRIWA's strategic research priorities, including critical minerals, net-zero emission mining, exploration amplification, precision and low-impact mining, green steel, and alternative use of tailings and waste.

2025–26 Achievements

A key achievement during the year was the successful implementation of the METS Innovation Program, providing a dedicated mechanism to accelerate innovation, strengthen industry-research collaboration and support the commercialisation of WA-developed mining technologies.

During 2025–26, the program supported a diverse portfolio of industry-led projects spanning automation, exploration, mine decarbonisation, critical minerals, resource recovery and advanced data analytics, including:

- M10529 – Automated Flange Bolting Robot with Camera Vision for Mining and Minerals Processing Infrastructure (Total Marine Technology)
- M10532 – Drone-Deployed Transient Electromagnetic (TEM) System for Exploration and Mining Applications (Loupe Geophysics Pty Ltd)
- M10536 – *Raptor Grav*™: A Next-Generation Airborne Gravimeter (CMG Operations Pty Ltd)
- M10545 – Collar Keeper® System (CKS) Automation Phase (Aquirian Limited)
- M10583 – Critical Minerals Recovery with Simultaneous Generation of Cleaned Groundwater in the Goldfields (EcoTechnol Pty Ltd)
- M10585 – Development and Implementation of CMAP: A Corrosion Monitoring and Protection System for Gold Cyanidation Tanks (TECHT)
- M10623 – Establishing an Australian Rubidium Industry: Extraction and Purification from Pegmatite Ore (Everest Metals Corporation Ltd)
- M10625 – Advancing Low-Carbon High-Grade Silicon Production from Iron Ore Waste – Phase 1 (Element Zero)
- M10633 – Field-Scale Validation of Electrokinetic In-Situ Recovery of Metals from Tailings Waste (Ekion Pty Ltd)
- M10644 – Data Visualisation and Machine Learning for Truck Performance Prediction and Analysis (Electric Power Conversions Australia)
- M10646 – AI-Enhanced Machine Vision System for the Automated Flange Bolting Robot 'Boltron' (Total Marine Technology)
- M10660 – OptiClino Precision Drill Alignment System: MVP Optimisation, Prototype 2 Development and Underground Field Validation at Fimiston Underground Mine (IBT Robotic Systems Group)

The program also celebrated the completion of two projects:

- M10550 – Cooling System for Retrofitted Electric Mining Truck (EPCA-E100 Project) (Electric Power Conversions Australia)
- M10549 – Big Roller™ Energy-Efficient Overland Conveyor Development (Big Roller™ Overland Conveyor Company)

Collectively, these projects advanced technologies in automation, robotics, electrification, energy efficiency, exploration, critical minerals recovery, circular economy solutions and digital analytics.

The Program directly supported Western Australian Government priorities to foster innovation, accelerate decarbonisation, strengthen sovereign capability in critical minerals and enhance the global competitiveness of the State's mining and METS sectors.

Education & Workforce Development Program

The Education & Workforce Development Program, formerly known as the Education Program, underwent a review to see if it was fit for purpose. This review encompassed understanding the Program's stakeholders' needs. It identified internal and external drivers, including a marked decrease in enrolments in mining-related disciplines in Australian universities, as well as low awareness of mining careers. It also took into consideration broader state government policies. As a result, the Program expanded its scope to include workforce development.

Endorsed by the MRIWA Board in December 2025, the Program's scope includes workforce development issues for the WA research workforce. Its vision drives the growth of a highly skilled, diverse, and future-ready workforce to meet the evolving needs of Western Australia's minerals sector.

Through excellence in research, and industry collaboration, the Program promotes lifelong learning, supports diverse career pathways, and enables workforce transformation that fosters innovation, sustainability, and inclusive social and economic development across the State.

Over the year the Program delivered a variety of workshops to enhance the skills of our scholarship recipients, student interns, and scholarship and PD Bursary alumni, including but not limited to:

- Intellectual Property Essentials training
- Why do we need minerals research? (presentation for high school students)
- Aboriginal cultural competency training
- Project Management Fundamentals through AIM WA
- Entrepreneurial Mindset through the Centre for Entrepreneurial Research & Innovation

The Program continues to support sponsorship of the work of Australian Earth Science Education (formerly Earth Science Western Australia) supporting earth science teaching in Kalgoorlie schools.

Total Grant Value	MRIWA Contribution	Total Projects	Completed Projects	Number Commenced
$2.2	$2.2M	23	1	3

MRIWA PhD Scholarships

The Program supports the development of exceptional talent to help meet the future needs of the Western Australian mining industry through:

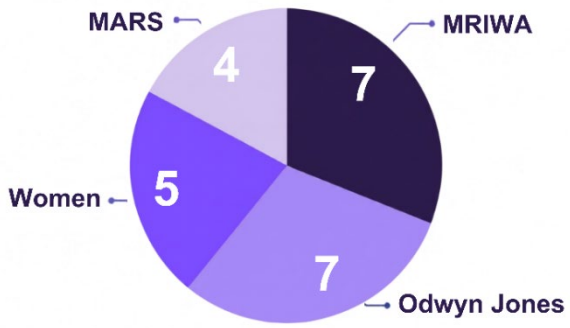
- A minimum of three prestigious MRIWA scholarships available each year to support post-graduate research students at Western Australian universities.
- Outreach and mentoring of PhD students during their studies.
- Administration of PhD scholarships awarded under the WA Government MARS (Mental Awareness, Respect and Safety) Program.
- Ongoing access to Program events and workshops after graduation.

Other activities in the Program

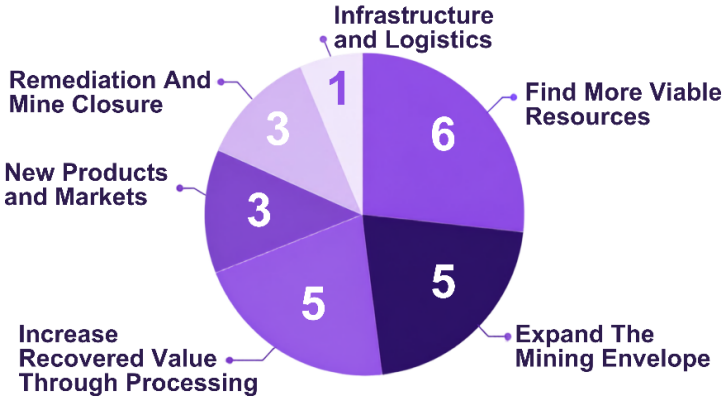
The Program has increased its impact through delivering the following:

- Greater inclusivity in workshop participation: Extending Program workshops and events to Higher Degree by Research students attached to MRIWA-funded research projects.
- Light-touch mentoring with Research Portfolio Managers: PhD scholarship recipients and student interns connected with MRIWA focus area leads. Run in a group setting, the sessions are an opportunity for students to seek advice, discuss research progress and share challenges with peers in similar research disciplines, and guided by the RPM.

Scholarship Type



Program



2026 MRIWA Scholarship Recipients

MRIWA PhD Scholarships

MRIWA PhD Scholarships are awarded through a competitive application process to students undertaking research aligned to MRIWA's Research Priority Plan at any university in Western Australia. One or more MRIWA PhD Scholarships may be awarded annually at the discretion of the MRIWA CEO, within the funds allocated by the MRIWA Board.

Current recipients

Project No	Scholarship Recipient	Project Title	Host University	Duration (yrs)	About Project
M10487	Nilan Jayasiri Mudiyanselage	Accelerating Consolidation of Mine Tailings using Electro-osmosis Dewatering Technology	University of Western Australia	3.5	Improving tailings stability and safety using electro-osmosis dewatering, reducing failure risks and environmental impacts. It enables more efficient mine closure while supporting scalable, cost-effective practices across WA's mining industry.
M10542	Sistine Sun	The Unintended Effects of Carbon Emission Policy: International Evidence from the Paris Agreement and its Impact on the WA Mining Sector	University of Western Australia	2.5	The project shows how carbon costs may drive tax avoidance in mining, risking government revenue and sustainability outcomes. It informs policy to balance industry performance with long-term economic, environmental, and social benefits in WA.
M10544	Muzammil Khan	Towards decarbonisation in steelmaking: Grey-box modelling for optimisation of green and sustainable metallurgical coke production from biomass	Murdoch University	3.5	Supporting low-emission steelmaking by replacing traditional inputs with biocoke, significantly reducing GHG emissions and advancing WA's net-zero goals. It also drives economic growth and positions WA as a leader in sustainable steel production.
M10614	Farid Ullah	Advanced Integration of Electromagnetic Data in the Tomofast-x Inversion Code for Enhanced Mineral Exploration	University of Western Australia	4	Enhancing mineral discovery through more accurate, efficient geophysical techniques, reducing costs and environmental impact. It strengthens WA's competitiveness and supports sustainable growth in critical mineral supply.

Project No	Scholarship Recipient	Project Title	Host University	Duration (yrs)	About
M10675	Lisa Vella	Controls on the orderly distribution of giant deposits in self-organised mineral systems: new predictive criteria and analytical tools	University of Western Australia	3.5	Improves mineral discovery success in Western Australia, delivering strong economic benefits through more effective exploration.
M10676	Davood Hassanian Moghaddam	Green and Eco-friendly Membrane Technology for Sustainable Wastewater Treatment in Australia	Edith Cowan University	3.5	Enabling on-site wastewater treatment at mining sites, reducing freshwater use, costs, and environmental impact while supporting water recovery. It also enables critical mineral recovery and strengthens adaptive, sustainable water management.
M10678	Jonathan Michael Stokes	Unveiling the Critical Resource Potential of Western Australia's (WA) Proterozoic Carbonatites	University of Western Australia	3.5	Driving economic, environmental and social benefits by enabling sustainable exploration and development of critical minerals in WA. It will strengthen WA's role in the global energy transition while supporting workforce growth and responsible resource use.
M10679	Adeel Iqbal	Sustainable Enhancement of Asphalt Performance Using Biochar, Waste Plastic Aggregate, and Mining Waste	Edith Cowan University	1.8	This project reduces lithium industry waste and disposal costs while supporting cheaper, longer-lasting roads, advances circular economy and net-zero goals by repurposing major waste streams, and strengthens the critical minerals sector through local expertise development and job support.

MRIWA PhD Scholarships for Women

The MRIWA PhD Scholarships for Women is awarded annually. It was first awarded in 2018 and aims to promote opportunities for women in higher-degree research in the minerals sector.

Current recipients

Project No	Scholarship Recipient	Project Title	Host University	Duration (yrs)	About
M10452	Bishenka Mahaulpatha	Feasibility of effective metal recovery from tailings material via electrokinetic in-situ leaching	University of Western Australia	3.5	Enabling in-situ recovery of valuable metals from tailings, unlocking economic value while reducing environmental impact. It also improves tailings stability, lowering long-term risks and liabilities for industry and the state.
M10485	Hyunjin Na	Development of cementation-magnetic separation method for sulfide mineral processing and AMD prevention	Curtin University	3.3	This research introduces a simpler, flexible method to improve sulphide mineral recovery while reducing processing costs. It also reduces environmental risks by improving tailings management and preventing contamination.
M10613	Yasamin Hamidian	Development of a Gas-Assisted Ion-Selective Membrane for Lithium-Ion Extraction from Tailings	Edith Cowan University	2.9	Enabling low-emission, cost-effective lithium recovery from tailings, reducing waste and improving resource efficiency. It strengthens WA's competitiveness while supporting jobs, investment, and sustainable industry growth.

MRIWA Odwyn Jones PhD Scholarships

The MRIWA Odwyn Jones PhD Scholarships is awarded annually. This prestigious scholarship is named for Emeritus Professor Odwyn Jones AO, in recognition of his outstanding contribution to education in support of the mining industry in Western Australia.

Current recipients

Project No	Scholarship Recipient	Project Title	Host University	Duration (yrs)	About
M0548	Xingjie Chen	Investigating the utilisation of mine waste in shotcrete for underground support	University of Western Australia	4	This project converts waste rock into safe, durable materials for mine support, reducing costs and improving safety. It also lowers environmental impact by minimising waste and reducing contamination risks.
M0561	John Grigson	Giant rare-metal pegmatites of the East Pilbara Terrane, Western Australia: Mineral systems analysis and terrane-scale exploration	University of Western Australia	3.5	Improving targeting of lithium-rich pegmatites, enabling more efficient discovery of new deposits in WA. It supports future mineral supply and strengthens the long-term sustainability of the mining industry.
M10453	Kylie Blackwell	Beneficiation of Gold Telluride Ores	Curtin University	2.8	Supporting tellurium recovery from WA ores, strengthening its role in global clean energy supply. It also increases economic returns and jobs by unlocking additional value from existing mining operations.
M10484	Alex Eves	Petrogenesis and metallogenic significance of the Speewah Ti-V Deposit	University of Western Australia	2.9	Unlocking the mineral potential of the under-explored Kimberley region, enabling discovery of world-class deposits. It supports long-term regional economic growth, jobs, and royalties to replace lost income from the Argyle mine.
M10611	Kenneth Akiti	Responsible management of retired mining vehicle batteries to address environmental and economic challenges	Edith Cowan University	2	Delivering economic, environmental and social benefits by enabling the reuse of mining batteries, reducing costs and waste. It will also support renewable energy uptake and improve energy security in remote communities.

MARS Program PhD Scholarships

The MARS Program PhD Scholarships is awarded annually. As part of this program, Department of Local Government, Industry Regulation and Safety (LGIRS) is funding the creation of PhD Scholarships to attract and develop leading research talent in Western Australia. Administered by MRIWA.

Current recipients

Project No	Scholarship Recipient	Project Title	Host University	Duration (yrs)	About
M10594	Neil James	Psychological Capital – The Last Line of Defence in Psychosocial Safety in the Mining Industry	Edith Cowan University	6.7	Improving psychosocial safety in the WA mining industry can reduce distress, absenteeism, and costs while boosting productivity and wellbeing. This research identifies practical interventions that strengthen both workforce outcomes and industry performance.
M10596	Ben Walsh	Occupational Hygiene Dust Sampler Comparison Study in Western Australian Mining Operations	Edith Cowan University	4.5	Enabling more accurate and cost-efficient exposure monitoring through validated real-time technologies and improved industry standards. It supports better worker health outcomes while reducing compliance and sampling costs for the mining industry.
M10597	Nousheen Fatima	The Critical Impacts of Psychosocial Risk Factors on Workers' Behaviours and Workforce Sustainability: Examining the Role of Psychosocial Safety Climate in Mining Industry	Edith Cowan University	3.5	The project improves psychosocial safety in mining, reducing mental health risks while enhancing productivity, retention, and cost efficiency. It strengthens the sector's resilience and sustainability, supporting its ongoing economic contribution to Western Australia.

2025 - 2026 Completed MRIWA PhD Scholarships

Project No	Scholarship Recipient	Project Title	Host University	Duration (yrs)	About
M10486	Daniel Goldstein	Ore Body Characterisation using Machine Learning and Measure-While-Drilling Data	Curtin University	2.8	Low-cost drilling data enables real-time orebody insights, improving planning while reducing reliance on costly exploration. It delivers safer, lower-cost operations with less waste and higher productivity for WA's iron ore industry.
M10540	Emad Al-Hemyari	Data Processing and Inversion for Seismic While Drilling and Mining Using Distributed Acoustic Sensing and Machine Learning	Curtin University	2.5	Declining discoveries and rising demand create a major opportunity for WA, and this research enables efficient, low-impact exploration. It reduces drilling, preserves resources, redirects investment to sustainable methods, and builds workforce capability.
M10541	Yamini Kannappan	Extraction of Rare Earth Elements (REE) from Sub-economic Ores and Process Tailings	Curtin University	1.5	REE demand will outstrip supply by 2030, and this research unlocks WA's low-grade deposits to drive jobs, exports, and global competitiveness. Using green chemistry and circular economy approaches, it increases sustainable supply while minimising environmental impact.
M10562	Michael Ajith	Impact of COVID-19 on the leadership of operational leaders in the oil, gas, and mining sector of Australia.	Edith Cowan University	4.5	Embedding psychosocial safety and adaptive crisis leadership strengthens resilience, reduces risk, and protects FIFO workforce wellbeing. Digital innovation and proactive wellbeing strategies enhance environmental performance, workforce stability, and long-term sustainability.
M10595	Patrick Benetti	Effective Leader Safety Storytelling: its attributes and outcomes	University of Western Australia	1	Storytelling improves worker safety outcomes through psychological influence. It also enhances leadership perception by linking storytelling techniques to trust, engagement, and behaviour change.

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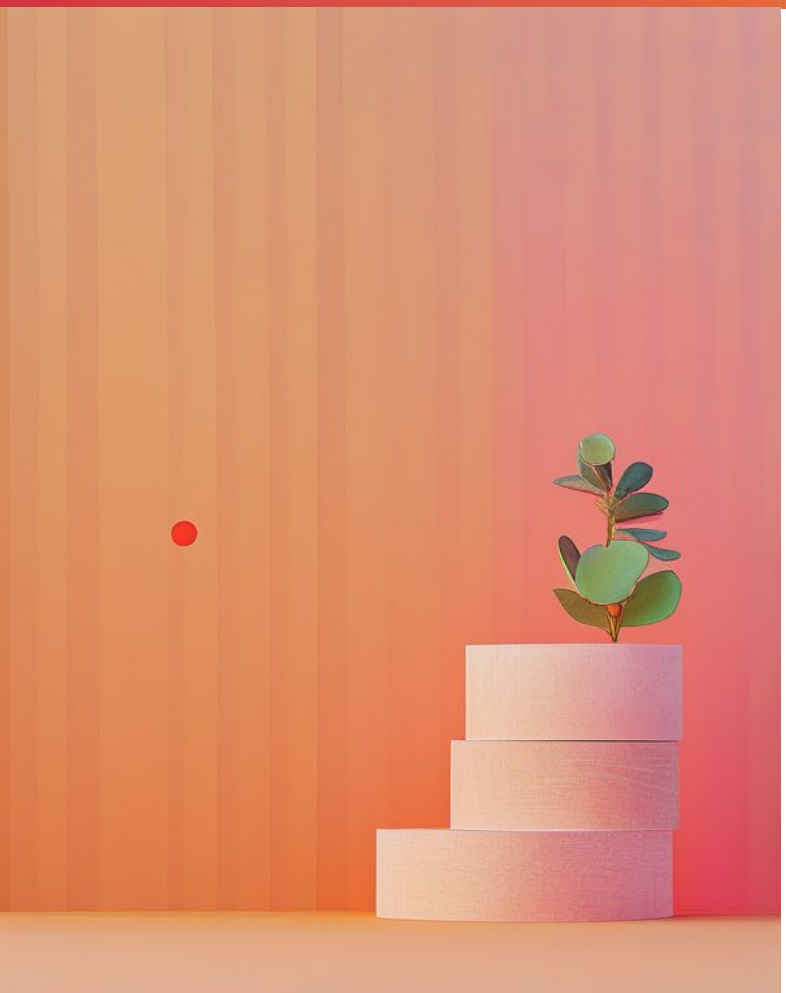
Our Governance



MRIWA is committed to strong governance, underpinned by contemporary and fit-for-purpose corporate practices.

This section highlights the key mechanisms that support effective oversight, enhance organisational performance and ensure compliance with legislative requirements.

Committee Structure

MRIWA Board

The control and management of the Minerals Research Institute of Western Australia (MRIWA) is vested in a Board of seven members (MRIWA Board), appointed by the Minister for Mines and Petroleum in accordance with Section 27(1) of the MRIWA Act. The Board is responsible for overseeing the strategic direction of MRIWA, while the Chief Executive Officer manages the day-to-day operations under the Board's direction.

To achieve its objectives, MRIWA draws significantly on the expertise of the minerals sector. This is reflected in the composition of the MRIWA Board and its supporting advisory committees, whose members contribute valuable industry knowledge and experience.

The Board is supported by an Audit and Risk Committee, which plays a key role in strengthening governance and oversight. The Committee is responsible for:

- reviewing the integrity of financial reporting and financial statements
- monitoring the effectiveness of internal control systems
- overseeing risk management frameworks and processes
- ensuring compliance with relevant legislation, standards, and policies
- liaising with external auditors and reviewing audit outcomes

MRIWA Board members are remunerated by an annual fee determined by the Public Sector Commissioner. The current remuneration reflects the most recent review, effective from 18 September 2023.

Membership as at 30 June 2026	Initial Appointment	Term Expiry	Attendance and No. of Meetings Eligible to Attend	Base Sitting Fees [a] ($ pa)	Foregone Sitting Fees [b] ($ pa)	Actual Sitting Fees Paid [c] ($ pa)
Vanessa Torres (Chairperson)	1-Jan-26	31-Dec-28	2 of 2	$13,074 [d]	$0	$13,074
Gerard Danckert (Deputy Chairperson)	1-Jan-24	31-Dec-26	3 of 4	$15,260	$0	$15,260
Rylee Campbell (Chairperson, Audit and Risk Committee)	1-Feb-23	31-Jan-29	4 of 4	$14,381	$1,438	$12,943
Michele Spencer	1-Feb-23	31-Jan-29	3 of 4	0 [e]	NA	NA
Hongqi Sun	1-Aug-23	31-Jul-26	4 of 4	$14,381	$14,381	$0
Sheryl Frame	25-Aug-25	24-Aug-28	3 of 3	$12,232 [d]	$1,223	$11,008
Michelle Carey	1-Mar-26	28-Feb-29	1 of 1	$4,834 [d]	$4,834	$0
Miriam Stanborough (former Chairperson)	1-Oct-17	31-Dec-25	2 of 2	$13,074 [d]	$2,615	$10,459
Linda Tompkins (former Deputy Chairperson and Chairperson, Audit and Risk Committee)	1-Mar-20	28-Feb-26	3 of 3	$11,283 [d]	$0	$11,283

(a) Eligible sitting fees, effective from 18 September 2023, exclusive of superannuation.
(b) Foregoes sitting fees for use in initiatives as determined by contributing Board Members.
(c) Actual sitting fees paid, inclusive of superannuation.
(d) Pro-rata base sitting fee based on period on Board during Financial Year.
(e) Ineligible for remuneration in accordance with Premier's Circular 2025/15 State Government Boards and Committees.

Message from the Audit and Risk Committee Chairperson

It is my honour to present this report as the incoming Chairperson of the Audit and Risk Committee, a role I assumed from 1 March 2026 following the conclusion of Linda Tompkins' tenure. I take this opportunity to acknowledge Linda's leadership of the Committee.

The 2025-26 year presented the Committee with a rich and substantive agenda. With a strong focus on strengthening governance, risk management and organisational performance.

A key priority for the Committee was the establishment of the standalone Chief Finance Officer role to ensure an appropriate separation of responsibilities from the Chief Executive Officer. The Committee provided careful oversight of this transition, including ensuring the Financial Management Manual was updated to clearly document the separation of duties, and that the Certifying and Incurring Officers Register reflected the revised arrangements.

Strengthening financial controls in this way is fundamental to sound governance, and the Committee is satisfied that appropriate measures are now embedded within MRIWA's financial management framework.

The Committee also devoted attention to fraud and corruption risk during the year. A number of initiatives have been progressed, including enhancements to employment screening processes and updates to MRIWA's Fraud and Corruption Action Plan. The Committee remains mindful the effectiveness of internal controls depends not only on their design, but on ongoing verification that they are operating as intended.

Cybersecurity continued to be a standing priority. The Committee received a detailed briefing from the Office of Digital Government on the current cyber threat landscape, noting that government agencies account for a significant proportion of reported incidents nationally. MRIWA continues to achieve high levels of maturity against the Essential Eight across its IT systems in accordance with the WA Cyber Security Policy, with ongoing monitoring in place. The briefing reinforced the importance of vigilance, particularly in relation to access controls and account security, and the Committee will continue to monitor this area closely.

Compliance with the *Privacy and Responsible Information Sharing Act 2024* (PRIS) was another focus during the year. MRIWA progressed its Agency Action Plan and participated in government-led engagement sessions to support effective implementation of the incoming legislative requirements. The Committee will continue to oversee progress in the lead-up to the anticipated commencement of the legislation in July 2026.

The Committee also reviewed the organisation's approach to declarations of financial interest, including disclosure requirements for both Board and staff members. This work reflects an ongoing commitment to transparency, integrity, and accountability in decision-making at all levels of the organisation.

In addition to its governance and assurance responsibilities, the Committee placed increased emphasis this year on performance reporting and the effective use of data to support decision-making. This included consideration of how performance information is captured, validated, and reported, with a focus on improving the quality, accessibility, and timeliness of data. Strengthening the use of data analytics will support more informed oversight, enhance organisational insights, and contribute to continuous improvement across MRIWA's operations.

The composition of the Committee has also been refreshed during the year. I welcome Sheryl Frame to the Committee, who joined as a member from 1 March 2026, bringing fresh perspectives to our work. Gerard Danckert continues as a member, and I look forward to working with them both as we build on the Committee's strong track record.

Throughout the year, the quality of MRIWA's financial management and internal audit practices has remained high. I extend my appreciation to the MRIWA team for their continued commitment on governance excellence, and to our financial services provider, Deloitte Touche Tohmatsu, for their professional support.

Rylee Campbell
Chairperson, Audit and Risk Committee

MRIWA College

Under section 60 of the MRIWA Act, the MRIWA Board has the authority to establish committees or appoint organisations or individuals to provide advice, including on the merit of applications for research funding.

The College is MRIWA's advisory committee as appointed by the MRIWA Board to provide expert advice on minerals research priorities. It supports MRIWA and the Board in identifying and assessing research and scholarship applications that address the challenges facing Western Australia's minerals industry, ensuring outcomes deliver economic and social benefits to the State.

The College comprises individuals with specialised knowledge and experience across one or more program areas outlined in the MRIWA Research Priority Plan (RPP). Members are drawn from industry, the research community, and government organisations.

Assessment Panels

Since 17 February 2020, MRIWA's advisory committee structure has operated through formal assessment panels. The Research Assessment Panel (RAP), formerly known as the Grant Assessment Panel (GAP), comprises Core Members and subject matter experts from the MRIWA College and is responsible for assessing research funding applications.

A separate Scholarship Assessment Panel, comprising MRIWA College Members, assesses PhD scholarship applications. The panel evaluates applications against criteria including research quality and alignment with MRIWA's research priorities, and provides funding recommendations to the Chief Executive Officer, who approves awards under delegation from the Board.

The MRIWA Board also approved a streamlined assessment process for Rapid Response Projects under the Accelerated Mineral Carbonation Research Program. Under this process, MRIWA College subject matter experts review low-cost, low-risk proposals and may recommend funding without convening a full panel. The Chief Executive Officer has delegated authority to approve these funding decisions.

To support the timely completion of research projects, MRIWA piloted a process under which College Members undertake technical assessments of Final Technical Reports (FTRs). The process was designed to ensure reviews and feedback could be completed within the two-hour cap applicable to written assessments, enabling FTRs to be recommended to the Chief Executive Officer for publication.

MRIWA College Colloquium

The 2025 MRIWA College Colloquium, held on 28 October 2025, brought together MRIWA College members, staff and industry stakeholders to help shape MRIWA's Research Priority Plan (RPP). The program combined keynote presentations on innovation, technology translation and research governance with facilitated workshops exploring emerging challenges, opportunities and priorities for Western Australia's minerals research sector. Insights generated through collaborative discussions informed future research investment and strategic planning.

Core Membership

Five individuals are currently appointed as Core Members of the MRIWA College. Upon completion of their term, Core Members may continue to contribute as subject matter experts.

Sitting fee rates are:

Chairperson:	$1,046 per full day meeting over four hours
	$680 per half day meeting four hours or less
Deputy Chairperson and Core Members:	$680 per full day meeting over four hours
	$442 per half day meeting four hours or less

Where written assessments are required, remuneration is provided at a rate of $85 per hour capped at a maximum of two hours per written assessment.

The number of meetings varies from year to year. Core Members are typically invited to:

- Attend all RAP meetings to ensure consistency in the assessment of funding applications.
- Participate in consultation activities throughout the year.

Position Title	First Name	Last Name	Appointment First Approved	Current Term Expiry	Actual Remuneration 2025-26 $
Chairperson	Jon	Hronsky	1/06/2020	31/05/2029	3,230(a)
Deputy Chairperson	Laura	Kuhar	1/06/2020	31/05/2029	1,802(a)
Core Member	Allan	Trench	1/06/2020	31/05/2029	1,326(a)
Core Member	Eugenia	Phegan	1/03/2023	28/02/2029	2,618(a)
Core Member	Michelle	Keegan	1/06/2020	31/05/2029	884(a)
Core Member	Sara	Braund	1/09/2022	31/08/2025	442(a)(b)

(a) Foregoes all remuneration for use in the MRIWA Education Program.
(b) Stepped down as Core Member of RAP in period.

Message from the Chairperson, MRIWA College

During the last twelve months, the Research Assessment Panel (RAP) reviewed a total of 22 research proposals, across a diverse range of areas, including the traditional focus areas of geoscience, mining and mineral processing, but also expanding into automation/robotics, the management and exploitation of mine waste streams and biological remediation of mine sites.

The breadth and innovative scope of these proposals is testament to the vibrant nature of the West Australian mining (and mining adjacent) industry's research and development ecosystem. This is an ecosystem in which MRIWA plays a critical role, not just as a funder but also a strategic facilitator, through our research strategy which encourages submissions in key defined areas of significance.

The majority of the proposals received were recommended to the MRIWA Board by the RAP, which reflects both the generally high quality of these proposals and the effective work done by the MRIWA team before these proposals were presented to us.

Unsurprisingly, we saw the emergence of AI-based proposals, both in regional exploration-related geoscience mapping and in various automated industrial systems, supporting machine learning and machine vision. Both exploration and mineral processing proposals were dominated by a focus on critical minerals, particularly those critical to battery technologies.

A key objective of MRIWA is to support and enhance Western Australia's METS (mining and exploration technology services) sector, which is already recognised as world-leading, but which also has significant global-scale growth potential. To this end, MRIWA has a separate category of research support, with a lower proponent funding threshold, that is targeted to supporting METS companies. Six such proposals were considered in the last year. One particularly note-worthy theme that seems to be emerging in the METS space is the development of expertise in automating mining-related processes, and we recommended support for a number of proposals in this area. There is clearly an important opportunity for Western Australia to lead in this field and MRIWA is playing a critical role in making this happen and will continue to do so.

Finally, as RAP Chairperson, I would like to thank all of my colleagues from the MRIWA College and those invited subject matter experts for their contributions to this review process during the past year. Their service to the good of Western Australia is gratefully acknowledged. I would also like to acknowledge the support and assistance of the MRIWA team, led by Nicole Roocke and Tim Walton.

Jon Hronsky
Research Assessment Panel (RAP) Chairperson

College Members

College members are invited to participate in MRIWA's activities as subject matter experts.

The number of meetings is not fixed and is variable year to year. College Members:

- May be invited to attend a Research Assessment Panel (RAP) meeting subject to their area of expertise and the applications being considered.
- Are invited to participate in consultation activities throughout the year.

Type of remuneration is based on attendance with differing rates for full or half day meetings.

Sitting fee rates are:

RAP Subject Matter Experts:	$680 per full day meeting over four hours $442 per half day meeting four hours or less
College Members:	$680 per full day meeting over four hours $442 per half day meeting four hours or less

Where written assessments are required, remuneration is provided at a rate of $85 per hour capped at a maximum of two hours per written assessment.

First Name	Last Name	Appointment First Approved	Current Term Expiry	Actual remuneration 2025-26 $
Alexander	Logan	1/09/2020	31/08/2026	0 [(a)]
Andy	Fourie	1/06/2020	31/05/2029	0 [(a)]
Andy	Lamb	1/09/2020	31/08/2026	0 [(a)]
Anel	Joubert	1/06/2020	31/05/2029	1,564 [(a)]
Anna	Kaksonen	1/06/2020	31/05/2029	0 [(c)]
Bryan	Maybee	1/06/2020	31/05/2029	0 [(b)]
Charles	Elliott	20/06/2020	31/05/2029	1,257 [(d)]
Chitra	Viswanathan	1/09/2020	31/08/2026	0 [(c)]
Chris	Kirkland	1/06/2020	31/05/2029	0 [(a)]
Christopher	Baker	1/06/2023	31/05/2029	0 [(a)]
Daniel	Goldstein	1/09/2024	31/08/2027	697 [(a)]
Darren	Matthews	1/03/2025	29/02/2028	1,752 [(d)]
Elizabeth	Wall	1/06/2025	31/05/2028	0 [(d)]
Erkan	Topal	22/06/2020	31/05/2029	0 [(a)]
Fawna	Korhonen	1/06/2025	30/05/2028	0 [(c)]
Fiona	Haslam-McKenzie	1/06/2020	31/05/2029	990 [(d)]
Ian	Suckling	1/01/2021	31/12/2026	0 [(a)]

First Name	Last Name	Appointment First Approved	Current Term Expiry	Actual remuneration 2025-26 $
Ivor	Roberts	1/06/2020	31/05/2029	0 (d)
James	Jung	1/12/2023	30/11/2026	0 (a)
Kate	Selway	1/06/2025	30/05/2028	1,243 (b)
Katy	Evans	1/06/2025	30/05/2028	0 (b)
Lance	Myers	1/09/2025	31/08/2028	0 (a)
Lei	Jin	1/09/2024	31/08/2027	1,739 (b)
Lisa	Di Paolo	1/09/2025	31/08/2028	0 (c)
Louise	McNab	1/09/2025	31/08/2028	612 (a)
Marilena	Stimpfl	1/09/2022	31/08/2028	0 (a)
Mark	Jessell	1/06/2020	31/05/2029	170 (a)
Melinda	Hodkiewicz	1/09/2023	31/08/2026	0 (a)
Nicolas	Hebert	1/03/2023	28/02/2029	2,159 (b)
Paul	Hodkiewicz	1/06/2025	30/05/2028	495 (d)
Peter	Bewick	1/06/2020	31/05/2029	850 (a)
Phil	Heckley	18/11/2024	18/11/2027	190 (d)
Phillip	Campbell	1/09/2024	31/08/2027	0 (a)
Pietro	Guj	1/11/2020	31/10/2026	680 (a)
Rob	Hough	1/06/2020	31/05/2029	0 (c)
Rod	Houston	1/03/2025	28/02/2028	1,180 (d)
Russell	Staines	1/12/2022	30/11/2028	0 (a)
Ryan	Fraser	1/11/2023	31/10/2026	680 (a)
Samantha	Langley	1/09/2025	31/08/2028	1,122 (a)
Sandra	Occhipinti	1/06/2025	30/05/2028	0 (d)
Stephanie	Vialle	1/06/2025	30/05/2028	1,462 (a)
Steve	Beresford	1/06/2025	30/05/2028	867 (a)
Tamsin	Senders	1/06/2025	30/05/2028	808 (a)
Trevor	Beardsmore	1/09/2025	31/08/2028	0 (c)
Vanessa	Lickfold	1/01/2021	31/12/2026	808 (a)
Yuan	Tian	1/06/2025	30/05/2028	1,769 (b)

(a) Foregoes all remuneration for use in the MRIWA Education Program.
(b) Foregoes a portion of remuneration for use in the MRIWA Education Program. Cash component includes superannuation paid.
(c) Ineligible for remuneration in accordance with Premier's Circular 2025/15 State Government Boards and Committees.
(d) Cash component includes superannuation paid.

Disclosures and legal compliance

Ministerial Directives

There were no Ministerial directives to MRIWA in 2025-26.

Employment and Industrial Relations

As at 30 June 2026, MRIWA employed 18 people, with no vacant roles, equating to 15.3 full-time equivalents (FTE). During the year, two employees concluded their employment.

MRIWA Employment Profile

Employment Type	2026	2025
Permanent Full-Time	6	4
Fixed Term Full-Time	7	9
Fixed Term Part-Time	2	1
Permanent Part-Time	3	-

Staff Development

MRIWA is committed to building workforce capability through the provision of training and professional development opportunities that support both individual performance and organisational outcomes.

During the reporting period, MRIWA continued the implementation of Work Impact Plans, which facilitate structured discussions between employees and managers to identify development opportunities aligned with MRIWA's Strategic Plan and business priorities. These plans support capability building, performance improvement, and the delivery of organisational objectives. The Skills Academy will be used to support identified developmental needs.

Work Health and Safety and Injury Management

MRIWA's approach to work health and safety and injury management is aligned with the principles of the Australian Work Health and Safety Strategy 2023–2033, supporting the vision of safe, healthy and productive working lives.

MRIWA demonstrates leadership and commitment to safety by embedding work health and safety considerations into its governance, planning and operational activities. The organisation promotes a positive safety culture underpinned by consultation, shared responsibility and continuous improvement.

The organisation remains committed to maintaining compliance with the *Work Health and Safety Act 2020 (WA)* and the *Workers' Compensation and Injury Management Act 1981 (WA*), while contributing to broader government objectives of safer workplaces across Western Australia.

Measures	Results - Base year[(a)]	Results - Prior year	Results - Current reporting year	Targets
Number of fatalities	0	0	0	0
Incidence of work-related injury or illness	0	0	0	Reduce by 2% per year and 15% by 2033 compared with 2023
Incidence rate of serious claims with one or more weeks' lost time	0	0	0	Reduce by 2.5% per year and 20% by 2033 compared with 2023
Incidence rate of claims resulting in permanent impairment	0	0	0	Reduce by 2% per year and 15% by 2033 compared with 2023
Incidence rate of work-related respiratory disease	0	0	0	Reduce by 2.5% per year and 20% by 2033 compared with 2023
Managers and supervisors trained in: a) work health and safety as relevant to the PCBU's risk profile; and	0	0	0	Greater than or equal to 80% of cohort trained within last two (2) years
b) injury management	0	0	0	Greater than or equal to 80% of cohort trained within last five (5) years
Percentage of workers returned to work on full duties and hours within: a) 13 weeks; and	N/A	N/A	N/A	No target for 13 weeks
b) 26 weeks	N/A	N/A	N/A	Greater than or equal to 70% returned to work within 26 weeks
Agency has a WHS management system that has been independently assessed in last five years	No	No	No	Yes

(a) The performance reporting examines a three-year trend and, as such, the comparison base year is to be two years prior to the current reporting year.

Workforce Diversity and Inclusion

MRIWA is committed to fostering a diverse, inclusive, and respectful workplace that reflects the community it serves. This commitment supports improved organisational performance, innovation, and effective engagement with stakeholders. MRIWA promotes equal opportunity in employment and provides a workplace environment that is free from discrimination and harassment. Employment practices are guided by merit principles and relevant legislation.

Consistent with WA Government reporting requirements, MRIWA monitors workforce diversity and inclusion outcomes and supports initiatives that promote equity, access, and participation across all levels of the organisation.

Diversity Profile

Diversity Group	2026	2025
Gender		
Women on the Board	57%	50%
Women on the College	39%	40%
Women in Senior Executive Services (SES)	50%	50%
Women who are Lead Investigators for our Research[a]	21%	-[b]
Women who are PhD Scholarship Recipients[c]	38%	-[b]
Indigenous Australians[d]		
Board	14%	17%
College	0%	0%
Employees	0%	0%
Lead Investigators[a]	4%	-[b]
PhD Scholars[e]	0%	-[b]
Culturally-Diverse Background[f]		
Board	43%	33%
College	71%	76%
Employees	47%	47%
Lead Investigators[a]	75%	-[b]
PhD Scholars[e]	73%	-[b]
Disabilities		
Board	0%	0%
College	0%	0%
Employees	11%	13%
Lead Investigators[a]	4%	-[b]
PhD Scholars[e]	18%	-[b]
Youth - under 25 years		
Board	0%	0%
College	2%	2%
Employees	0%	0%
Lead Investigators[a]	0%	-[b]
PhD Scholars[e]	0%	-[b]

(a) Data sourced from annual survey of Lead Investigators, with a 31% response rate
(b) Data not collected or reported in prior year
(c) Data sourced from details provided at time of application
(d) Aboriginal and Torres Strait Islander people
(e) Data sourced from annual survey of PhD Scholarship recipients, with a 31% response rate
(f) Cultural diversity core measures are defined by fluency in a language other than English, being born in a country other than Australia or self-identifying as culturally and linguistically diverse.

WA Multicultural Policy Framework

The Institute continued to implement its Multicultural Plan during the reporting period in support of the Western Australian Multicultural Policy Framework (WAMPF). The Institute remained committed to fostering a welcoming, inclusive and culturally responsive workplace and ensuring equitable access to services, programs and opportunities for people from culturally and linguistically diverse (CaLD) backgrounds.

MRIWA is committed to creating opportunities for staff, Board members and PhD scholars to deepen their understanding of Aboriginal and Torres Strait Islander cultures, histories and lived experiences. This commitment is particularly important given the diverse nature of the PhD cohort, including a significant number of scholars from overseas. Through cultural learning and engagement initiatives, MRIWA seeks to foster greater awareness, respect and appreciation of First Nations peoples and their enduring connection to Country.

Throughout the year MRIWA:

- Highlighted scholarship recipients and project leaders on its website and LinkedIn, promoting cultural diversity and inclusion in research.
- MRIWA strives to ensure diversity and inclusion are reflected across all events, including through speaker representation and audience participation. During 2025–26, approximately 20% of event speakers were from culturally and linguistically diverse (CaLD) backgrounds, including MRIWA PhD scholars presenting their research to the community. While this result was below the initial target of 30%, all events attracted strong attendance from participants representing a broad range of culturally and linguistically diverse backgrounds, supporting inclusive engagement and knowledge sharing.
- As part of MRIWA's education program, Aboriginal Cultural Competency workshops are delivered annually to PhD scholars to enhance understanding of and respect for Aboriginal and Torres Strait Islander cultures, histories and perspectives. The workshop held on 3 March 2026 provided participants with an opportunity to develop greater cultural awareness and strengthen their capacity to engage respectfully with First Nations peoples and communities.

Other legal requirements

Advertising

In accordance with section 175ZE of the *Electoral Act 1907* (WA), MRIWA has incurred the following expenditure for advertising agencies, market research, polling, direct mail or media advertising agencies:

Expenditure	Amount $	Total $
Advertising agencies, Market research organisations, Polling organisations, Direct mail organisations	NIL	
Media advertising organisations		
- Seek Limited *(Recruitment)*	940	
Grand total		940

Disability Access and Inclusion Plan

Under the Service Level Agreement, the Department of Local Government, Industry Regulation and Safety (LGIRS) supports MRIWA in meeting its obligations under the *Disability Services Act 1993 (WA)* by implementing and maintaining a Disability Access and Inclusion Plan (DAIP).

MRIWA is committed to ensuring its services and operations are accessible and inclusive and aligns with the LGIRS DAIP. Through this arrangement, MRIWA supports the identification and removal of barriers to participation, enabling equitable access to services, facilities and information for people with disability.

Public Sector Standards and Ethical Codes

MRIWA is committed to maintaining high standards of integrity, accountability and ethical conduct across all of its operations. All members of the MRIWA Board and MRIWA College are required to comply with the provisions relating to the disclosure of material personal interests under Part 4, Division 3 of the Minerals Research Institute of *Western Australia Act 2013 (WA),* as well as MRIWA's Code of Conduct.

MRIWA has complied with section 31(1) of the P*ublic Sector Management Act 1994 (WA)* in the administration of its human resource management practices. These practices are aligned with the Public Sector Standards in Human Resource Management, the WA Public Sector Code of Ethics, and MRIWA's Code of Conduct. MRIWA utilises human resource services provided by the Department of Local Government, Industry Regulation and Safety (DLGIRS), and is satisfied that appropriate systems and controls are in place to support compliance with applicable legislative and policy requirements.

During the 2025–26 reporting period:

- no breach claims were lodged under the Public Sector Standards in Human Resource Management;
- no breaches of the WA Public Sector Code of Ethics were reported; and
- no matters were identified requiring reporting as a breach of discipline under the *Public Sector Management Act 1994 (WA).*

MRIWA is compliant with the *Public Interest Disclosure Act 2003 (WA).* The Chief Executive Officer is designated as the Public Interest Disclosure (PID) Officer. No public interest disclosures were received during the reporting period.

MRIWA maintains a register of gifts and benefits, which is reported to the Board on a quarterly basis. This process supports transparency and accountability, ensuring that any acceptance of gifts or benefits is appropriate and consistent with ethical standards, while also enabling the monitoring of emerging trends.

Contracts with Senior Officers

No member of MRIWA staff had any interest in, or derived any benefit from, any contract entered into by MRIWA during the reporting period.

Freedom of Information

The *Freedom of Information Act 1992* (WA) enables the public to apply for access to documents held by MRIWA. No freedom of information request was received by the organisation in 2025-26.

MRIWA is committed to the principles of openness, transparency and accountability. Information about the organisation, its activities, publications, policies and funding programs is made available through the MRIWA website and other public communication channels wherever possible.

In accordance with Part 5 of the Freedom of Information Act 1992 (WA), MRIWA maintains an Information Statement that provides details of the Institute's functions, decision-making processes, the categories of documents held by the Institute, and the arrangements available for accessing information and documents.

MRIWA's Information Statement is available on the Institute's website at www.mriwa.wa.gov.au and is reviewed periodically to ensure the information remains current and accurate.

Requests for access to documents or enquiries regarding freedom of information may be directed to MRIWA using the contact details available on the Institute's website.

Recordkeeping plans

MRIWA maintains an approved Recordkeeping Plan in accordance with the *State Records Act 2000 (WA)*.

Consistent with the requirements of the State Records Commission Standard 2, Principle 6, MRIWA actively monitors, reviews and evaluates the effectiveness and efficiency of its recordkeeping systems and practices. These processes support the continuous improvement of recordkeeping capability and ensure that information is created, managed and maintained in a manner that meets operational, accountability and legislative requirements.

MRIWA recognises the growing importance of cybersecurity in supporting effective recordkeeping and continues to strengthen its information security controls to protect records from unauthorised access, loss or compromise, supporting the integrity, availability and confidentiality of information assets.

Through these combined practices, MRIWA remains committed to maintaining best practice in information governance and ensuring its recordkeeping framework continues to meet evolving organisational and regulatory requirements.

Unauthorised use of credit cards

Officers of the Institute hold corporate credit cards where their functions warrant usage of this facility. Two employees inadvertently used the corporate credit card for transportation associated with personal travel rather than official business purposes. The matter was not referred for disciplinary action as the Chief Finance Officer noted the prompt disclosure and reimbursement of the personal expenditure, and that the value of the transaction was immaterial and consistent with an honest administrative error rather than deliberate misuse of Institute resources.

	2025-26
Number of instances the Western Australian Government Purchasing Cards have been used for personal purposes	3
Aggregate amount of personal use of expenditure for the reporting period	$64
Aggregate amount of personal use expenditure settled by the due date (within 5 working days)	$64

Other Financial Disclosures

Capital Works

MRIWA has no capital works projects.

Consultant expenditure

The Institute engaged the following consultants during the period:

Consultant	Title of project	Actual cost (includes GST) $
Rennie Advisory	Business case for development of WA-ANZ Week	58,737
ACIL Allen	Research Priority Plan	44,960
Deloitte Access Economics	Impact Assessment	16,500
Total		**120,197**

These costs are treated as expense in the financial year.

Financial Estimates 2026-2027

The Institute is not separately identifiable within a separate Division of the Consolidated Account Expenditure Estimates.

The 2026-2027 estimates are prepared and approved in accordance with Section 40 of the *Financial Management Act 2006* and have been approved by the Minister dated 2 June 2026.

Statement of Comprehensive Income

For financial year ending 30 June 2027

	Notes	Estimate 2026-2027 $
COST OF SERVICES		
Expenses		
Employee benefits expense		3,575,369
Research and Scholarships expense		18,844,366
Accommodation expenses		215,334
Supplies and services		1,294,642
Depreciation expense		**3,000**
Other expenses		**126,970**
Total cost of services		**24,059,681**
Income		
Revenue		
Interest revenue		554,369
Commonwealth grants and contributions	(a)	1,350,000
Other revenue		272,279
Total revenue		**2,176,648**
Total income other than income from State Government		**5,183,674**
NET COST OF SERVICES		**13,892,488**
Income from State Government		
State Government Grant		10,554,000
Income from other public sector entities		810,000
Resources received free of charge		215,334
Total income from State Government		**11,579,334**
Surplus/(Deficit) for the period		**(10,303,700)**
TOTAL COMPREHENSIVE INCOME/(LOSS) FOR THE PERIOD		**(10,303,700)**

(a) Inclusive of funds committed by the Federal Government under a Federation Funding Agreement to complete a feasibility study and detailed business case to establish a Critical Minerals Advanced Processing (CMAP) Common User Facility.

Statement of Financial Position

For financial year ending 30 June 2027

	Estimate 2026-2027 $
ASSETS	
Current Assets	
Cash and cash equivalents	5,174,993
Restricted cash and cash equivalents	7,332,368
Receivables	570,000
Other Current Assets	835,000
Total Current Assets	**13,912,361**
Non-Current Assets	
Property, plant and equipment	7,000
Total Non-Current assets	**7,000**
TOTAL ASSETS	**13,919,361**
LIABILITIES	
Current Liabilities	
Payables	330,000
Employee benefit provisions - current	264,000
Deferred income	1,912,000
Total Current Liabilities	**2,506,000**
Non-Current Liabilities	
Employee benefit provisions - Non-current	113,000
Total Non-Current Liabilities	**113,000**
TOTAL LIABILITIES	**2,619,000**
NET ASSETS	**11,300,361**
EQUITY	
Accumulated surplus	11,300,361
TOTAL EQUITY	**11,300,361**

Statement of Cash Flows

For financial year ending 30 June 2027

	Notes	Estimate 2026-2027 $
Cash flows from State Government		
State Government grant and sponsorship		10,554,000
Funds from other public sector entities		810,000
Net cash provided by State Government		**11,364,000**
Cash flows from operating activities		
Payments		
Employee benefits		(3,575,369)
Research and Scholarship payments		(18,844,366)
Supplies and services		(1,294,642)
Other expenses		(126,970)
GST paid on purchases		(1,312,231)
Receipts		
Receipts from Commonwealth Government	(a)	1,350,000
Interest received		554,369
Other receipts		272,279
GST received on sales		27,228
Net GST refunded from ATO (or paid)		1,230,064
Cash generated from operations		**(21,719,639)**
Net increase/(decrease) in cash and cash equivalents		(10,355,639)
Cash and cash equivalents at the beginning of the period		22,863,000
CASH AND CASH EQUIVALENTS AT END OF PERIOD		**12,507,361**

(a) Inclusive of funds committed by the Federal Government under a Federation Funding Agreement to complete a feasibility study and detailed business case to establish a Critical Minerals Advanced Processing (CMAP) Common User Facility.

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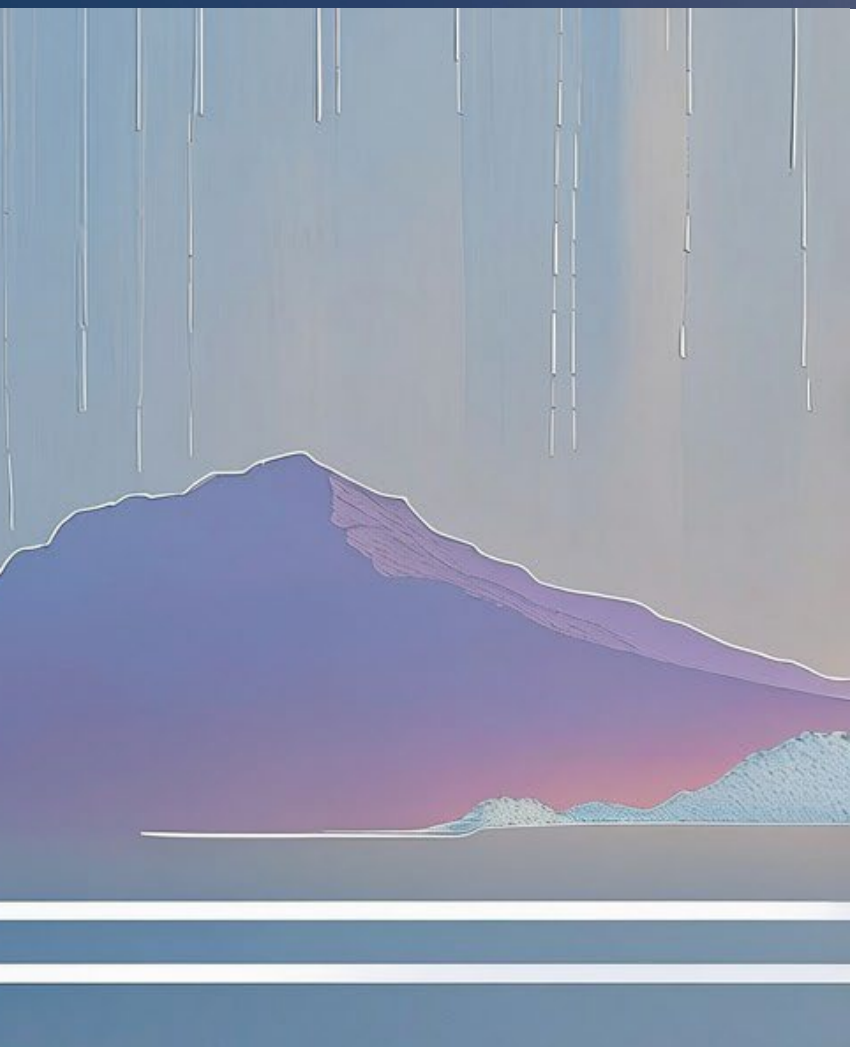
Financial Statements



This section presents the audited financial statements for the year ended 30 June 2026, providing an overview of MRIWA's financial management and stewardship of public resources. The statements demonstrate how MRIWA has managed its finances to support the delivery of its strategic objectives and industry outcomes.

Certification of Financial Statements

For the year ended 30 June 2026

The accompanying financial statements of the Minerals Research Institute of Western Australia (MRIWA or the Institute) have been prepared in compliance with the provisions of the *Financial Management Act 2006* (WA) from proper accounts and records to present fairly the financial transactions for the financial year ended 30 June 2026 and the financial position as at 30 June 2026.

At the date of signing, we are not aware of any circumstances which would render the particulars included in the financial statements misleading or inaccurate.

Vanessa Torres

Chairperson of the Board

Date: 3 August 2026

Rylee Campbell

Chairperson, Audit and Risk Committee, Member of the Board

Date: 3 August 2026

Fauziah Antonio

Chief Finance Officer

Date: 3 August 2026

Auditor General

INDEPENDENT AUDITOR'S REPORT

2026

Minerals Research Institute of Western Australia

To the Parliament of Western Australia

Report on the audit of the financial statements

Opinion

I have audited the financial statements of the Minerals Research Institute of Western Australia (Institute) which comprise:

- the statement of financial position as at 30 June 2026, the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended
- notes comprising a summary of material accounting policies and other explanatory information.

In my opinion, the financial statements are:

- based on proper accounts and present fairly, in all material respects, the operating results and cash flows of the Institute for the year ended 30 June 2026 and the financial position as at the end of that period
- in accordance with Australian Accounting Standards (applicable to Tier 2 Entities), the *Financial Management Act 2006* and the Treasurer's Instructions.

Basis for opinion

I conducted my audit in accordance with the Australian Auditing Standards. My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of my report.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Responsibilities of the Board for the financial statements

The Board is responsible for:

- keeping proper accounts
- preparation and fair presentation of the financial statements in accordance with Australian Accounting Standards (applicable to Tier 2 Entities), the *Financial Management Act 2006* and the Treasurer's Instructions
- such internal control as it determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board is responsible for:

- assessing the entity's ability to continue as a going concern
- disclosing, as applicable, matters related to going concern
- using the going concern basis of accounting unless the Western Australian Government has made policy or funding decisions affecting the continued existence of the Institute.

Auditor's responsibilities for the audit of the financial statements

As required by the *Auditor General Act 2006*, my responsibility is to express an opinion on the financial statements. The objectives of my audit are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Australian Auditing Standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.

A further description of my responsibilities for the audit of the financial statements is located on the Auditing and Assurance Standards Board website. This description forms part of my auditor's report and can be found at https://www.auasb.gov.au/auditors_responsibilities/ar4.pdf.

Report on the audit of controls

Opinion

I have undertaken a reasonable assurance engagement on the design and implementation of controls exercised by the Institute. The controls exercised by the Institute are those policies and procedures established to ensure that the receipt, expenditure and investment of money, the acquisition and disposal of property, and the incurring of liabilities have been in accordance with the State's financial reporting framework (the overall control objectives).

In my opinion, in all material respects, the controls exercised by the Institute are sufficiently adequate to provide reasonable assurance that the controls within the system were suitably designed to achieve the overall control objectives identified as at 30 June 2026, and the controls were implemented as designed as at 30 June 2026.

The Board's responsibilities

The Board is responsible for designing, implementing and maintaining controls to ensure that the receipt, expenditure and investment of money, the acquisition and disposal of property and the incurring of liabilities are in accordance with the *Financial Management Act 2006*, the Treasurer's Instructions and other relevant written law.

Auditor General's responsibilities

As required by the *Auditor General Act 2006,* my responsibility as an assurance practitioner is to express an opinion on the suitability of the design of the controls to achieve the overall control objectives and the implementation of the controls as designed. I conducted my engagement in accordance with Standard on Assurance Engagements *ASAE 3150 Assurance Engagements on Controls* issued by the Australian Auditing and Assurance Standards Board. That standard requires that I comply with relevant ethical requirements and plan and perform my procedures to obtain reasonable assurance about whether, in all material respects, the controls are suitably designed to achieve the overall control objectives and were implemented as designed.

An assurance engagement involves performing procedures to obtain evidence about the suitability of the controls design to achieve the overall control objectives and the implementation of those controls. The procedures selected depend on my judgement, including an assessment of the risks that controls are not suitably designed or implemented as designed. My procedures included testing the implementation of those controls that I consider necessary to achieve the overall control objectives.

I believe that the evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Limitations of controls

Because of the inherent limitations of any internal control structure, it is possible that, even if the controls are suitably designed and implemented as designed, once in operation, the overall control objectives may not be achieved so that fraud, error or non-compliance with laws and regulations may occur and not be detected. Any projection of the outcome of the evaluation of the suitability of the design of controls to future periods is subject to the risk that the controls may become unsuitable because of changes in conditions.

Report on the audit of the key performance indicators

Opinion

I have undertaken a reasonable assurance engagement on the key performance indicators of the Institute for the year ended 30 June 2026 reported in accordance with the *Financial Management Act 2006* and the Treasurer's Instructions (legislative requirements). The key performance indicators are the Under Treasurer-approved key effectiveness indicators and key efficiency indicators that provide performance information about achieving outcomes and delivering services.

In my opinion, in all material respects, the key performance indicators report of the Institute for the year ended 30 June 2026 is in accordance with the legislative requirements, and the key performance indicators are relevant and appropriate to assist users to assess the Institute's performance and fairly represent indicated performance for the year ended 30 June 2026.

The Board's responsibilities for the key performance indicators

The Board is responsible for the preparation and fair presentation of the key performance indicators in accordance with the *Financial Management Act 2006* and the Treasurer's Instructions and for such internal controls as the Board determines necessary to enable the preparation of key performance indicators that are free from material misstatement, whether due to fraud or error.

In preparing the key performance indicators, the Board is responsible for identifying key performance indicators that are relevant and appropriate, having regard to their purpose in accordance with Treasurer's Instruction 3 Financial Sustainability – Requirement 5 Key Performance Indicators.

Auditor General's responsibilities

As required by the *Auditor General Act 2006,* my responsibility as an assurance practitioner is to express an opinion on the key performance indicators. The objectives of my engagement are to obtain reasonable assurance about whether the key performance indicators are relevant and appropriate to assist users to assess the Institute's performance and whether the key performance indicators are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. I conducted my engagement in accordance with Standard on Assurance Engagements *ASAE 3000 Assurance Engagements Other than Audits or Reviews of Historical Financial Information* issued by the Australian Auditing and Assurance Standards Board. That standard requires that I comply with relevant ethical requirements relating to assurance engagements.

An assurance engagement involves performing procedures to obtain evidence about the amounts and disclosures in the key performance indicators. It also involves evaluating the relevance and appropriateness of the key performance indicators against the criteria and guidance in Treasurer's Instruction 3 - Requirement 5 for measuring the extent of outcome achievement and the efficiency of service delivery. The procedures selected depend on my judgement, including the assessment of the risks of material misstatement of the key performance indicators. In making these risk assessments, I obtain an understanding of internal control relevant to the engagement in order to design procedures that are appropriate in the circumstances.

I believe that the evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

My independence and quality management relating to the report on financial statements, controls and key performance indicators

I have complied with the independence requirements of the *Auditor General Act 2006* and the relevant ethical requirements relating to assurance engagements. In accordance with ASQM 1 *Quality Management for Firms that Perform Audits or Reviews of Financial Reports and Other Financial Information, or Other Assurance or Related Services Engagements,* the Office of the Auditor General maintains a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Other information

The Board is responsible for the other information. The other information is the information in the entity's annual report for the year ended 30 June 2026, but not the financial statements, key performance indicators and my auditor's report.

My opinions on the financial statements, controls and key performance indicators do not cover the other information and accordingly I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, controls and key performance indicators my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements and key performance indicators or my knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact. I did not receive the other information prior to the date of this auditor's report. When I do receive it, I will read it and if I conclude that there is a material misstatement in this information, I am required to communicate the matter to those charged with governance and request them to correct the misstated information. If the misstated information is not corrected, I may need to retract this auditor's report and re-issue an amended report.

Matters relating to the electronic publication of the audited financial statements and key performance indicators

This auditor's report relates to the financial statements and key performance indicators of the Institute for the year ended 30 June 2026 included in the annual report on the Institute's website. The Institute's management is responsible for the integrity of the Institute's website. This audit does not provide assurance on the integrity of the Institute's website. The auditor's report refers only to the financial statements, controls and key performance indicators described above. It does not provide an opinion on any other information which may have been hyperlinked to/from the annual report. If users of the financial statements and key performance indicators are concerned with the inherent risks arising from publication on a website, they are advised to contact the Institute to confirm the information contained in the website version.

Nayna Raniga
Senior Director Financial Audit
Delegate of the Auditor General for Western Australia
Perth, Western Australia
7 August 2026

Statement of Comprehensive Income

For the year ended 30 June 2026

	Notes	2026 $	2025 $
COST OF SERVICES			
Expenses			
Research and scholarships	2.1	6,087,259	6,459,653
Employee benefits expense	2.2	2,619,151	2,108,587
Supplies and services	2.3	803,181	910,374
Accommodation expenses	2.3	217,041	211,112
Other expenses	2.3	186,292	172,930
Depreciation expense	4.1	2,600	2,600
Total cost of services		**9,915,524**	**9,865,256**
Income			
Commonwealth grants and contributions	3.2	-	150,000
Interest revenue	3.2	956,004	1,037,568
Revenue from industry sponsorship	3.2	1,351,182	1,189,401
Other revenue	3.2	60,128	96,755
Total income		**2,367,314**	**2,473,724**
NET COST OF SERVICES		**7,548,210**	**7,391,532**
Income from State Government			
State Government grant	3.1	**6,544,000**	8,895,000
Income from other public sector entities	3.1	**981,779**	863,000
Resources received	3.1	**220,173**	217,328
Total income from State Government		**7,745,952**	**9,975,328**
SURPLUS/(DEFICIT) FOR THE PERIOD		**197,742**	**2,583,796**
TOTAL COMPREHENSIVE INCOME/(LOSS) FOR THE PERIOD		**197,742**	**2,583,796**

The Statement of Comprehensive Income should be read in conjunction with the accompanying notes. The comparative amounts have been reclassified for simplified disclosures. This change in presentation has no impact on the net result.

Statement of Financial Position

As at 30 June 2026

	Notes	2026 $	2025 $
ASSETS			
Current assets			
Cash and cash equivalents	6.1.1	12,171,883	11,314,585
Restricted cash and cash equivalents	6.1.2	8,773,595	10,207,838
Receivables	5.1	294,558	576,313
Other current assets	5.2	480,954	262,690
Total current assets		**21,720,990**	**22,361,426**
Non-current assets			
Office equipment	4.1	7,523	10,123
Total non-current assets		**7,523**	**10,123**
TOTAL ASSETS		**21,728,513**	**22,371,549**
LIABILITIES			
Current liabilities			
Payables	5.3	517,651	395,788
Employee related provisions	2.2.1	326,807	197,681
Deferred income	5.4	846,256	1,911,806
Total current liabilities		**1,690,714**	**2,505,275**
Non-current liabilities			
Employee benefit provisions	2.2.1	86,326	112,543
Total non-current liabilities		**86,326**	**112,543**
TOTAL LIABILITIES		**1,777,040**	**2,617,818**
NET ASSETS		**19,951,473**	**19,753,731**
EQUITY			
Accumulated surplus	8.8	19,951,473	19,753,731
TOTAL EQUITY		**19,951,473**	**19,753,731**

Statement of Financial Position should be read in conjunction with the accompanying notes.

Statement of Changes in Equity

For the year ended 30 June 2026

	Notes	Accumulated Surplus $
Balance at 1 July 2024		17,169,935
Surplus for the period	8.8	2,583,796
Balance at 30 June 2025		**19,753,731**
Balance at 1 July 2025		19,753,731
Surplus for the period	8.8	197,742
Balance at 30 June 2026		**19,951,473**

The Statement of Changes in Equity should be read in conjunction with the accompanying notes.

Statement of Cash Flows

For the year ended 30 June 2026

	Notes	2026 $	2025 $
CASH FLOWS FROM STATE GOVERNMENT			
State Government grant and sponsorship		6,544,000	8,895,000
Funds from other public sector entities		861,779	863,000
Net cash provided by State Government		**7,405,779**	**9,758,000**
Utilised as follows:			
CASH FLOWS FROM OPERATING ACTIVITIES			
Payments			
Research and scholarship payments		(5,906,311)	(6,655,677)
Employee benefits		(2,502,428)	(2,005,157)
Supplies and services		(831,318)	(639,441)
Other payments		(174,302)	(153,584)
GST paid on purchases		(638,040)	(715,708)
Receipts			
Receipts from sponsors		256,893	677,065
Receipts from Commonwealth Government		-	150,000
Other receipts		11,054	4,992
Interest received		964,845	986,316
GST received on sales		35,371	46,124
Net GST refunded from ATO (or paid)		801,512	358,186
Net cash used in operating activities		**(7,982,724)**	**(7,946,884)**
Net increase/(decrease) in cash and cash equivalents		(576,945)	1,811,116
Cash and cash equivalents at the beginning of the period		21,522,423	19,711,307
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD	6.1.1	**20,945,478**	**21,522,423**

The Statement of Cash Flows should be read in conjunction with the accompanying notes. The comparative amounts have been reclassified for simplified disclosures. This change in presentation has no impact on the net result.

Notes to the Financial Statements

For the year ended 30 June 2026

Note 1. Basis of preparation

The Institute is a Government not-for-profit entity controlled by the State of Western Australia, which is the ultimate parent.

A description of the nature of its operations and its principal activities have been included in the 'Overview' and 'Research Portfolio' sections of the Institute's Annual Report which does not form part of these financial statements.

These annual financial statements were authorised for issue by the accountable authority of the Institute on 3 August 2026.

Statement of compliance

The financial statements are general purpose financial statements which have been prepared in accordance with Australian Accounting Standards – Simplified Disclosures, the Conceptual Framework and other authoritative pronouncements issued by the Australian Accounting Standards Board (AASB) as modified by Treasurer's instructions. Some of these pronouncements are modified to vary their application and disclosure.

The *Financial Management Act 2006* and Treasurer's instructions, which are legislative provisions governing the preparation of financial statements for agencies, take precedence over AASB pronouncements. Where an AASB pronouncement is modified and has had a significant financial effect on the reported results, details of the modification and the resulting financial effect are disclosed in the notes to the financial statements.

Basis of preparation

The financial statements are presented in Australian dollars applying the accrual basis of accounting and using the historical cost convention. Certain balances will apply a different measurement basis (such as the fair value basis). Where this is the case the different measurement basis is disclosed in the associated note.

Judgements and estimates

Judgements, estimates, and assumptions are required to be made about financial information being presented. The significant judgements and estimates made in the preparation of these financial statements are disclosed in the notes where amounts affected by those judgements and/or estimates are disclosed. Estimates and associated assumptions are based on professional judgements derived from historical experience and various other factors that are believed to be reasonable under the circumstances.

Accounting for Goods and Services Tax (GST)

Income, expenses, and assets are recognised net of the amount of Goods and Services Tax (GST), except that the:

a) amount of GST incurred by the Institute as a purchaser that is not recoverable from the Australian Taxation Office (ATO) is recognised as part of an asset's cost of acquisition or as part of an item of expense; and
b) receivables and payables are stated with the amount of GST included.

Cash flows are included in the Statement of cash flows on a gross basis. However, the GST components of cash flows arising from investing and financing activities which are recoverable from, or payable to, the ATO are classified as operating cash flows.

Comparative Information

Except when an Australian Accounting Standard permits or requires otherwise, comparative information is presented in respect of the previous period for all amounts reported in the financial statements. AASB 1060 provides relief from presenting comparatives for:

- Property, Plant and Equipment reconciliations;
- Intangible Asset reconciliations; and
- Right-of-Use Asset reconciliations.

Note 2. Use of our funding

Expenses incurred in the delivery of services
This section provides the additional information about how the Institute's funding is applied and the accounting policies that are relevant for an understanding of the items recognised in the financial statements. The primary expenses incurred by the Institute in achieving its objectives and the relevant notes are:

	Notes
Research and scholarships	2.1
Employee benefits expenses	2.2
Employee related provisions	2.2.1

2.1 Research and Scholarships

	2026 $	2025 $
Research projects and grants	5,679,133	6,252,889
Scholarships and awards	408,126	206,764
Total	**6,087,259**	**6,459,653**

Research projects expense is recognised when the Institute becomes obliged to make payment to the grantee. The Institute becomes obliged to make payment when the grantee has met conditions of the grant agreement.

Scholarship and awards expense represent the Institute's obligation to fund approved scholarships and costs associated with the various award programs.

Comparative figures have been reclassified for presentation purposes. In the prior year, research projects expense and scholarship and awards expense were disclosed as separate line items in the Statement of Comprehensive Income.

2.2 Employee benefits expense

	2026 $	2025 $
Employee benefits	1,901,827	1,429,747
Executive salaries	434,504	461,956
Superannuation - defined contribution plans[(a)]	282,820	216,884
Total	**2,619,151**	**2,108,587**

Employee benefits include wages, salaries, accrued and paid leave entitlements, paid sick leave and non-monetary benefits, where applicable.

Defined contribution plans include West State Superannuation Scheme (WSS), Government Employees Superannuation Board Schemes (GESBs) and other eligible funds. Superannuation is the amount recognised in the Statement of Comprehensive Income comprising employer contributions paid to the West State Super, GESB Super or other superannuation funds.

Executive salaries include the base salary of the Institute's CEO and the Director Research and Strategy, net of employee contributions, where applicable.

2.2.1 Employee related provisions

Provision is made for benefits accruing to employees in respect of annual leave and long service leave for services rendered up to the reporting date and recorded as an expense during the period the services are delivered.

	2026 $	2025 $
Current		
Annual leave[(a)]	177,171	126,009
Long service leave[(b)]	149,636	71,672
	326,807	**197,681**
Non-current		
Long service leave[(b)]	86,326	112,543
	86,326	**112,543**
Total employee related provisions	**413,133**	**310,224**

(a) **Annual leave liabilities:** Classified as current as there is no right at the end of the reporting period date to defer settlement for at least 12 months after the reporting period.

The provision for annual leave is calculated at the present value of expected payments to be made in relation to services provided by employees up to the reporting date.

(b) **Long service leave liabilities**: Unconditional long service leave provisions are classified as **current** liabilities as the Institute does not have the right at the end of the reporting period to defer settlement of the liability for at least 12 months after the end of the reporting period.

Pre-conditional and conditional long service leave provisions are classified as **non-current** liabilities because the Institute has the right to defer the settlement of the liability until the employee has completed the requisite years of service.

The provision for long service leave is calculated at present value as the Institute does not expect to wholly settle the amounts within 12 months. The present value is measured taking into account the present value of expected future payments to be made in relation to services provided by employees up to the reporting date. These payments are estimated using the remuneration rate expected to apply at the time of settlement and discounted using market yields at the end of the reporting period on government bond yields adjusted for the relevant WATC credit spread, with reference to maturities that align with the expected timing of future cash outflows. The Western Australian Treasury Corporation (WATC) credit spread is the margin between the yield on WATC bonds and the reference risk-free rate.

2.3 Other expenditure

	2026 $	2025 $
Supplies and Services		
Board and committee fees	140,797	147,178
Communications	39,080	21,919
Contractors	279,775	283,249
Consultants	103,859	279,671
Consumables	67,510	51,066
Events and sponsorships	52,063	72,890
Business Travel	36,473	11,877
Other supplies and services	83,624	42,522
Total supplies and services	**803,181**	**910,374**
Accommodation expenses	**217,041**	**211,112**
Other expenses		
Employee on-cost	134,253	85,149
Other expenses	52,039	87,781
Total of other expenses	**186,292**	**172,930**
Total other expenditure	**1,206,514**	**1,294,416**

Supplies and services: Supplies and services are recognised as an expense in the reporting period in which they are incurred.

Accommodation expenses: Includes rental and outgoings incurred as per the Memorandum of Understanding Agreement between the Institute and the Department of Local Government, Industry Regulation and Safety.

Other expenses: Other expenses generally represent the day-to-day running costs incurred in normal operations.

Employee on-cost: includes workers' compensation insurance, payroll tax and other employment oncosts. The oncosts liability associated with the recognition of annual and long service leave liabilities is included at note 2.2.1. Employee related provisions. Superannuation contributions accrued as part of the provision for leave are employee benefits and are not included in employment on-costs.

Comparative figures have been reclassified to align with the current year presentation, enhancing the relevance and clarity of disclosures. In the prior financial year, Board and Committee fees were presented as a separate line item; these costs are now included within Supplies and Services. In addition, certain expenditure items within Supplies and Services and Other Expenses have been reclassified to provide a more streamlined and meaningful presentation of the organisation's financial performance. These reclassifications relate to presentation only and do not affect the reported results or net assets of the entity.

Note 3. Our funding sources

How we obtain our funding

This section provides additional information about how the Institute obtains its funding and the relevant accounting policy notes that govern the recognition and measurement of this funding. The primary income received by the Institute and the relevant notes are:

	Notes
Income from State Government	3.1
Other income	3.2

3.1 Income from State Government

	2026 $	2025 $
Administered appropriations received during the period - State Government grants	6,544,000	8,895,000
Total state government grants	**6,544,000**	**8,895,000**
Income received from other public sector entities during the period:		
State Government sponsorship	981,779	863,000
Total income from other public sector entities	**981,779**	**863,000**
Resources received during the period:		
Accommodation provided by the Department of Local Government, Industry Regulation and Safety	217,041	211,112
Legal services from the State Solicitor's Office	3,132	6,216
Total resources received free of charge or for nominal cost	**220,173**	**217,328**
Total income from State Government	**7,745,952**	**9,975,328**

State Government Grant: Revenue is recognised at fair value when MRIWA obtains control over the assets comprising the contributions, usually when cash is received.

Income from other public sector entities is recognised as income when the Institute has satisfied its performance obligations under the funding agreement. If there is no performance obligation, income is recognised when the Institute receives the funds.

Resources received free of charge or for nominal cost: Resources received free of charge or for nominal cost that MRIWA would otherwise purchase if not donated, are recognised as income at fair value where they can be reliably measured. A corresponding expense is recognised for services received. Receipts of assets are recognised in the Statement of Financial Position.

3.2 Other income

	2026 $	2025 $
Income received from the Commonwealth during the period in relation to sponsorship:		
Critical Minerals Advanced Processing Common User Facility (CMAP)	-	150,000
Total Commonwealth grants and contributions	**-**	**150,000**
Revenue received from industry sponsors during the period in relation to sponsorship:		
Sponsorship income	1,351,182	1,189,401
Total revenue from industry sponsorship	**1,351,182**	**1,189,401**
Interest Revenue	**956,004**	**1,037,568**
Other revenue		
Miscellaneous revenue	46,132	91,763
Event ticket sales	11,054	4,992
Commercial income	2,943	-
Total other revenue	**60,128**	**96,755**

Commonwealth grants and contributions is recognised as income when the Institute has satisfied its performance obligations under the funding agreement. If there is no performance obligation, income is recognised when the Institute receives the funds.

Revenue from industry sponsorship: MRIWA provides a service to sponsors by administering sponsorship funds for research projects and conferences. When the funds are received it is initially regarded as deferred revenue in MRIWA's accounts. Income from sponsors is recognised at the point in time MRIWA has completed this service. These services are completed under a contractual arrangement.

Miscellaneous revenue: Includes sitting fees foregone by Board and advisory committee members.

Commercial income: During the reporting period, the Institute formalised its accounting policy for commercial income arising from financial assistance arrangements. Commercial Income is recognised when the Institute's entitlement becomes measurable and enforceable. This generally occurs when the grantee's commercial income can be determined and the Institute's contractual share can be reliably calculated. Prior to this point, no income is recognised.

Note 4. Key assets

This section includes information regarding the key assets the Institute utilises to gain economic benefit or provide service potential. The section sets out both the key accounting policies and financial information about the performance of those assets.

	Notes
Office equipment	4.1

4.1 Office equipment

	2026 $	2025 $
Office equipment		
At cost	13,000	13,000
Accumulated depreciation	(5,477)	(2,877)
	7,523	**10,123**
Office equipment		
Carrying amount at start of period	10,123	12,723
Additions	-	-
Depreciation	(2,600)	(2,600)
Carrying amount at end of period	**7,523**	**10,123**

Initial recognition: Items of office equipment, costing $5,000 or more are measured initially at cost. Where an asset is acquired for no cost or nominal cost, the cost is valued at its fair value at the date of acquisition. Items of office equipment costing less than $5,000 are immediately expensed direct to the Statement of Comprehensive Income (other than where they form part of a group of similar items which are significant in total).

Subsequent measurement: All office equipment is stated at historical cost less accumulated depreciation and accumulated impairment losses.

Useful lives: All non-current assets having a limited useful life are systematically depreciated over their estimated useful lives in a manner that reflects the consumption of their future economic benefits.

Depreciation is calculated on straight-line basis, at rates that allocate the asset's value, less any estimated residual value, over its estimated useful life. The expected useful life for office equipment is 3 to 7 years.

The estimated useful lives, residual values and depreciation method are reviewed at the end of each annual reporting period, and adjustments are made where appropriate.

Impairment: There were no indications of impairment to office equipment at 30 June 2026. MRIWA held no goodwill or intangible assets with an indefinite useful life during the reporting period.

Non-financial assets are tested for impairment whenever there is an indication that the asset may be impaired. Where there is an indication of impairment, the recoverable amount is estimated. Where the recoverable amount is less than the carrying amount, the asset is considered impaired and is written down to the recoverable amount and an impairment loss is recognised.

Note 5. Other assets and liabilities

This section sets out those assets and liabilities that arose from the Institute's controlled operations and includes other assets utilised for economic benefits and liabilities incurred during normal operations:

	Notes
Receivables	5.1
Other current assets	5.2
Payables	5.3
Deferred income	5.4

5.1 Receivables

	2026 $	2025 $
Current		
Grant receivables - sponsorship	8,201	82,500
Commercial income receivable	2,943	
Less: loss allowance	-	-
Total	**11,144**	**82,500**
GST receivable	283,414	493,813
Total	**294,558**	**576,313**

Trade receivables are initially recognised at original invoice amount less an allowance for any uncollectible amounts (i.e. expected credit loss). The collectability of receivables is reviewed on an ongoing basis and any receivables identified as uncollectible are written off against the allowance account. In the current year no expected credit loss was recognised. The carrying amount is equivalent to fair value as it is due for settlement within 30 days.

5.2 Other current assets

	2026 $	2025 $
Interest receivable	249,304	258,145
Prepayments	-	4,545
Accrued income	231,650	-
Total	**480,954**	**262,690**

Interest revenue is recognised on an accrual basis. **Accrued income** is recognised where the Institute has satisfied its performance obligations under a sponsorship agreement and consideration is receivable at the reporting date but has not yet been received. Refer to Note 3.2.

5.3 Payables

	2026 $	2025 $
Current		
Accrued general expenses	436,465	328,416
Accrued salaries	81,186	67,372
Total	**517,651**	**395,788**

All payables are recognised when MRIWA becomes obliged to make future payments as a result of a purchase of assets or services. The carrying amount is equivalent to fair value, as they are generally settled within 30 days.

Accrued salaries represent the amount due to staff but unpaid at the end of the financial year. Accrued salaries are settled within a fortnight of the financial year end.

Accrued general expenses represent the amounts due to researchers and suppliers but unpaid at the end of the financial year. These payments are settled within 30 days of the financial year end. MRIWA considers the carrying amount of accrued expenses to be equivalent to its fair value.

5.4 Deferred income

	2026 $	2025 $
Deferred income - sponsorship	846,256	1,911,806
Total	**846,256**	**1,911,806**

Deferred Income: MRIWA provides a service to sponsors by administering sponsorship funds for research projects or conferences**.** These services are completed under a contractual arrangement**. Deferred income** is recognised when the sponsorship funds are received or receivable and the Institute has not fulfilled its obligations under the terms of the sponsorship agreement. Refer to Note 3.2.

Revenue Recognition Matter
During the current year, management reassessed the accounting treatment of a funding arrangement entered into in the prior year. Under the terms of the agreement, a portion of the funding received was subject to sufficiently specific performance obligations. Accordingly, that portion of the funding would have been more appropriately recognised as a Deferred Income until the relevant obligations were satisfied. The funding was recognised as revenue in the year ended 30 June 2025. No adjustment has been made to the comparative financial information in respect of this matter, as the amount was not considered material to the financial statements.

Note 6. Financing

This section sets out the material balances and disclosures associated with the financing and cash flows of the Institute.

	Notes
Cash and cash equivalents	6.1.1
Restricted cash and cash equivalents	6.1.2
Commitments	6.2

6.1 Cash and cash equivalents

6.1.1 Reconciliation of cash

	2026 $	2025 $
Cash and cash equivalents	12,171,883	11,314,585
Restricted cash and cash equivalents - current	8,773,595	10,207,838
Total	**20,945,478**	**21,522,423**

For the purpose of the Statement of Cash Flows, cash and cash equivalents (and restricted cash and cash equivalents) assets comprise cash on hand and short-term deposits with original maturities of three months or less that are readily convertible to a known amount of cash, and which are subject to insignificant risk of changes in value.

6.1.2 Restricted cash and cash equivalents

	2026 $	2025 $
Research projects and grants	7,441,076	8,942,092
Scholarships and awards	1,332,519	1,265,746
Total	**8,773,595**	**10,207,838**

Cash held in the account is to be used only for the purpose of providing grants for research and development of projects to grantees.

6.2 Commitments

	2026 $	2025 $
Other expenditure commitments		
Within 1 year	6,269,288	9,709,504
Later than 1 year and not later than 5 years	8,995,304	4,364,444
Later than 5 years	1,942,000	1,969,162
Total	**17,206,592**	**16,043,110**

The total presented for other expenditure commitments is GST exclusive.

The total commitments reported above represent projects with a contractual liability in place and those approved by the Board during this period where funds have been committed but the contracts are still to be finalised.

Note 7. Financial instruments and contingencies

This note sets out the financial instruments and contingencies of the Institute.

	Notes
Financial instruments	7.1
Contingent assets and liabilities	7.2

7.1 Financial instruments

The carrying amounts of each of the following categories of financial assets and financial liabilities at the end of the reporting period are:

	2026 $	2025 $
Financial assets		
Cash and cash equivalents	12,171,883	11,314,585
Restricted cash and cash equivalents	8,773,595	10,207,838
Receivables[(a)]	11,144	82,500
Other current assets	249,304	258,145
Total financial assets	**21,205,926**	**21,863,068**
Financial liabilities		
Payables	436,465	328,416
Total financial liabilities	**436,465**	**328,416**

(a) The amount of receivables/financial assets at amortised cost excludes GST recoverable from the ATO (statutory receivable).

7.2 Contingent assets and liabilities

MRIWA has no contingent liabilities or contingent assets (2025: nil).

Note 8. Other disclosures

This section includes additional material disclosures required by accounting standards or other pronouncements, for the understanding of this financial report.

	Notes
Events occurring after the end of the reporting period	8.1
Changes in accounting policy	8.2
Key management personnel	8.3
Related party transactions	8.4
Related bodies	8.5
Affiliated bodies	8.6
Remuneration of auditors	8.7
Equity	8.8

8.1 Events occurring after the end of the reporting period

MRIWA has had no events occurring after the end of the reporting period.

8.2 Changes in accounting policy

During the reporting period, the Institute formalised its accounting policy for commercial income arising from financial assistance arrangements.

Commercial income arising from financial assistance arrangements is recognised when the Institute's entitlement becomes measurable and enforceable. This generally occurs when the grantee's commercial income can be determined and the Institute's contractual share can be reliably calculated. Prior to this point, no income is recognised.

Where future commercial income is probable but not yet measurable and enforceable, the arrangement is disclosed as a contingent asset. Commercial income receivables are assessed for impairment in accordance with the Institute's financial asset impairment policy and are presented as Commercial Income in the statement of comprehensive income.

Significant judgements related to the timing and recognition of commercial income are disclosed where relevant.

8.3 Key management personnel

The Institute has determined key management personnel including the responsible Minister, board members, and senior officers of the Institute.

The Institute does not incur expenditures to compensate Ministers and those disclosures may be found in the *Annual Report on State Finances.*

The total fees, salaries, superannuation, non-monetary benefits, and other benefits for key management personnel of the Institute for the reporting period are presented within the following bands:

	2026	2025
Compensation band ($)		
0 – 50,000	9	7
50,001 – 100,000	-	1
100,001 – 150,000	1	1
150,001 – 200,000	-	-
200,001 – 250,000	1	-
250,001 – 300,000	-	-
300,001 – 350,000	1	1
Total compensation of senior officers	**808,915**	**631,905**

Total compensation includes the superannuation expense incurred by the Institute in respect of key management personnel.

8.4 Related party transactions

The Institute is a wholly owned and controlled entity of the State of Western Australia.

Related parties of the Institute include:

- all Cabinet Ministers and their close family members, and entities controlled or jointly controlled by them;
- all senior officers and their close family members, and entities controlled or jointly controlled by them;
- the Government Employees Superannuation Board (GESB);
- other Western Australian Government departments, agencies and public sector entities, including entities consolidated into the Whole of Government financial statements; and
- associates and joint ventures that are included in the Whole of Government consolidated financial statements

The Institute transacts with various State Government entities in the normal course of conducting its business activities, including the work relating to the CMAP Feasibility Study with the Department of Housing and Works. Appropriations received from the Department of Mines, Petroleum and Exploration are disclosed in Note 3.1.

8.5 Related bodies

The Institute had no related bodies during the reporting period (2025: nil).

8.6 Affiliated bodies

The Institute had no affiliated bodies during the reporting period (2025: nil).

8.7 Remuneration of auditors

Remuneration paid or payable to the Auditor General in respect of the audit for the current financial year is as follows:

	2026 $	2025 $
Auditing the accounts, financial statements and key performance indicators	46,000	44,418

8.8 Equity

	2026 $	2025 $
Accumulated surplus		
Balance at start of period	19,753,731	17,169,935
Result for the period	197,742	2,583,796
Balance at end of period	**19,951,473**	**19,753,731**
Total Equity at end of period	**19,951,473**	**19,753,731**

8.9 Supplementary financial information

(a) Write-offs
During the reporting period, nil (2025:nil) was written off by the Institute's books.

(b) Losses through theft, defaults, and other causes
During the reporting period, there were no losses through thefts, defaults or other causes, (2025:nil).

(c) Forgiveness of debts
During the reporting period, there were no occurrences of forgiveness of debts, (2025:nil).

(d) Gift of public property
During the reporting period, there were no occurrences of gifts of public property, (2025:nil).

Note 9. Explanatory Statements

This section explains variations in the financial performance of the Institute.

	Notes
Explanatory statement for controlled operations	9.1

9.1 Explanatory statement for controlled operations

This explanatory section explains variations in the financial performance of the Institute undertaking transactions under its own control, as represented by the primary financial statements. All variances between annual estimates (published in annual report 2025) and actual results for 2026, and between the actual results for 2026 and 2025 are shown below. Narratives are provided for major variances which are more than 10% of the comparative and which are more than 1% of the following (as appropriate):

1) Estimate and actual results for the current year:
   - Total Cost of Services of the annual estimates for the Statement of comprehensive income and Statement of cash; and
   - Total Assets of the annual estimates for the Statement of financial position.
2) Actual results between the current year and the previous year:
   - Total Cost of Services of the previous year for the Statements of comprehensive income and Statement of cash flows; and
   - Total Assets of the previous year for the Statement of financial position.

9.1.1 Statement of comprehensive income variances

	Variance note	Estimate 2026 $	Actual 2026 $	Actual 2025 $	Variance between estimate and actual	Variance between actual results for 2026 and 2025
COST OF SERVICES						
Expenses						
Research and scholarships	1,A	11,040,872	6,087,259	6,459,653	(4,953,613)	(372,394)
Employee benefits expense	2,B	3,055,163	2,619,151	2,108,587	(436,012)	510,564
Supplies and services	3	4,627,735	803,181	910,374	(3,824,554)	(107,193)
Other expenses		139,086	186,292	172,930	47,206	13,362
Accommodation expenses		213,306	217,041	211,112	3,735	5,929
Depreciation expense		-	2,600	2,600	2,600	-
Total cost of services		**19,076,162**	**9,915,524**	**9,865,256**	**(9,160,638)**	**50,268**
Income						
Revenue						
Interest revenue	4	739,158	956,004	1,037,568	216,846	(81,564)
Commonwealth grants and contributions	5,C	1,350,000	-	150,000	(1,350,000)	(150,000)
Other revenue		78,362	60,128	96,755	(18,234)	(36,627)
Revenue from Industry Sponsorship	6,D	3,016,155	1,351,182	1,189,401	(1,664,973)	161,781
Total Revenue		**5,183,675**	**2,367,314**	**2,473,724**	**(2,816,361)**	**(106,410)**
Total income other than income from State Government		**5,183,675**	**2,367,314**	**2,473,724**	**(2,816,361)**	**(106,410)**
NET COST OF SERVICES		**13,892,487**	**7,548,210**	**7,391,532**	**(6,344,277)**	**156,678**
Income from State Government						
State Government Grant	E	6,528,000	6,544,000	8,895,000	16,000	(2,351,000)
Income from other public sector entities	F	1,067,500	981,779	863,000	(85,721)	118,779
Resources received free of charge		213,306	220,173	217,328	6,867	2,845
Total income from State Government		**7,808,806**	**7,745,952**	**9,975,328**	**(62,854)**	**(2,229,376)**
SURPLUS/(DEFICIT) FOR THE PERIOD		**(6,083,681)**	**197,742**	**2,583,796**	**6,281,423**	**(2,386,054)**
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD		**(6,083,681)**	**197,742**	**2,583,796**	**6,281,423**	**(2,386,054)**

The estimates and the comparative amounts have been reclassified for simplified disclosures. This change in presentation has no impact on the net result.

9.1.1 Statement of comprehensive income variances (continued)

Major estimate and actual (2026) variance narratives

1. Research project expenditure was lower than estimated project values and vary due to the timing of entering into funding agreements and the progressive fulfilment of grant conditions. While the original budget assumed the full project expenditure would occur in the current year, a portion of the payments has been reprofiled to future years in line with project delivery schedules.
2. Employee benefits expense was lower than budgeted due to delays in filling all vacant positions, including roles associated with the CMAP Feasibility Study.
3. Supplies and services expenditure was lower than budget due to delays in the CMAP Feasibility Study. The original budget assumed that consultancy costs for the entire project would be incurred within the current year; however, project timelines have been revised, resulting in expenditure being deferred and reforecast to future years.
4. Interest revenue exceeded budget as actual earnings were higher than anticipated. The variance was due to the original budget that was based on a conservative estimate of interest income, which resulted in higher-than-budgeted revenue being recognised during the year.
5. Commonwealth grants and contributions relate to funding receivable under the Commonwealth National Productivity Initiative for the CMAP Feasibility Study. The variance was due to the funding for $1.35m reprofiled to the next financial year.
6. Sponsorship revenue is lower than budget as fewer sponsorship contributions are managed by the Institute. The budget was based on a higher estimate of sponsorship funding, resulting in lower actual revenue than forecast. This is also dependent on the timing of entering into funding agreements and the progressive fulfilment of grant conditions. A portion of the sponsorship revenue has been reprofiled to future years in line with project delivery schedules.

Major actual (2026) and comparative (2025) variance narratives

A. Research project expenditure decreased by 6% compared with the prior year, primarily reflecting a lower level of grant commitments and project activity during the year. The reduction was partially offset by expenditure associated with achieving key project milestones and ongoing research activities.

B. The Employee benefits expense has increased from the prior year due to the increase in number of employees appointed to some of the vacant positions.

C. Nil contribution in this financial year with funding receivable under the Commonwealth National Productivity Initiative for the CMAP Feasibility Study for $1.35m as it has been reprofiled to the next financial year.

D. Income from Industry sponsorship is driven by the terms set in the Conditions of Grant at the commencement of every new research project. The increase in income reflects the higher level of sponsorship funds to be managed by MRIWA in accordance with the Conditions of Grants entered into prior years.

E. State Government Grants decreased in the current year due to specific funding for CMAP feasibility study for $2.4m received in prior year.

F. Income from other public sector entities increased predominantly due to new sponsorship received from Department of Water and Environmental Regulation for $256k.

9.1.2 Statement of financial position variances

	Variance note	Estimate 2026 $	Actual 2026 $	Actual 2025 $	Variance between estimate and actual $	Variance between actual results for 2026 and 2025 $
ASSETS						
Current Assets						
Cash and cash equivalents		8,762,781	12,171,883	11,314,585	3,409,102	857,298
Restricted cash and cash equivalents		7,169,548	8,773,595	10,207,838	1,604,047	(1,434,243)
Receivables		570,000	294,558	576,313	(275,442)	(281,755)
Other current assets	1,A	184,790	480,954	262,690	296,164	218,264
Total Current Assets		**16,687,119**	**21,720,990**	**22,361,426**	**5,033,871**	**(640,436)**
Non-Current Assets						
Office equipment		7,800	7,523	10,123	(277)	(2,600)
Total Non-Current Assets		**7,800**	**7,523**	**10,123**	**(277)**	**(2,600)**
TOTAL ASSETS		**16,694,919**	**21,728,513**	**22,371,549**	**5,033,594**	**(643,036)**
LIABILITIES						
Current Liabilities						
Payables		390,000	517,651	395,788	127,651	121,863
Employee benefit provisions - Current		236,400	326,807	197,681	90,407	129,126
Deferred income	2,B	1,529,445	846,256	1,911,806	(683,189)	(1,065,550)
Total Current Liabilities		**2,155,845**	**1,690,714**	**2,505,275**	**(465,131)**	**(814,561)**
Non-Current Liabilities						
Employee benefit provisions - Non-Current		135,052	86,326	112,543	29,238	51,747
Total Non-Current Liabilities		**135,052**	**86,326**	**112,543**	**29,238**	51,747
TOTAL LIABILITIES		**2,290,897**	**1,777,040**	**2,617,818**	**(513,857)**	**(840,778)**
NET ASSETS		**14,404,022**	**19,951,473**	**19,753,731**	**5,547,451**	**197,742**
EQUITY						
Accumulated surplus		14,404,022	19,951,473	19,753,731	5,547,451	197,742
TOTAL EQUITY		**14,404,022**	**19,951,473**	**19,753,731**	**5,547,451**	**197,742**

9.1.2 Statement of financial position variances (continued)

Major Estimate and Actual (2026) Variance Narratives

1. Other current assets were higher than budget due to the recognition of accrued income relating to the CMAP Feasibility Study where the Institute had satisfied its performance obligations by year-end and the associated funding was receivable but had not yet been received.

2. Deferred income was lower than budget due to the timing of entering into funding agreements and the progressive fulfilment of grant conditions. In addition, the completion and closure of a significant number of projects during the year resulted in the recognition of previously deferred funding as revenue, reducing the deferred income balance below budget.

Major Actual (2026) and Comparative (2025) Variance Narratives

A. The increase in other current assets reflects the recognition of accrued income associated with the CMAP Feasibility Study. The Institute had satisfied its performance obligations under the funding agreement as at the reporting date, with the related funding remaining receivable at year-end.

B. Deferred income was lower than the prior year, reflecting the recognition of previously deferred funding as revenue following the satisfaction of grant conditions and the closure of a significant number of research projects during the year.

9.1.3 Statement of cash flows variances

	Variance note	Restated budget 2026 $	Actual 2026 $	Restated Actual 2025 $	Variance between estimate and actual $	Variance between actual results for 2026 and 2025 $
CASH FLOWS FROM STATE GOVERNMENT						
State Government Grant						
State Government grant and sponsorship	1,A	6,528,000	6,544,000	8,895,000	16,000	(2,351,000)
Funds from other public sector entities	1	1,067,500	861,779	863,000	(205,721)	(1,221)
		7,595,500	**7,405,779**	**9,758,000**	**(189,721)**	**(2,352,221)**
Utilised as follows:						
CASH FLOWS FROM OPERATING ACTIVITIES						
Payments						
Research and scholarships payments	2,B	(10,730,872)	(5,906,311)	(6,655,677)	4,824,561	749,366
Employee benefits	3,C	(2,760,496)	(2,502,428)	(2,005,157)	258,068	(497,271)
Supplies and Services	4	(4,627,735)	(831,318)	(639,441)	3,796,417	(191,877)
Other Expenses		(139,087)	(174,302)	(153,584)	(35,215)	(20,718)
GST paid on purchases	5	(1,377,417)	(638,040)	(715,708)	739,377	77,668
Receipts						
Receipts from Sponsors	6,D	2,936,056	256,893	677,065	(2,679,163)	(420,172)
Receipts from Commonwealth Government and contributions	7,E	1,350,000	-	150,000	(1,350,000)	(150,000)
Other receipts		78,362	11,054	4,992	(67,308)	6,062
Interest received	8	708,179	964,845	986,316	256,666	(21,471)
GST received on sales	9	180,865	35,371	46,124	(145,494)	(10,753)
GST receipts from taxation authority	10,F	1,196,552	801,512	358,186	(395,040)	443,326
Net cash used in operating activities		**(13,185,593)**	**(7,982,724)**	**(7,946,884)**	**5,202,869**	**(35,840)**
CASH FLOWS FROM INVESTING ACTIVITIES		**-**	**-**	**-**	**-**	**-**
Net increase/(decrease) in cash and cash equivalents		(5,590,093)	(576,945)	1,811,116	5,013,148	(2,388,061)
Cash and cash equivalents at the beginning of the period		21,522,423	21,522,423	19,711,307	-	1,811,116
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD		**15,932,329**	**20,945,478**	**21,522,423**	**5,013,148**	**(576,945)**

The estimates and the comparative amounts have been reclassified for simplified disclosures. This change in presentation has no impact on the net result.

9.1.3 Statement of cash flows variances (continued)

Major Estimate and Actual (2025) Variance Narratives

1. Net cash received from the State Government was lower than estimated. This favourable variance for State Government grant of $16K that was provided to offset increased insurance costs was partially offset by lower-than-budgeted sponsorship contributions received from other public sector entities.
2. Research project payments were lower than budget due to the timing of entering into funding agreements and the progressive fulfilment of grant conditions. While the original budget assumed the full project expenditure would occur in the current year, a portion of the payments has been reprofiled to future years in line with project delivery schedules.
3. Employee benefits payments are lower than budgeted due to delays in appointing personnel to all vacant positions.
4. Supplies and services payments was lower than budget due to delays in the CMAP Feasibility Study. The original budget assumed that consultancy costs for the entire project would be incurred within the current year; however, project timelines have been revised, resulting in expenditure being deferred and reforecast to future years.
5. GST on payments was below budget, reflecting lower actual expenditure than anticipated. The original budget was based on a conservative estimate of expenditure levels, resulting in higher forecast GST recoveries than were ultimately realised.
6. Sponsorship receipts were lower than budget as fewer sponsorship contributions were received than anticipated. The budget was based on a higher estimate of sponsorship funding, resulting in lower actual receipts than forecast.
7. Nil contribution in this financial year with funding receivable under the Commonwealth National Productivity Initiative for the CMAP Feasibility Study for $1.35m which has been reprofiled to the next financial year.
8. Interest revenue exceeded budget as actual earnings were higher than anticipated. The original budget was based on a conservative estimate of interest income, which resulted in higher-than-budgeted revenue being recognised during the year.
9. GST receipts associated with sponsorship funding were below budget, reflecting lower taxable sponsorship income received during the year than forecast. The original budget was based on higher estimated sponsorship revenue, resulting in a corresponding reduction in GST receipts.
10. GST receipts from the taxation authority were lower than budget, primarily due to lower GST-bearing transactions than originally forecast. The budget was prepared using higher estimates of taxable revenue and expenditure activity, resulting in lower GST recoveries than anticipated.

Major Actual (2026) and Comparative (2025) Variance Narratives

A. State Government grants decreased in the current year as the prior year included $2.4 million of specific funding for the CMAP Feasibility Study. This project-specific funding was not ongoing and was not repeated in the current year.

B. Cash payments for research projects decreased from the prior year, reflecting the completion and closure of a significant number of projects during the year. In addition, the timing of project milestones resulted in some planned payments being deferred to future financial years.

C. Employee benefits payments are higher from the prior year due to the increase in number of employees appointed to some of the vacant positions.

D. Sponsorship receipts were lower than the prior year, reflecting a lower level of industry sponsorship funding received as several projects were completed during the year and fewer new sponsorship-funded projects commenced.

E. Nil contribution in this financial year with funding receivable under the Commonwealth National Productivity Initiative for the CMAP Feasibility Study for $1.35m which has been reprofiled to the next financial year.

F. GST receipts from the taxation authority increased compared to the prior year, reflecting higher levels of operational and research project activity, which generated increased GST recoveries during the year.

Appendix A: Current Projects/ Contracts Executed

Current Projects/ Contracts Executed

Program 1 – Find More Viable Resources							
Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10525	Data driven decisions	ChatGeo: Forging Trust in Spatial Semantic Document and Knowledge Retrieval	University of Western Australia Eun-Jung Holden	Department for Energy and Mining (SA), Department of Mines, Petroleum and Exploration (GSWA)	2	300,401	100,401
M10587	Data driven decisions	Machine-Assisted Granite Mapping in the Archaean Yilgarn Craton	RSC Global Pty Ltd Yongjun Lu	Department of Mines, Petroleum and Exploration (GSWA), SQM Australia Pty Ltd, Terrain Minerals	1	255,000	85,000
M10665	Data driven decisions	Empowering Future Mineral Exploration Research – WA Capability Review	University of Western Australia Guangyi Shao		1	18,000	18,000
M10678	Data driven decisions	Unveiling the Critical Resource Potential of Western Australia's (WA) Proterozoic Carbonatites	University of Western Australia Jonathan Michael Stokes		3.5	64,830	64,830
M0509	Detection technology	MinEx CRC	MinEx CRC Andrew Bailey		10	1,000,000	1,000,000[1]
M10444	Detection technology	Coiled Tubing Drilling for definition of Mineral Deposits - Phase 2: MinEx CRC Project 2	University of South Australia Soren Soe	Anglo American Services (UK) Ltd, Anglo American Technical & Sustainability Services Ltd, BHP Iron Ore Pty Ltd, Department of Regional New South Wales, Epiroc, LKAB Wassara, MinEx CRC, South32 Group Operations Pty Ltd	3	2,833,505	86,561[2]

[1] MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.
[2] MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10445	Detection technology	Petrophysics for Mineral Discovery during Drilling - Phase 2: MinEx CRC Project 4	Curtin University Brett Harris	Imdex Limited, MinEx CRC, Rio Tinto Technological Resources Pty Ltd, South32 Group Operations Pty Ltd	3	816,000	123,000[3]
M10446	Detection technology	Seismic in the Drilling Workflow - Phase 2: MinEx CRC Project 5	Curtin University Konstantin Tertyshnikov	Anglo American Exploration (Australia) Pty Ltd, BHP Pty Ltd, MinEx CRC, Rio Tinto Technological Resources Pty Ltd, Sercel	3	940,000	123,000[4]
M10532	Detection technology	Drone-Deployed Transient Electromagnetic (TEM) System for Exploration and Mining Applications	Loupe Geophysics Pty Ltd Andrew Duncan	Loupe Geophysics Pty Ltd	2	600,232	250,000
M10536	Detection technology	Raptor Grav™ – a next generation airborne gravimeter	CMG Operations Pty Ltd Andy Gabell	CMG Operations Pty Ltd	1.8	500,000	250,000
M10540	Detection technology	Data Processing and Inversion for Seismic While Drilling and Mining Using Distributed Acoustic Sensing and Machine Learning	Curtin University Emad Al-Hemyari		2.5	34,942	34,942
M10545	Detection technology	Collar Keeper® System (CKS) Automation Phase	Aquirian Limited - Jon Wright	Aquirian Limited	1	906,000	250,000
M10552	Detection technology	Coiled Tubing Drilling for definition of Mineral Deposits - Phase 3: MinEx CRC Project 2	University of South Australia Soren Soe	Anglo American Technical & Sustainability Services Ltd, BHP Iron Ore Pty Ltd, Epiroc, LKAB Wassara, MinEx CRC, Vale	3	1,843,000	84,000[5]
M10553	Detection technology	Petrophysics for Mineral Discovery during Drilling - Phase 3: MinEx CRC Project 4	Curtin University Brett Harris	BHP Iron Ore Pty Ltd, Imdex Limited, MinEx CRC, Rio Tinto Technological Resources Pty Ltd	3	782,000	101,000[6]

[3] MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.
[4] MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.
[5] MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.
[6] MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10554	Detection technology	Seismic in the Drilling Workflow - Phase 3: MinEx CRC Project 5	Curtin University Konstantin Tertyshnikov	Anglo American Technical & Sustainability Services Ltd, BHP Iron Ore Pty Ltd, Fortescue Ltd T/As Fortescue Metals Group Ltd, MinEx CRC, Rio Tinto Technological Resources Pty Ltd	3	702,600	99,600.[7]
M10582	Detection technology	Drilling Optimisation - Phase 3: MinEx CRC Project 1	Curtin University Masood Mostofi	BHP Iron Ore Pty Ltd, Fortescue Ltd T/As Fortescue Metals Group Ltd, Geotech Boyles Bros, Imdex Limited, McKay Drilling Pty Ltd, MinEx CRC, Rio Tinto Technological Resources Pty Ltd, Sandvik Mining and Construction Oy, Vale	3	2,342,000	100,000.[8]
M10614	Detection technology	Advanced Integration of Electromagnetic Data in the Tomofast-x Inversion Code for Enhanced Mineral Exploration	University of Western Australia Farid Ullah		4	167,519	167,519
M0470a	Mineral systems	(WAS M555) A multi-scale approach to controls on mineralization in the Fraser Zone, Western Australia	Curtin University Katy Evans	Curtin University, Department of Mines, Petroleum and Exploration (GSWA), IGO Limited, Legend Mining Limited, Mark Gareth Creasy	3.7	1,023,300	341,300
M0551	Mineral systems	Integrated 3G - Geochronology-geochemistry-grain shape: a new toolkit for mineral sands understanding	Curtin University Milo Barham	Curtin University, Iluka Resources Limited	4	979,000	345,000

[7] MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.

[8] MRIWA contributions are drawn down from MRIWA's commitment to the MinEx CRC.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M0554	Mineral systems	Evolution of Proterozoic multistage rift basins – key to mineral systems - ARC Linkage proposal linked to M521	University of Western Australia Mark Jessell	Anglo American Exploration (Australia) Pty Ltd, Anglo-American PLC, Australian Research Council, BHP Group Operations Pty Ltd, IGO Limited, Monash University, Teck Australia Pty Ltd	4	2,041,040	540,837
M0561	Mineral systems	Giant rare-metal pegmatites of the East Pilbara Terrane, Western Australia: Mineral systems analysis and terrane-scale exploration	University of Western Australia John Grigson		3.5	52,500	52,500
M10412	Mineral systems	Primary and secondary high-grade gold mineralisation processes in orogenic systems: key to a sustainable mining?	University of Western Australia (CET - Centre for Exploration Targeting) Nicolas Thébaud	Australian Research Council, Fosterville Gold Mine Pty Ltd, Karora Resources Pty Ltd, Monash University, Newmont Australia Pty Ltd, Northern Star Resources Limited, University of Western Australia (CET - Centre for Exploration Targeting)	3	1,942,114	450,417
M10422	Mineral systems	Understanding the Mt Weld Carbonatite mineral system - a Critical Minerals super-resource in Western Australia	Murdoch University Artur Deditius	Curtin University, Murdoch University, Lynas Rare Earths Limited	5	581,083	146,116
M10433	Mineral systems	Distal footprints in the South West Terrane	Commonwealth Scientific Industrial Research Organisation (CSIRO) Ignacio Gonzalez-Alvarez	Anglo American Exploration (Australia) Pty Ltd, Department of Mines, Petroleum and Exploration (GSWA), Ramelius Resources Limited	3.8	1,233,000	308,000
M10484	Mineral systems	Petrogenesis and metallogenic significance of the Speewah Ti-V Deposit	University of Western Australia Alex Eves		3	48,361	48,361

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10500	Mineral systems	Characterisation of clay-hosted rare-earth element deposits in Australia	RSC Global Pty Ltd Yongjun Lu	Auric Mining, Dreadnought Resources, Golden Mile Resources, Heavy Rare Earths Ltd, Mt Ridley Mines, MTM Critical Metals Ltd, Terrain Minerals, Voltaic Strategic Resources	1	202,500	67,500
M10502	Mineral systems	CuBAS - Structural and sedimentological reconstruction and fluid flow simulations for copper exploration in the Yeneena Basin – Paterson Orogen, WA	Commonwealth Scientific Industrial Research Organisation (CSIRO) Thomas Poulet	BHP Metals Exploration Pty Ltd, Department of Mines, Petroleum and Exploration (GSWA)	2	600,000	150,000
M10539	Mineral systems	Realising the carbonatite-hosted Nb-REE Potential of the West Arunta, Western Australia	University of Western Australia Marco Fiorentini	Australian Research Council, Department of Mines, Petroleum and Exploration (GSWA), Dreadnought Resources, Encounter Resources Ltd	3	1,669,948	366,739
M10602	Mineral systems	Mobility of nominally immobile elements in hydrothermal and weathering environments: implications for exploration and mineral processing	Curtin University Alexander Walker	Critica Limited, Curtin University	2	650,000	150,000
M10610	Mineral systems	Yilgarn 2030	University of Western Australia Quentin Masurel	Iceni Gold, Lefroy Exploration Ltd, Northern Star Resources Limited, Norton Gold Fields Pty Ltd, Ramelius Resources Limited, Regis Resources	3	1,760,000	440,000
M10675	Mineral systems	Controls on the orderly distribution of giant deposits in self-organised mineral systems: new predictive criteria and analytical tools	University of Western Australia (CET - Centre for Exploration Targeting) Lisa Jane Vella		3.5	64,830	64,830

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10479	Workforce of the future	ARC Training Centre in Critical Resources for the Future	University of Western Australia Marco Fiorentini	Ardea Resources Limited, Australian Research Council, Bellavista Resources, BHP Group Ltd, Chalice Mining Ltd, Department for Energy and Mining (SA), Department of Industry, Tourism and Trade (Northern Territory Geological Survey), Department of Mines, Petroleum and Exploration (GSWA), Evolution Mining Limited, Geological Survey of Queensland, IGO Limited, Imdex Limited, Newexco Services Pty Ltd, Rio Tinto Exploration Pty Limited, The Australian National University, University of Adelaide, University of Western Australia	5	10,500,334	695,711

Program 2 – Expand the Mining Envelope

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10430	Data driven decisions	Sustainable Optimisation of Mining Complexes through Innovative Algorithms	Curtin University Waqar Asad	Norton Gold Fields Pty Ltd,	4.5	165,000	M10430
M10486	Data driven decisions	Ore Body Characterisatio n using Machine Learning and Measure-While-Drilling Data	Curtin University Daniel Goldstein		2.8	45,597	M10486
M0529	Deep and complex extraction systems	Lixiviant access creation in impermeable hard rock mass for the in-situ underground leaching of metals from ore	Murdoch University Aleksandar Naum Nikoloski	Murdoch University, CMTE Development Ltd T/As Mining3	5.6	120,000	M0529
M0544	Deep and complex extraction systems	Towards a Mechanistic Understanding of Electrokinetic In Situ Leaching	University of Western Australia James Jamieson	BHP Pty Ltd, Evolution Mining Limited, Newcrest Mining Limited, Newmont Mining Services Pty Ltd	6	842,605	M0544
M0545	Deep and complex extraction systems	Evaluation of in-situ barrier technology for risk mitigation and extraction optimisation for in-situ-recovery operations	Curtin University Navdeep Dhami	BHP Pty Ltd, CMTE Development Ltd T/As Mining3, Newcrest Mining Limited, Orano Mining	5.1	225,000	M0545
M0510	Mining technology	Safe, sustainable management of filtered tailings	University of Western Australia Andy Fourie	Alcoa of Australia Ltd, Alumina Quality Workshop Inc, International Aluminium Institute, Rio Tinto Technological Resources Pty Ltd, BHP Group Operations Pty Ltd	3	482,500	M0510
M0548	Mining technology	Investigating the utilisation of mine waste in shotcrete for underground support	University of Western Australia Xingjie Chen		4	120,000	M0548

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10559	Mining technology	Automation System for Processing Tank Descale Rig with Advanced A.I. driven 4D radar and 3D camera technologies	Total Marine Technology (TMT) Malte Duering	Cleanaway Operation Pty Ltd	2.9	500,000	M10559
M10599	Mining technology	Precision and Low Impact Mining Technologies Inventory	University of Western Australia Keely Gausten		1	18,000	M10599
M10633	Mining technology	Field-Scale Validation of Electrokinetic In Situ Recovery of Metals from Tailings Waste	Ekion Pty Ltd Henning Prommer	Ekion Pty Ltd	1.5	502,205	M10633
M10660	Mining technology	OptiClino Precision Drill Alignment System - MVP Optimisation, Prototype 2 Development and Underground Field Validation at Fimiston Underground Mine	IBT Robotic System Group Jollan Kingsley	Innovative Blasting Technologies Pty Ltd, Robotic Systems Pty Ltd	0.5	500,000	M10660
M10562	Safety, social and environmental sustainability	Impact of COVID-19 on the leadership of operational leaders in the oil, gas, and mining sector of Australia	Edith Cowan University Michael Ajith		4.5	104,757	M10562
M10594	Safety, social and environmental sustainability	Psychological Capital – The Last Line of Defence in Psychosocial Safety in the Mining Industry	Edith Cowan University Ronald Neil James		6.7	155,196	M10594
M10596	Safety, social and environmental sustainability	Occupational Hygiene Dust Sampler Comparison Study in Western Australian Mining Operations	Edith Cowan University Ben Walsh		4.5	116,397	M10596

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10597	Safety, social and environmental sustainability	Examining the Role of Psychosocial Safety Climate in the Mining Industry	Edith Cowan University Nousheen Fatima		3.5	162,956	M10597

Program 3 – Increase Recovered Value Through Processing							
Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M0508a	Data driven decisions	Unlocking Knowledge from Technical Texts using Deep Active Learning and Entity Typing	University of Western Australia Tyler Bikaun		3.5	120,000	120,000[9]
M0508b	Data driven decisions	Risk-based Inspection Intervals: A Practical Approach	Curtin University Gabriel Gonzalez		3.5	120,000	120,000[10]
M10673	Data driven decisions	Mineralogical Classification of Tailings and Development of Advanced Separation Strategies for Resource Recovery	Curtin University Maria Joriza Bondoc		0.5	20,000	20,000
M10425	Energy utilisation	Heavy Industry Low-Carbon Transmission CRC (HILT CRC)	HILT CRC Limited Jenny Selway	Department of Energy and Economic Diversification (DEED)	10	1,630,000	0
M10527	Energy utilisation	Online Green Process Model Phase2 and Phase3	GHD Pty Ltd Bhupesh Sharma		0.7	210,000	210,000
M10544	Energy utilisation	Towards decarbonisation in steelmaking: Grey-box modelling for optimisation of green and sustainable metallurgical coke production from biomass	Murdoch University Muzammil Khan		3.5	61,148	61,148
M0508	Processing technology	ARC Industrial Transformation Training Centre (ITTC) in Transforming Maintenance through Data Science	Curtin University Andrew Rohl	Alcoa of Australia Ltd, Australian Research Council, BHP Pty Ltd, Curtin University, Roy Hill Holdings Pty Ltd, University of Western Australia	6	9,099,302	240,000

[9] MRIWA contributions are drawn down from MRIWA's commitment to the CTMTDS.

[10] MRIWA contributions are drawn down from MRIWA's commitment to the CTMTDS.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M0533f	Processing technology	Hydrometallurgical Processing for Nickel and Cobalt Ores, Concentrates, Tailings, Wastes - Stage 2 (FBI CRC Project No. 029)	Curtin University Elsayed Oraby	Ardea Resources Limited, BASF Australia Ltd, BHP Nickel West Pty Ltd, Blackstone Minerals Limited, Future Battery Industries, CRC Ltd, IGO Limited JordProxa Pty Ltd, Lycopodium Pty Ltd, Mineral Carbonation International Pty Ltd, Mining and Process Solutions Pty Ltd, Pure Battery Technologies Pty Ltd	3.5	3,607,080	0.[11]
M0533v	Processing technology	Beneficiation and Chemical Processing of Lithium Minerals - Phase 2 (FBI CRC No. 030)	Murdoch University Aleksandar Nikoloski	Allkem Ltd, BASF Australia Ltd, Calix Limited, Department of the Chief Minister and Cabinet (Northern Territory), EV Metals Group PLC, Future Battery Industries, CRC Ltd, IGO Limited, JordProxa Pty Ltd, Lycopodium Pty Ltd, Rio Tinto Services Limited	3.5	3,195,000	0.[12]
M0537	Processing technology	The effect of water quality on rare earth minerals flotation	Curtin University Bogale Tadesse	Curtin University, Lynas Rare Earths Limited	4.3	210,500	70,000
M0541	Processing technology	Organic Acid Leach System for Rare Earth Extraction Technology Development	Curtin University Laurence Dyer	Future Battery Industries CRC Ltd, Department of Industry, Innovation and Science, Lynas Rare Earths Limited, Curtin University	5.1	435,160	115,000
M10452	Processing technology	Feasibility of effective metal recovery from tailings material via electrokinetic in-situ leaching	University of Western Australia Bishenka Mahaulpatha		3.5	144,228	144,228

[11] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and include Department of Energy and Economic Diversification (DEED) funds.
[12] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and include DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10473	Processing technology	Microwave Reactor for Critical Minerals	Northern Minerals Louis DeKlerk	Northern Minerals	0.7	625,000	125,000
M10481	Processing technology	New Opportunities for the PGM Industry in WA	ACIL Allen Pty Limited Ryan Buckland		0.7	204,874	204,874
M10485	Processing technology	Development of cementation-magnetic separation method for sulfide mineral processing and AMD prevention	Curtin University Hyunjin Na		3.3	143,734	143,734
M10497	Processing technology	Green pyromet/hydromet beneficiation pathways	University of Adelaide Alfonso Chinnici	Calix Limited Curtin University, FMG Procurement Services Pty Ltd, HILT CRC Limited, Onesteel Manufacturing Pty Ltd, Roy Hill Holdings Pty Ltd, South32 Group Operations Pty Ltd, The Australian National University, University of Adelaide	1	504,350	20,000.[13]
M10504	Processing technology	The upgrading of iron ore for DRI production using products from seawater	Curtin University Jacques Eksteen	Curtin University, FMG Procurement Services Pty Ltd, HILT CRC Limited, Roy Hill Holdings Pty Ltd, University of Adelaide	1	455,000	20,000.[14]
M10522	Processing technology	Upgrading Iron Ore for DRI Production using Seawater Reverse Osmosis Brines	Curtin University Jacques Eksteen	Australian Renewable Energy Agency (ARENA), Curtin University, HILT CRC Limited, FMG Procurement Services Pty Ltd, Roy Hill Holding Pty Ltd, BG&E Resources Pty Ltd, Proxa Australia Pty Ltd, University of Adelaide	3	2,806,238	500,000

[13] MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

[14] MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10528	Processing technology	Extraction of Clay-Hosted Rare-Earth Element Deposits in Australia	RSC Global Pty Ltd Yongjun Lu	Curtin University, Cygnus Metals Limited, Dreadnought Resources, Narryer Metals Limited, Pluto Resources, Terrain Minerals	1	532,500	175,000
M10541	Processing technology	Extraction of Rare Earth Elements (REE) from Sub-economic Ores and Process Tailings	Curtin University Yamini Kannappan		1.5	26,206	26,206
M10563	Processing technology	De-risking of Electric Smelting Furnaces for Australian Ores	Swinburne University of Technology	HILT CRC Limited, CSIRO, Calix Limited, Swinburne University of Technology, FMG Procurement Services Pty Ltd, Grange Resources (Tasmania) Pty Ltd, MHI Australia Pty Ltd, Roy Hill Holding Pty Ltd, Onesteel Manufacturing Pty Ltd	3	860,179	60,000.[15]
M10569	Processing technology	Cathode Precursor Production Pilot Plant (C4P) - Stage 3	Commonwealth Scientific Industrial Research Organisation (CSIRO) Keith Barnard		1	1,494,000	1,494,000
M10583	Processing technology	Critical Minerals Recovery with Simultaneous Generation of Cleaned Groundwater in the Goldfields.	EcoTechnolPtyLtd Robert Vagnoni	EcoTechnol PtyLtd	1	96,200	48,100

[15] MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10591	Processing technology	Alumina Refineries' Next Generation Transition (ALUMINEXT) Project - HILT CRC	HILT CRC Limited Woei Saw	CSIRO, 1414 Degrees Limited, Emirates Global Aluminium PJSC, Energy Exemplar Pty Ltd, WA Kenwalt Australia Pty Ltd, Norsk Hydro Brazil LTDA, Calix Limited, Rio Tinto Aluminium Limited, HILT CRC Limited	3	2,250,404	60,000.[16]
M10605	Processing technology	Optimal fast-start pathways to green steel via magnetite	The Australian National University Alireza Rahbari	HILT CRC Limited, The Australian National University, University of Adelaide, Department for Energy and Mining (SA), Grange Resources (Tasmania) Pty Ltd, Magnetite Mines Limited, Onesteel Manufacturing Pty Ltd	2	480,874	40,000.[17]
M10613	Processing technology	Development of a Gas-Assisted Ion-Selective Membrane for Lithium-Ion Extraction from Tailings	Edith Cowan University Yasamin Hamidian		3	139,599	139,599
M10625	Processing technology	Advancing Low-Carbon High-Grade Silicon Production from Iron Ore Waste (Phase 1)	Element Zero Bart Kolodziejczyk	Element Zero	2.8	500,000	250,000
M10626	Processing technology	Critical Minerals Advanced Processing Common User Facility - Project Definition Plan	MRIWA Johan Paul Beukes	Department of Industry, Science, Energy and Resources	1.1	3,000,000	1,500,000

[16] MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

[17] MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10636	Processing technology	Upscaling of novel green thermally assisted beneficiation pathways and impact of beneficiation on DRI and pellet production	University of Adelaide Alfonso Chinnici	HILT CRC Limited, Magaldi Power SpA, CSIRO, Calix Limited, Curtin University, Swinburne University of Technology, FMG Procurement Services Pty Ltd, Grange Resources (Tasmania) Pty Ltd, Roy Hill Holding Pty Ltd	3	1,298,320	60,000.[18]
M10640	Processing technology	Metallurgical Process Development for Gallium – Nimy Resources	NIMY Pty Ltd Luke Hampson	Curtin University, NIMY Resources Pty Ltd	2	1,456,000	550,000
M10641	Processing technology	Production of High-Performance Vanadium Redox Flow Batteries Electrolytes-Extraction of Impurities and optimisation	Murdoch University Aleksandar Naum Nikoloski	Murdoch University	1.5	120,000	60,000
M10477	Safety, social and environmental sustainability	Advanced electrometallurgy for improved recovery of green metals	University of Sydney Alejandro Montoya	ECOX Australia Pty Ltd	3	1,515,139	378,785

[18] MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds

Program 4 – Infrastructure and Logistics							
Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M0533u	Data driven decisions	Assessment, design and operation of battery-supported electric mining vehicles and machinery (FBI CRC No. 028)	University of Adelaide Ali Pourmousavi Kani	BHP Nickel West Pty Ltd, Department for Energy and Mining (SA), Department of Energy and Public Works (Qld), Energetics Pty Ltd, Future Battery Industries CRC Ltd, IGO Limited, Multicom Resources Limited, Galaxy Resources Limited - now Allkem Limited	3.5	1,160,000	300,000.[19]
M10644	Data driven decisions	Data Visualisation and Machine Learning for Truck Performance Prediction and Analysis	Electric Power Conversions Australia Clayton Franklin	Electric Power Conversions Australia	0.6	500,000	250,000
M10443	Energy utilisation	Stationary Mine Electrification (FBI CRC No. 039)	University of Western Australia Tyrone Fernando	Energetics Pty Ltd, Future Battery Industries CRC Ltd, Lycopodium Pty Ltd, Magellan Powertronics Pty Ltd, Ultra Power Systems Pty Ltd	2.5	1,112,000	300,000.[20]

[19] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

[20] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10451	Energy utilisation	Development of Vanadium Electrolytes (FBI CRC Project Number 038)	Murdoch University Aleksandar Naum Nikoloski	Department of Energy and Public Works (Qld), Department of the Chief Minister and Cabinet (Northern Territory), Future Battery Industries CRC Ltd, King River Resources Limited, Lycopodium Pty Ltd, Lynas Corporation, Technology Metals Australia Limited, Ultra Power Systems Pty Ltd	3	1,073,000	0.[21]
M10550	Energy utilisation	Cooling System for Retrofitted Electric Mining Truck (EPCA-E100 project)	Electric Power Conversions Australia Clayton Franklin	Electric Power Conversions Australia	1	500,000	250,000
M10600	Energy utilisation	Net Zero Research, Development & Deployment Roadmap Inventory	University of Western Australia Phoebe Tran		1	18,000	18,000
M10611	Energy utilisation	Responsible management of retired mining vehicle batteries to address environmental and economic challenges	Edith Cowan University Kenneth Tetteh Akiti		2	28,436	28,436
M10645	Regulatory tools and processes	Phase 1 Accreditation for Surficial Mineral Carbonation - Carbon Credit Markets and Australian Carbon Credit Units (ACCUs)	Full Circle Carbon Rosie Johnstone		0.3	25,000	25,000

[21] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Program 5 – New Products and Markets							
Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M0533d	Data driven decisions	Process Legacy - Stage 2 (FBI CRC Project No. 033)	Curtin University Arie van Riessen	Anax Metals Limited, Australasian Pozzolan Association, Cadoux Limited (formerly FYI Resources Limited), ChemCentre, Department of the Chief Minister and Cabinet (Northern Territory), EV Metals Group PLC, Future Battery Industries CRC Ltd, IGO Limited	3.5	3,044,589	0.[22]
M0533j	Data driven decisions	Establishment of the National Battery Testing Centre	Queensland University of Technology Joshua Watts	Australian Vanadium Ltd, BASF Corporation USA, BHP Nickel West Pty Ltd, Calix Limited, Defence Science and Technology, Department of the Chief Minister and Cabinet (Northern Territory), ESS Asia Pacific Pty Ltd, Future Battery Industries CRC Ltd, Lava Blue Ltd, Magellan Powertronics Pty Ltd, Multicom Resources Limited, Sunrise Energy Metals Limited, Syrah Resources Ltd, Ultra Power Systems Pty Ltd	4	7,145,342	200,000.[23]

[22] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

[23] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M0533m	Data driven decisions	Electrochemical Testing of Li-ion Battery Materials in Standard Cell Formats (FBI CRC Project No. 022)	Queensland University of Technology Michael Horn	Alpha HPA Limited, Ardea Resources Limited, BASF Australia Ltd, BHP Nickel West Pty Ltd, Cadoux Limited (formerly FYI Resources Limited), Calix Limited, ChemX Materials Ltd, Cobalt Blue Holdings Limited, EV Metals Group PLC, Future Battery Industries CRC Ltd, IGO Limited, Koppers Carbon Minerals and Chemicals Pty Ltd, Lava Blue Ltd, MRIWA, Pure Battery Technologies Pty Ltd, Sicona Battery Technologies Pty Ltd, Sunrise Energy Metals Limited, Talga Group Ltd	4	4,210,396	500,000.[24]
M0533q	Data driven decisions	Development of a trusted supply chain for Australian battery minerals and products (FBI CRC Project No. 027)	Curtin University Prokopiy Vasilyev	Ardea Resources Limited, Australasian Pozzolan Association, BASF Australia Ltd, EV Metals Group PLC, Everledger Australia Pty Ltd, Future Battery Industries CRC Ltd, Source Certain International Pty Ltd	3	1,795,000	0.[25]

[24] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

[25] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M0533r	Data driven decisions	Battery Materials for a Circular Economy (FBI CRC Project 023)	University of Technology Sydney Damien Giurco	Ardea Resources Limited, Australasian Pozzolan Association, BASF Australia Ltd, BHP Nickel West Pty Ltd, Energetics Pty Ltd, Future Battery Industries CRC Ltd, IGO Limited, Multicom Resources Limited, Galaxy Resources Limited - now Allkem Limited	4.5	1,688,550	400,000.[26]
M10530	Data driven decisions	Retrieval Augmented Generation (RAG) on large Technical Reports - (CEED)	University of Western Australia Henri Scaffidi		1	24,354	24,354
M10585	Data driven decisions	Development and Implementation of CMAP: A Corrosion Monitoring and Protection System for Gold Cyanidation Tanks	TECHT Giles Harrison	TECHT	1.3	471,721	230,610
M10672	Data driven decisions	Accelerated Mineral Carbonation: Research Capability and Opportunity Mapping	Curtin University Thi Hong Tran		0.5	20,000	20,000

[26] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M0533h	Downstream processing technology	Cathode Precursor Production Pilot Plant - Stage 2 (FBI CRC No. 031)	Curtin University Alireza Rabieh	Alpha HPA Limited, Ardea Resources Limited, BASF Australia Ltd, BHP Nickel West Pty Ltd, Blackstone Minerals Limited, Calix Limited, ChemX Materials Ltd, Cobalt Blue Holdings Limited, EV Metals Group PLC, Future Battery Industries CRC Ltd, IGO Limited, JordProxa Pty Ltd, King River Resources Limited, Lycopodium Pty Ltd, Mn Energy Limited (formerly Pilbara Metals Group Ltd), Pure Battery Technologies Pty Ltd	3	5,916,300	0.[27]
M0533k	Downstream processing technology	Super Anode (FBI CRC Project No.019)	University of Melbourne Amanda Ellis	AnteoTech LTD, Calix Limited, EcoGraf Limited, Future Battery Industries CRC Ltd, Koppers Carbon Minerals and Chemicals Pty Ltd, Syrah Resources Ltd, Talga Group Ltd	4	4,200,000	200,000.[28]
M10453	Downstream processing technology	Beneficiation of Gold Telluride Ores	Curtin University Kylie Blackwell		2.7	41,208	41,208
M10521	Downstream processing technology	Pre-feasibility study into the development of a pilot plant for the adaption of Direct Lithium Extraction	Edith Cowan University Amir Razmjou		0.7	450,000	450,000
M10598	Downstream processing technology	WA Critical Mineral Commodity Overviews	Curtin University George Barakos		0.3	50,000	50,000
M10622	Downstream processing technology	Scandium Oxide Recovery	Victory Metals Limited Brendan Clark	Victory Metals Limited	0.7	750,000	250,000

[27] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

[28] MRIWA contributions are drawn down from MRIWA's commitment to the FBI CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10623	Downstream processing technology	Establishing an Australian rubidium industry: Extraction and purification from pegmatite ore	Everest Metals Corporation Ltd Bahman Rashidi	Everest Metals Corporation Ltd	1	300,000	150,000
M10549	Energy utilisation	Big Roller™, energy efficient overland conveying with negative marginal cost of abatement energy efficient overland conveyor development	Big Roller™ Overland Conveyor Company Shawn Ryan	Big Roller™ Overland Conveyor Company	0.6	500,000	250,000
M10571	Regulatory tools and processes	Developing a Perth Critical Minerals Exchange (PCMX)	Digital Finance CRC Limited Eric Lilford	Curtin University, Digital Finance CRC Limited, University of Western Australia	1	2,000,000	500,000
M10469	Safety, social and environmental sustainability	Use of Industrial Tailings as Alternative to Virgin Sands	ChemCentre Richard Burgdorf	Sustainability Waste Alliance (SWA), Albemarle Lithium Pty Ltd, Covalent Lithium, Mineral Resources Limited	1.5	319,165	79,788
M10529	Safety, social and environmental sustainability	Automated Flange Bolting Robot with Camera Vision for Mining and Minerals Processing Infrastructure	Total Marine Technology (TMT) Malte Duering	Alcoa of Australia Ltd	3.1	397,333	99,333
M10542	Safety, social and environmental sustainability	The Unintended Effects of Carbon Emission Policy: International Evidence from the Paris Agreement and its Impact on the WA Mining Sector	University of Western Australia Sistine Sun		2.5	116,397	116,397
M10595	Safety, social and environmental sustainability	Effective Leader Safety Storytelling: its attributes and outcomes	University of Western Australia Patrick Benetti		1	17,471	17,471
M10607	Safety, social and environmental sustainability	Use of DBS manufactured sands in roads - Human Health and Ecological Risk Assessment	ChemCentre Richard Burgdorf	Albemarle Lithium Pty Ltd, Covalent Lithium, Department of Water and Environmental Regulation	1.4	521,334	64,360

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10617	Safety, social and environmental sustainability	Evaluating the Potential of Mine Waste for Construction Solutions	University of Western Australia Sarah Scott		0.8	13,500	13,500
M10645	Safety, social and environmental sustainability	Phase 1 Accreditation for Surficial Mineral Carbonation - Carbon Credit Markets and Australian Carbon Credit Units (ACCUs)	Full Circle Carbon Rosie Johnstone		0.2	25,000	25,000
M10646	Safety, social and environmental sustainability	A.I. enhanced Machine Vision System for Automated Flange Bolting Robot “Boltron” for Mining and Minerals Processing Infrastructure	Total Marine Technology (TMT) Dan Barac	Total Marine Technology (TMT)	0.6	187,720	93,860
M10679	Safety, social and environmental sustainability	Sustainable Enhancement of Asphalt Performance Using Biochar, Waste Plastic Aggregate, and Mining Waste	Edith Cowan University Adeel Iqbal		1.8	83,759	83,759
M0533	Strategic foresight	Future Battery Industries CRC	Future Battery Industries CRC Ltd Derek Hall	Department of Energy and Economic Diversification	5	6,000,000	5,500,000.[29]
M10505	Strategic foresight	Intermediate product exports for Australia-China green steel	The Australian National University Jorrit Gosens	Curtin University, FMG Procurement Services Pty Ltd, Grange Resources (Tasmania) Pty Ltd, HILT CRC Limited, Onesteel Manufacturing Pty Ltd, Roy Hill Holdings Pty Ltd, The Australian National University	1.2	254,461	0.[30]

[29] MRIWA contributions are drawn down from MRIWA’s commitment to the FBI CRC and DEED funds.

[30] MRIWA contributions are drawn down from MRIWA’s commitment to the HILT CRC and DEED funds.

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10506	Strategic foresight	Analysis of market, cost and locational factors for green iron and steel in Australia	The Australian National University Frank Jotzo	FMG Procurement Services Pty Ltd, HILT CRC Limited, Onesteel Manufacturing Pty Ltd, Queensland University of Technology, Roy Hill Holdings Pty Ltd, Swinburne University of Technology, The Australian National University, University of Adelaide	1.2	26,1517	0.[31]
M10515	Strategic foresight	Western Australia Critical Minerals priority scheme	University of Western Australia Sineth Kannangara		0.6	20,000	20,000
M10535	Strategic foresight	Net Zero Research Development and Demonstration Roadmap	Low Carbon Australia Pty Ltd Tristy Fairfield	Department of Energy and Economic Diversification	0.5	450,000	150,000
M10629	Strategic foresight	Australian intermediate product exports in a decarbonised global steelmaking industry: scenarios and pathways	The Australian National University Jorrit Gosens	Swinbourne University, FMG Procurement Services Pty Ltd, Roy Hill Holding Pty Ltd, Grange Resources (Tasmania) Pty Ltd, CSIRO, Onesteel Manufacturing Pty Ltd, The Super Power Institute, University of Adelaide, HILT CRC Limited	1	335,507	200,000.[32]
M10647	Workforce of the future	Case Study Audit & Development (25 MRIWA-2)	Curtin University Annalise Peacock		0.3	10,886	10,886

[31] MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds.

[32] MRIWA contributions are drawn down from MRIWA's commitment to the HILT CRC and DEED funds.

Program 6 – Remediation and Mine Closure							
Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10442	Acid mine drainage and treatment of tailings	Improved Prediction, Remediation and Closure of Acid and Neutral Metalliferous Drainage (AMD/NMD) Sites	Flinders University Sarah Harmer	Australian Genome Research Facility Limited, Australian Research Council, BHP Group Operations Pty Ltd, CRC for Transformations in Mining Economies (CRC TiME), Fortescue Ltd T/As Fortescue Metals Group Ltd, MMG Australia Ltd, Newmont Mining Services Pty Ltd, Rio Tinto Services Limited, Teck Resources Limited	5	4,558,586	125,000.[33]
M10447	Acid mine drainage and treatment of tailings	Wetland in a Box (EnphytoBox®) - a smart water treatment system to support the decarbonisation of water in mining	Syrinx Environmental PL Kathy Meney	Syrinx Environmental PL	0.8	86,600	43,300
M10619	Acid mine drainage and treatment of tailings	Carbon negative mines: mineral carbonation of mine waste	University of Queensland Eric Ansah		0.5	25,000	25,000
M10624	Acid mine drainage and treatment of tailings	Hybrid tailings treatment with integrated mineral carbonation for CO_2 sequestration	Edith Cowan University Masoumeh Zargar	Edith Cowan University	0.5	50,000	25,000
M10676	Acid mine drainage and treatment of tailings	Green and Eco-friendly Membrane Technology for Sustainable Wastewater Treatment in Australia	Edith Cowan University Davood Hassanian Moghaddam		3.5	64,830	64,830

[33] MRIWA contributions are drawn down from MRIWA's commitment to the CRC TiME

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10615	Data driven decisions	Investigating the Valorisation Potential of Mine Waste for Mineral Carbonation	University of Western Australia Nikhil Kumar		0.8	18,000	18,000
M0513	Regulatory tools and processes	Validation and Standardisation of Sequential Leaching Tools to Better Predict Impacts of Iron Ore Mining – Phase 2	ChemCentre John Moursounidis	BHP Iron Ore Pty Ltd, CRC CARE, Fortescue Ltd T/As Fortescue Metals Group Ltd, Rio Tinto Limited (Iron Ore)	3	525,000	216,000
M10406	Safety, social and environmental sustainability	Evaluating the mining industry's view of their success in delivering a positive legacy for host communities at the time of mine closure	University of Western Australia Elizabeth Wall		5	52,972	52,972
M10476	Safety, social and environmental sustainability	Opportunities for Growth in Australia's Mine Closure Solutions Industry (CRC TiME Project Number 3.17)	Commonwealth Scientific Industrial Research Organisation (CSIRO) Dominic Banfield	CRC for Transformations in Mining Economies (CRC TiME), Deswick Mining Consultants (Australia) Pty Ltd, Ecocene (Emapper), Ecoplant Australia Pty Ltd, Fortescue Ltd T/As Fortescue Metals Group Ltd, GHD Pty Ltd, K2Fly Ltd T/as Decipher, Landloch Pty Ltd, O'Kane Consultants Pty Ltd, Sustainable Solutions Global Pty Ltd	0.5	410,350	50,000.[34]
M10487	Safety, social and environmental sustainability	Accelerating Consolidation of Mine Tailings using Electro-osmosis Dewatering Technology	University of Western Australia Nilan Jayasiri Mudiyanselage		3.5	58,033	58,033.50

[34] MRIWA contributions are drawn down from MRIWA's commitment to the CRC TiME

Project No	Theme	Project Title	Lead Organisation and Contact	Sponsors	Duration (yrs)	Total Project Value $	MRIWA Contribution $
M10501	Safety, social and environmental sustainability	Algae-based technologies for improved environmental outcomes and sustainable post-mining futures	Commonwealth Scientific Industrial Research Organisation (CSIRO) Anna Kaksonen	CRC for Transformations in Mining Economies (CRC TiME), Fortescue Ltd T/As Fortescue Metals Group Ltd, Heidelberg Materials Australia Pty Ltd T/As Hanson Construction Materials, Rio Tinto Services Limited, South32 Group Operations Pty Ltd	1	270,000	30,000.[35]
M0558	Sustainable land use post- mining	CRC for Transformations in Mining Economies (CRC-TiME) (Extension to M536 - CRC for Achieving Sustainable Mine Closure)	CRC for Transformations in Mining Economies (CRC TiME) Guy Boggs		10	300,000	300,000.[36]
M10458	Sustainable land use post- mining	Mine Pit Lake Assessment and Management: A National Initiative to Support Mine Closure and Regional Opportunities	ChemCentre Kathryn Linge	BHP Group Operations Pty Ltd, ChemCentre, CRC for Transformations in Mining Economies (CRC TiME), EnergyAustralia Yallourn Pty Ltd, GHD Pty Ltd, Iluka Resources Limited, Mine Land Rehabilitation Authority, Rio Tinto Services Limited, South32 Group Operations Pty Ltd	4	3,216,000	400,000.[37]

[35] MRIWA contributions are drawn down from MRIWA's commitment to the CRC TiME
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