



**ANNUAL
REPORT 2024**



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ACKNOWLEDGEMENT OF COUNTRY

CRC TiME acknowledges Traditional Custodians throughout Australia and their continuing connections to their lands, waters and communities. We pay our respects to all First Nations peoples and communities, and to Elders past and present.

We recognise the ongoing stewardship of Aboriginal and Torres Strait Islander peoples, and the important contribution they make to our communities and economies.

Cover image: CSIRO collaborating with Hanson Australia to establish an experimental revegetation planting in one of their Tasmanian rehabilitation areas for CRC TiME project 4.6, October 2023.

2023–2024 SNAPSHOT

Transformative research underway

6
NEW PROJECTS




\$4 – \$8 billion
ANNUAL ANNUAL EXPENDITURE
on mine closure and transitions
estimated in landmark research identified



18
CURRENT HDR TOP-UP SCHOLARSHIP STUDENTS



8
APPROVED PROJECTS WITH FIRST NATIONS INCLUSION COMPONENTS



13
PILOTS, CASE STUDIES, AND ON-GROUND RESEARCH UNDERWAY IN REGIONS



Mobilising knowledge

160+
ORGANISATIONS REPRESENTED ACROSS NINE 'DIG DEEPER' WEBINARS



400+
ENROLMENTS IN WORLD-FIRST MASS OPEN ONLINE COURSE
'Foundations of Mine Closure and Sustainable Transitions'



2,700+
PUBLICATION DOWNLOADS FROM OUR WEBSITE




290
ATTENDEES AT 'RESTORING COUNTRY' WEBINARS



1,400+
REPORT DOWNLOADS
'Mine closure and transitions: Opportunities for Australian industry'



4
LEADERS RECOGNISED AT INAUGURAL CRC TIME ANNUAL AWARDS



FROM THE CHAIR

Dr Bruce Kelly
Chair



I am pleased to present CRC TiME's fourth Annual Report.

A time for transformation

One of the privileges of being Chair of this organisation is the opportunity to meet with partners and stakeholders across Australia.

At each engagement, what stands out is the genuine and deep commitment of people across our partnership to drive transformative change. It is this commitment that buoys people to go above and beyond, sharing their knowledge, their time and their networks for our common purpose.

In 2023–24, we saw this generosity continue as our portfolio, reach and profile expanded. While there are many areas to highlight, I will focus on three key areas.

First, work is underway to better understand intangible valuation and working beyond the limitations of NPV to ensure long-term closure risks and opportunities are better incorporated into decision-making across the mine life cycle. This will complement the recent success of the Natural Capital Accounting resources suite, of which a next phase is already in development with CSIRO and other partners.

By tackling one of the most significant factors in risk, evaluation and planning, this series of projects has the potential to be truly transformative.

The second highlight is increasing interest by First Nations partners and organisations in working with us. This has included the First Nations VET Pathways project and the 'Restoring Country' webinar series.

We take the trust of our Indigenous colleagues seriously and will continue to facilitate initiatives that support First Nations aspirations.

Finally, I wanted to highlight the importance of on-ground demonstration projects and pilot activities.

There are now five sites — in Queensland, Western Australia, South Australia and Tasmania — trialling climate-adapted seed sourcing strategies. Furthermore, plans are well underway for pilot activities in the Bowen Basin, Queensland, and Bell Bay, Tasmania to test new analytical tools to help regions plan for economic transitions.

Reflecting on 2021–24

During 2024, the Board has revisited and further focussed the Strategic Plan for 2024–27, which will be released shortly. The 2021–24 plan saw significant progress with investment of \$15 million across 46 projects. To share knowledge from this research, more than 30 papers, 31 reports, 100 presentations were produced. It's rewarding to hear that partners and key stakeholders are now using these resources.

The Board is also very grateful for Vanessa Elliott's contributions across her time as a CRC TiME Director.

Focusing on what matters most

Our partnership is working to help solve complex and, at times, contested challenges. Tensions and the need for better solutions are only growing, while global economic transformations are creating new value paths and opportunities.

At the same, as a CRC, we have a limited lifespan. It is therefore critical that during our next phase — our peak investment period — we are laser-focused on unlocking what I describe as 'rate-limiting steps'. These are key constraints — whether technical, physical, financial, social or governance-related — that limit progress in other areas.

Setting a path of transformation that continues long after the CRC's lifetime requires us to apply all our attention to these key barriers.

CEO FOREWORD

Dr Guy Boggs
CEO



Last year saw significant investment into the next stages of projects, delivery of knowledge exchange activities across our diverse partnership and creation of new education and training pathways.

We are at a pivotal stage of our Cooperative Research Centre: with four strong years behind us and approaching the middle point, we look towards another six years to continue developing relationships and delivering research that is not only leading but practical, used and understood to enable change and improved outcomes.

Through strategic investments, time and trust of our partners, we have collectively made important progress in helping to transform how mine closure and post-mine transitions are understood and undertaken. We have also seen a shift in how our work is being recognised on the global stage, re-enforcing the unique space our organisation fills.

A powerful example is the *Enabling mine closure and transitions: Opportunities for Australian industry* report with CSIRO. By September 2024, the report — released nine months prior — had been downloaded more than 2,300 times and cited in various key plans and reports, including AUSMASA's Workforce Plan.

Another important example is the 'Restoring Country' pilot series, a collaboration between CRC TiME and The University of Queensland. More than 400 people learned from diverse First Nations and industry speakers over four webinars, who shared their perspectives and experiences about Indigenous leadership, participation and opportunities in mine rehabilitation and closure.

We continue to work with partners and education providers to help address the mine closure and post-mine transition education and training gap. As part of this, we were delighted that nearly 500 professionals from 33 countries enrolled in the pilot Mass Open Online Course on the Foundations of Mine

Closure and Sustainable Transitions. Handbooks developed during 2023-24 will also be tested during community workshops as part of the 'First Nations – National VET Pathways' project soon.

Central to the value of a CRC is the ability to plan and deliver an integrated research program that builds on success. In the last year, two of our key projects progressed with strong support from our partners to their next stage: the first is focussed on collaborative planning for post-mining development in the Latrobe Valley. This stage will set up public fora to present next land use options that demographically represent the local community. The second builds upon the stage 1 case study analysis of the *what, why, who* and *how* of Regional Cumulative Affects Assessment and Management (RCEAM) by identifying and evaluating analytical tools and methods for RCEAM.

Our focus is also moving towards integration, as we bring together work from our previous, existing, and planned investments to deliver and test emerging frameworks and toolkits. These projects are key examples, where the work they deliver, alongside our work on Economic Transition Pathways, will underpin the delivery of an integrated regional planning and decision toolkit. Pilot testing will feature strongly in many of the next stages of our projects to refine and ensure readiness for use.

Recognising transformation requires trust and understanding. Deep and lasting connections between partners, participants and public remains our central goal throughout.

After an incredibly productive year, I look forward to working on behalf of our partnership to enable conversations and new ways of collaborating through our world-leading research in the name of better post-mine outcomes.

FIRST NATIONS INCLUSION

Progress against strategy

Leadership and governance

- Acknowledged the significant contribution of our inaugural First Nations College Director Vanessa Elliott and welcomed incoming Director Shirley McPherson, following an open nomination process.
- Hosted four First Nations Advisory Team (FNAT) meetings to inform project design and delivery in addition to identifying the group's 2024 priorities. Two FNAT members retired during the period.
- Focused on strengthening relationships, leading to a steady increase in engagement across our work and activities. This included through direct briefings and our NAIDOC Week 2024 event.
- Co-designed the 'Restoring Country' webinar series.

Impact and translation

- Participated in key events, such as the Society for Ecological Conference and Aboriginal Enterprises in Mining, Energy and Exploration (AEMEE) conferences and First Nations Clean Energy Symposium.
- Ensured a strong focus on First Nations perspectives and aspirations for closure across our 2023 Annual Forum Program and in planning for our 2024 event.
- First Nations VET Pathways Project Leader Zane Hughes was appointed as Chair of the Australian Mining and Automotive Skills Alliance Strategic Workforce Advisory Panel (SWAP).

Research and capability

- Engaged Associate Professor Mandy Downing, Dean, Indigenous Futures, Curtin University, to deliver an ethics workshop and raised awareness of our researcher First Nations Inclusion resources.
- Continued to promote HDR opportunities. Two of 23 HDR students are First Nations people.
- Held a field trip to support the 'Pit Lakes Management and Assessment project' to south-west Western Australia, including Talison Lithium Greenbushes and Lake Kepwari in Collie.
- Co-designed Aboriginal deliberation with Gunaikurnai Land and Waters Aboriginal Corporation for the 'Collaborative planning for post-mining development in the Latrobe Valley' project (Stage 2).
- Profiled Indigenous businesses in the *'Enabling mine closure and transition: Opportunities for Australian industry report'*, with the research featured in *The National Indigenous Times*.

Participatory frameworks

- Began partnering with CSIRO on a pilot Aboriginal research priority identification workshop held in Geraldton in July 2024. Work is now underway to develop a workshop series.
- Undertook recruitment for an Indigenous Research Officer to support the 'Identifying capacity drivers for economic transition pathways' project as well as a community engagement officer for the 'National Mine Pit Lakes Initiative.'
- Identified various opportunities for further Indigenous-led and co-designed research through the 'Restoring Country' series.



Left: 2024 CRC TiME Annual Forum delegates participating in a yarning circle hosted by Sophie Murray, Partner Engagement Manager: Aboriginal Research, University of South Australia.

HIGHLIGHT

Restoring Country webinar series

For our first two series webinars:

489
PEOPLE
REGISTERED



290
PEOPLE
TUNED IN



241 VIEWS
ON YOUTUBE



A project plan and partnership agreement with the Centre for Social Responsibility in Mining was developed with a kick off of the first two webinars for the Restoring Country webinar series in May and June 2024.

Further webinars are being planned as well as a Restoring Country workshop at the 2024 CRC TiME Annual Forum and a final report.

The series has aimed to:

- raise awareness of the scale and scope of activities undertaken in mine closure and rehabilitation, with a view these opportunities may align with Indigenous community or Indigenous business interests.
- understand current practices and modes of engagement, including outcomes for participants and businesses, challenges and barriers.

- learn about Indigenous perspectives on participation in mine rehabilitation and closure, and how that fits into broader ‘caring for country’ and community development/nation building initiatives.
- envision what Indigenous-led participation in mine closure and rehabilitation services might look like in the future, and identify what industry, government and research partners can do in support.

Watch the first episode:



Watch the second episode:



First Nations Inclusion across project portfolio

Co-design

- Restoring Country pilot webinar series
- First Nations VET Pathways project (Stages 1 & 2) (Project 5.6)
- Collaborative planning for post-mine development in the Latrobe Valley (Stage 2) (Project 1.7)

Collaborative projects

- Identifying capacity drivers for economic transition pathways (Project 1.8)
- A systematic approach to Regional Cumulative Effects Assessment and Management (Stage 2) (Project 4.7)

- National Mine Pit Lakes Initiative (Project 4.9)
- Mass Open Online Course on the Foundations of Mine Closure and Sustainable Transitions (Project 5.4)
- Strategic review of education and training options in mine closure and transitions (Project 5.5)
- Optimising ecosystem management in mining areas: Integrating ground validation with remoting sensing for enhanced solutions (Project 4.10)

SUPPORTING EDUCATION AND TRAINING



HIGHLIGHT

World’s first Mass Open Online Course in mine closure and post-mine transitions

The ‘Foundations of Mine Closure and Sustainable Transitions’ world-first online course has seen its first cohort of students successfully complete it for free, with a paid certification version on the way.










Project 5.4 was led by Ms Rosemarie Tapia Rivera (The University of Queensland) and Dr George Barakos (Curtin University). CRC TiME’s mining research partners allocated a portion of their committed funding over the life of the organisation to development of the course as part of a suite of three new education and training initiatives. CRC TiME’s mining research partners include Hanson Australia, Iluka, MMG, BHP, Rio Tinto, Energy Australia, Alcoa, Fortescue, South32, and Newmont.

The large interest has proven that demand exists for upskilling and retraining in how to improve the closure of mines and the move towards next land uses. 406 professionals from 33 countries enrolled in the free beta version of the course, with interest across North America, South America, Africa, the Middle East and Asia, as well as Australia.

While most students were industry professionals, the cohort included regulators, policy-makers and postgraduate students seeking further knowledge in this area. This project also found that women want to drive the post-mine transition agenda: 53% of the course cohort identified as female.

Importantly, the course included a standalone module on ‘Recognising Indigenous culture through mine closure and post-mine land use’. It covered various dimensions, including connections to Country, values, Indigenous business and inclusion frameworks.

Foundations of Mine Closure and Sustainable Transition Mass Open Online Course

-  406 people enrolled
 -  53% female attendance
 -  60% retention rate
 -  77% industry professionals, 9% postgraduate students, 7% regulators/policy makers
 -  60% (246) from Australia  8% from Brazil  7% from Canada  and 25% from 30 other countries
-  with a diversity of topics covered



HIGHLIGHT

Strategic education and training review

Education and training pathways to mine closure and post-mine transition careers are unclear, limited and disparate.

To clarify pathways available and identify those needed, Project 5.5, 'Strategic education and training review and options', led by Donna Dejkovski from the Mining and Automotive Skills Alliance, achieved the following:

- identified the education and training needs and current options available to priority cohorts (mining and METS industries, regional and First Nations communities and governments)
- assessed emerging skills required in the field, considering future trends
- identified pathways that could enable these cohorts to build the knowledge, skills and capabilities required

- defined (in broad terms) the content, platforms and accreditation processes for these pathways
- identified partnerships that could help deliver these pathways over the long-term
- consulted with government departments and other groups to understand the need of priority cohorts, which include regional and Indigenous communities

The Australian Mining and Automotive Skills Alliance led this project, with the final report released soon.

Project participants are the Minerals Council of Australia and Business Skills Viability.



New HDR students

Lexi Connors

Program: Regional Economic Development
Project topic: Beyond mining: exploring Indigenous communities transition to the tourism sector

Adithyanti Febriana

Program: Operational Solutions
Project topic: Acid Mine Drainage (AMD): Exploring bacterial, algal, and plant driven process for bioremediation

Abdulraheem Okehi Anumah

Program: Operational Solutions
Project topic: Critical design criteria for predicting the chemical stability of tailings storage facilities using laboratory kinetic leaching experiments

Desire Runganga

Program: Risk, evaluation and planning
Project topic: Rethinking criticality for the global south and other resource rich countries to enable them to contribute to the energy transition non-sacrificially

Robert Shaw

Program: Cross-cutting
Project topic: An exploration of substance use and other factors to Indigenous incarceration and identification of supports needed to reduce (re)offending

Julia Thornton

Program: Operational Solutions
Project topic: The application of a variety of carbon sources as substrate amendments to build long term viable soil cover for land rehabilitation

Claudio Vergara-Saez

Program: Data integration, Forecasting and Scale
Project topic: Unravelling the control of the interaction between groundwater and surface water processes on the water quality evolution of mining pit lakes



Header image: HDR top-up scholarship student Amberley Laverick (left) speaking on an education and training panel at the 2023 CRC TiME Annual Forum

Top Left: New HDR top-up scholarship student Julia Thornton on the Flinders Ranges

Left: Recently graduated PhD student Dr Fitsum Weldegiorgis speaking on a panel at the Global Conference on Coal Transitions, Ohio, 2024



HIGHLIGHT

VET pathways

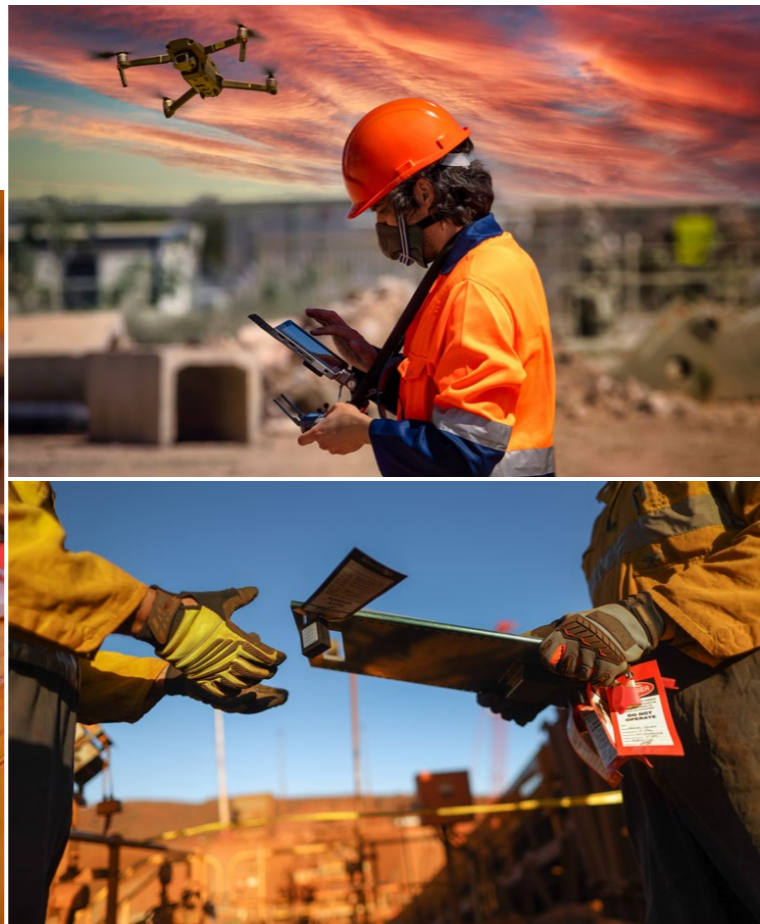
Current training options for Aboriginal and Torres Strait Islander people about mine closure and post-mine transitions are limited, impacting the ability of people and communities to be active and equal partners in processes.

Led through Curtin University this is a multi-phase project. The first step, Stage 1 and 2, involves work to:

- understand what enables Indigenous communities to participate, lead and benefit from mine closure and post-mine transitions through a series of workshops.
- undertake a needs assessment of what skills are required, projected demand, gaps and opportunities and potential delivery options.

The next stages are expected to involve developing

delivery and learning resources and submitting a proposal for accreditation of a nationally-recognised qualification or suite of units in mine closure (Certificate II, III, IV and possibly a Diploma).



BEYOND CLOSURE



Progress towards implementing a research agenda for post-mining transitions

Professor Tom Measham
Research Director

It has been another strong year for CRC TiME as we address key research challenges. Moreover, CRC TiME is increasingly playing a crucial role within broader international research communities. This includes publishing a paper setting out an international research agenda for mine closure and post-mining transition titled 'Beyond closure: A literature review and research agenda for post-mining transitions' in a leading journal. This paper has been presented to multiple audiences including to the *Conference on Global Coal Transitions in Columbus, Ohio* in 2024.

At home, we have been making progress towards addressing the challenges set out in the paper, with some highlights presented below.

The importance of rigorous deliberation in identifying post-mining transitions has been emphasised in a CRC TiME project focused on the Shire of Coolgardie, where an unconventional approach driven by local government has enabled the Shire to embrace new opportunities to diversify their economy and 'future-proof' their community. Elsewhere, the development of deliberative processes to jointly determine what post-mining transition means in the Latrobe Valley has advanced substantially, with a research project focused on developing a shared vision for the future land use of mines in this region, combining local government, First Nations, mining companies, power station operators and community organisations.

Another exciting area of research currently underway takes an economic lens to broadening what is included in net present value (NPV) calculations using discounted cash flow (DCF) rates. In doing so, this

project is engaging with a crucial mechanism by which a broader range of values can be considered in mine closure and post-mining transformation.

Breaking down research silos and driving integration across and between biophysical and social research is another area of progress. A project focused on mine pit lake assessments and management is a case in point, with a multidisciplinary team to develop guidance, scenario assessments and toolkits for pit lake management. Integration is also at the heart of CRC TiME research on Regional Cumulative Effects Assessment and Management. With the first stage of this project now completed, the second phase builds capacity and develops tools to undertake regional scale cumulative effects assessments.

The role of education and training for mine closure and transition is crucial, with several CRC TiME projects being completed in this area, including a strategic review of the education landscape. Another project currently underway focuses on training and skills development from the perspective of First Nations communities. A key focus of this project is to address the power asymmetry in closure planning so that First Nations communities are empowered to participate more effectively in these processes.

Across each of these projects, research teams are working closely with each other and with the External Relations and Impact team to ensure that research is coordinated and targeted towards achieving impact.



HIGHLIGHTED PROJECT

A way forward for Natural Capital Accounting implementation

Project 2.7 has culminated in releasing a new suite of reports aimed at supporting the Australian mining industry to implement Natural Capital Accounting (NCA).

Globally and nationally, organisations are increasingly being asked to account for their impacts and dependencies on nature, including natural capital under their stewardship.

Developed over 18 months, the new resources are intended to build industry capability, understand the sector’s readiness to adopt NCA, and to enable consistent application and reporting of natural capital information over time. Specifically, the four reports provide guidance around the following:

- **Business case:** developed around implementing NCA in the Australian mining sector through an analysis of the opportunities that can be realised from its adoption, and the challenges to its implementation. Includes an indicative roadmap for NCA implementation.

- **Guidance:** designed to build understanding of the concepts, methods and reporting structures for NCA and risk assessment, with a view to practical implementation.
- **Case study report:** presenting synopses of the pilot case studies that were undertaken to test the applicability of the System of Environmental Economic Accounting-Ecosystem Accounting (SEEA-EA) framework in the Australian mining sector. These case studies were used to inform the development of the Business Case and Guidance Material.
- **Forecasting study:** testing and demonstrating the potential to use NCA information for strategic forecasting purposes in the mining sector.

Led by Associate Professor Bryan Maybee (CRC TiME and Curtin University) and Dr Anthony O’Grady (CSIRO), the project had input from the Department of Climate Change, Energy, the Environment and Water (DCCEEW) – initiator of the overarching CRC TiME NCA project – and other CRC TiME partners including Alcoa, BHP, Curtin University, Hanson Construction Materials Pty Ltd, Murdoch University, Syrnix Environmental PL and the University of South Australia. It was also featured in the *National Indigenous Times*.



HIGHLIGHTED PROJECT

Opportunities for the Australian Mine Closure Solutions industry

165 REPORT DOWNLOADS VIA CRC TIME WEBSITE

1,797 PAGE VIEWS VIA CRC TIME WEBSITE

1,212 REPORT DOWNLOADS VIA CSIRO

2,400+ PAGE VIEWS VIA CSIRO WEBSITE

205 REPORT LAUNCH WEBINAR VIEWS VIA YOUTUBE

A landmark new report released in December 2023 underscored the scale of opportunity for Australian equipment, technology and services businesses helping to solve the domestic and global mine closure challenge.

Undertaken by CSIRO, Australia’s national science agency, for CRC TiME, the report *‘Enabling mine closure and transitions: Opportunities for Australian industry’* outlines new analysis estimating that expenditure on mine closure and rehabilitation activities at 240 Australian mines expected to close by 2040 could exceed \$4 billion annually.

This is in addition to the investments required to prepare mines for closure, undertake progressive and integrated mine closure activities on operating mines, and rehabilitating legacy sites.

The report identified opportunities across four categories of mine closure solutions:

1. **Engagement and partnership:** Solutions that enable effective engagement, co-design, and mutually beneficial partnerships to improve social performance and reduce risks.
2. **Waste reduction and recovery:** Solutions enabling cost-effective reduction, reuse, and recycling of mine waste to minimise closure liabilities.
3. **Mine rehabilitation:** Solutions improving the performance and cost-effectiveness of mine rehabilitation activities.

4. **Land use transitions:** Solutions addressing challenges in establishing post-closure land uses to generate lasting economic, social, or environmental value.

Major partners of project 3.17 included the Minerals Research Institute Western Australia, Fortescue and Intract. Other partners included enviroMETS (Qld), GHD, K2Fly, METS Ignited, O’Kane Consultants, the Queensland Government and The University of Queensland Sustainable Minerals Institute. The report’s lead author was Dominic Banfield, Senior Manager in CSIRO Futures.

Interest in the report was evident in the impact: in just the few days following the release, there were at least six radio interviews, hundreds of visits to the website news article, over 50 downloads of the report from the CRC TiME website, dozens of social media reposts, six industry-style articles and dozens of views of the associated webinar.

READ THE REPORT

MOBILISING KNOWLEDGE



HIGHLIGHTED PROJECT

Latrobe Valley collaborative governance

Project 1.7, Stage 1, Led by Associate Professor Jessica Reeves from Federation University and co-led by Dr Tira Foran from CSIRO, focussed on the Latrobe Valley in Victoria, a region experiencing multiple complex transitions, including major coal mines closed and closing.

This project is highlighted as an example of cross-sectoral collaboration on a specific regional case study involving mine transition in the near future. It uses community engagement to consider a post-mine future that locals can support and be proud of.

Participants in the pilot assessment preferred post-mine scenarios focussed on bioeconomy and new energy over a 'Business-as-Usual' transition.

It brought together mine operators, government, Traditional Owners and community groups through an independent, facilitated process to consider what opportunities the extensive lands currently zoned for mining present for the future, post-coal fired power generation. It aimed to build and support existing processes, avoiding duplication and focusing on what is realistic, feasible and desirable.

Two publications were published in May 2024. The final report titled 'Collaborative planning for people navigating mine land transition: progress in Australia's Latrobe Valley' was the culmination of Stage 1 and a summary of the process. The report 'Regional

development aspirations for the Latrobe Valley and Gippsland: Setting the context for post-mine land use planning' synthesised regional development plans for Gippsland, including with Traditional Owners.

Partners on this project were CSIRO, Energy Australia, AGL, Mine Land Rehabilitation Authority, GHD, Central Gippsland Region Water Corporation, Resources Victoria, Engie, LYB Operations and Maintenance, Latrobe City Council, Latrobe Valley Authority, Gunaikurnai Land and Waters Corporation, University of South Australia and Federation University.

Associate Professor Jess Reeves speaking on the project and the topic of water at the 2023 CRC TiME Annual Forum in the Latrobe Valley



Report cover art commissioned by local Gippsland artist Pollyanna R, incorporating Annual Forum delegates and potential post-mine land uses for the area



Read the findings

Collaborative planning for people navigating mine land transition: progress in Australia's Latrobe Valley



Regional development aspirations for the Latrobe Valley and Gippsland: Setting the context for post-mine land use planning



CATCH UP ON THE WEBINARS



Dig Deeper webinar series

The Dig Deeper webinar series is proving an ideal way of sharing knowledge across experiences of mine closure and post-mine transitions.

9 WEBINARS

1125+ TOTAL YOUTUBE VIEWS

501 PEOPLE TUNED IN

162 ORGANISATIONS REPRESENTED, INCLUDING 75 PARTNER ORGANISATIONS



Between July 2023 and June 2024, partner organisation representatives, interested parties and members of the public tuned in to the following webinars:

- **Revegetating iron-ore mine waste**, with Emeritus Professor Hans Lambers & Dr Pallavi (7 July 2023)
- **Future-proofing a small local government authority against the mining boom and bust cycle**, with Professor Fiona Haslam McKenzie (25 August 2023)
- **Improved prediction, remediation and closure of acid and neutral metalliferous drainage**, with Professor Sarah Harmer (15 September 2023)
- **Critical Minerals: Why beginning with the end in mind matters**, with Jillian D'Urso (24 September 2023)
- **Climate change induced risks for the performance of vegetation on soil covers – Latrobe Valley**, with Professor Thomas Baumgartl & Dr Vilim Filipović (9 November 2023)
- **Mine Closure must face the challenge of a nature-positive future**, with Professor Luis E. Sánchez (20 February 2024)
- **Collaborative planning for post-mine development in the Latrobe Valley**, with Dr Jessica Reeves & Dr Tira Foran (19 March 2024)
- **Evidence for effectiveness of climate-adapted seed-sourcing strategies**, with Dr Rebecca Jordan (17 April 2024)



HIGHLIGHT

2023 Annual Forum shines a spotlight on post-mine transformations

More than 130 people from across Australia and as far as Canada joined our second in-person Forum in November 2023.

We received wonderful feedback about the event, particularly about the value of holding it in the Latrobe Valley – a region in active economic transformation. We also heard it provided a balance between diverse perspectives, lived experience, thought leadership and research.

Furthermore, delegates told us they enjoyed the additional time for networking and the opportunity for two site visits. The visits to the Latrobe Regional Gallery and Morwell Historical Society were unexpected highlights according to delegates.

We were also delighted to recognise four outstanding leaders for their contributions, vision and hard work to help transform what happens after mining ends for the better at our inaugural CRC TiME Awards. The award winners in 2023 were:

- **Community Champion Award:** Suzi Strapp, FAWNA
- **Outstanding Student Award:** Fitsum S. Weldegiogis, The University of Queensland, Sustainable Minerals Institute
- **Distinguished Paper (Journal Article) Award:** Ebony Cowan, Murdoch University
- **Distinguished Paper (Conference Paper) Award:** Professor David Williams, The University of Queensland

To deeply connect to regional needs and challenges, in alternate years we'll be bringing the event to regional areas, with other years' events held in metropolitan areas. The 2024 CRC TiME Annual Forum was held in Brisbane.

3 DAYS

130+ DELEGATES

11 PROGRAM SESSIONS
PANELS, WORKSHOPS & PRESENTATIONS

5 MINE SITE & COMMUNITY VISITS

215 DELICIOUS COFFEES VIA THE LOCAL 51 COFFEE VAN

11 CHARTER AND MINI BUSES

Transformations in Mining Economies

Annual Forum. Latrobe Valley, 21-23 November, 2023

WATER: FINDING A COMMON GROUND

PANEL DISCUSSION

BRIDGING DIVERSE INTERESTS





HIGHLIGHT

National and global collaborations for impact

Beyond our diverse partnership, we collaborate with a range of national and global organisations to further develop knowledge and share findings and resources. Doing so helps broaden our reach, increasing the likelihood that investments lead to long-term transformations.

The table provides a snapshot of 2023-24 collaborations.

NATIONALLY	Cooperative Research Decarbonisation Working Group and Mining and Energy Working Group	<ul style="list-style-type: none"> Initiated first research to understand contribution of 13 CRCs to Net Zero Supporting collaborative to maximise innovation and deployment
	International Mining and Resources Conference (IMARC)	<ul style="list-style-type: none"> Collaborate to share findings, support diverse perspectives
	AusIMM	<ul style="list-style-type: none"> Collaborate to share findings with its network of resources professionals
	Australian Geoscience Council Geotourism Working Group	<ul style="list-style-type: none"> Contribute to work to promote mining heritage
	Australian Mining and Automotive Sills Alliance	<ul style="list-style-type: none"> VET Pathways project leader acts as Chair of Strategic Workforce Advisory Panel
GLOBALLY	ACG Mine Closure Conference	<ul style="list-style-type: none"> CEO sits on Local Organising Committee.
	Cambridge Research Directions Mine Closure and Transitions Journal	<ul style="list-style-type: none"> CEO is Co-Editor-in-Chief of new journal to rapidly share insights
	Global Coal Transitions Research Network	<ul style="list-style-type: none"> Contributing through Research Director on Steering Group, with various projects incorporated into 2024 Ohio Conference
	International Association for Society and Natural Resources Conference	<ul style="list-style-type: none"> Research Director co-chaired the 2024 global conference
	International Council on Mining and Metals	<ul style="list-style-type: none"> Collaborate to supporting leading practice globally, including with CEO at Responsible Leaders Forum and work on multistakeholder models
	Swedish-Australia Responsible Mining Summit	<ul style="list-style-type: none"> Support identification of speakers to provide diverse perspectives

THE YEAR AHEAD

Preparing for our next phase: Developing our 2024–27 strategy

Approaching the midway point

2024–25 is our fifth operating year as a Cooperative Research Centre and the end of our 2021–24 planning period. As we approached the halfway mark of our ten-year life, we began a strategic review process to inform our 2024–2027 planning by:

- listening to what our partners and key stakeholders see as the areas and ways we can best make transformative change.
- confirming areas where our involvement is not needed due to investments by others.

Beginning in early 2024, our Board led the framing and development of a process to evolve our strategy.

Central to this is the process of building alignment across our organisation, partnership and wider network.

To support this, we have taken a number of steps including:

- review of lessons across research and impact.
- Board strategic planning workshop(s).
- targeted consultation with key stakeholders.
- May College and Forum presentation and testing of areas of focus for our strategic objectives.
- establishment of a planning framework that tightly couples Research, First Nations and Adoption priorities with our strategic objectives.
- testing and refining of Research, First Nations and Adoption priorities at our September 2024 College meetings and with our First Nations Advisory Team.

Building alignment and sharpening our focus
After listening to our partners and stakeholders, we are simplifying our strategic document suite. It will include:

- a single overarching 2024–27 Strategic Plan, capturing overarching objectives, how we work and what we will focus on.
- a consolidated single supporting operational plan, expanding on Research, Impact and First Nations Inclusion priorities and activities.

The updated strategic planning suite will be reviewed by the Board in October and released to coincide with the International Mine Closure Conference in Perth in late November 2024.

An external view of how we evaluate impact

CRC TiME’s journey ‘began with the end in mind’ through a strong commitment to end user-driven research that delivers impact. Our foundational work on impact pathways framed our approach and integration across organisational and project level governance. As we approach our midway period, we have also commissioned a rapid evaluation that will capture areas of intended and unintended impact. Informed by this work and with our new strategic plan in place, we will commence 2025 with an update to our project development, management and finalisation processes and implementation of a monitoring, evaluation and learning framework to formalise current data collection, monitoring and continuous improvement activities.

GOVERNANCE

Our partners

We convene a unique partnership with mining companies, technology and service suppliers (METS), state and local governments, regional and community representative bodies and research institutions.

Consultation and collaboration underpins every stage of research from project scoping, investment decisions and research delivery, through to uptake and adoption.

Thank you to our partner organisations for supporting our work.



Our Board

Dr Bruce Kelley	Independent Chair
Dr Paul Vogel	Deputy Chair (represents the Government College)
Professor Christine Charles	Non-Executive Director (represents the Regions and Communities College)
Tony van Merwyk	Non-Executive Director (represents the METS College)
Shirley McPherson	Non-Executive Director (represents the First Nations College)
Gavin Price	Non-Executive Director (represents the Mining College)
Emeritus Professor David Brereton	Non-Executive Director (represents the Research College)

Audit and Risk Committee

Tony van Merwyk	CRC TiME Board (Chair)
Irene Costello	Chamber of Minerals and Energy Western Australia
Dr Paul Vogel	CRC TiME Board

Impact Committee

Adjunct Professor Christine Charles	CRC TiME Board (Chair)
Jordy Bowman	Bowman Advisory
Vanessa Elliot	CRC TiME Board (until December 2023)
Terry Hill	Pilbara Development Commission, Department of Primary Industries and Regional Development
Shirley McPherson	CRC TiME Board (from December 2023)
Donna Pershke	Pershke Consulting
Gavin Price	CRC TiME Board

Research Committee

Professor David Brereton	CRC TiME Board (Chair)
Professor Andrew Beer	University of South Australia
Adjunct Professor Christine Charles	CRC TiME Board
Ben Forsyth	3RZ Contracting
Professor Stephen van Leeuwen	Curtin University
Professor Rae Mackay	Mine Land Rehabilitation Authority
Santiago Barrera Ramirez / Melanie Stutsel (shared)	Rio Tinto

Nominations and Remunerations Committee

Dr Paul Vogel	CRC TiME Board (Chair)
Adjunct Professor Christine Charles	CRC TiME Board
Dr Bruce Kelley	CRC TiME Board



First Nations Advisory Team

Here are the First Nations Advisory Team members continuing through to June 2024:

Jim Walker, Chair, First Nations Advisory Team

Jim Walker is an Aboriginal man of the Yiman and Goreng Goreng First Nations peoples of Australia. He is a lecturer within the School of Earth and Environmental Sciences within the Faculty of Science at the University of Queensland. He is also a member of the Science Advisory Committee of Earthwatch Australia and Bush Blitz, Chair of the Murri Mura Aboriginal Corporation and Board of Advice member of the Queensland Aboriginal and Torres Strait Islander Foundation.

John Briggs, Committee Member, First Nations Advisory Team

John is a proud Yorta Yorta man from Cummrugunja, part of the Barmah Forest on the Murray River border region between Victoria and New South Wales. John's industry experience is a national portfolio of achievement in the construction and resources sector, where he has spent a large portion of his career, growing Aboriginal people and capability. His leadership and knowledge is widely recognised and he participates on a number of Boards and committees.

Christian Miller-Sabbioni, Committee Member, First Nations Advisory Team

Christian Miller-Sabbioni is a research assistant for ARC Centre Healing Country based at Curtin University. He works at the knowledge interface and is interested in the theoretical components of traditional cultural and modern scientific approaches to restoration and conservation. He is in his third year of a BA majoring in Philosophy, Political Science and International Relations at UWA.

Gerry Turpin, Committee Member, First Nations Advisory Team

Gerry Turpin is an Mbabaram Traditional Owner from north Queensland with familial links to Wadjanbarra Yidinji, Nadjon and Kuku Thaypan. He is an Indigenous Ethnobotanist with the Australian Tropical Herbarium, Department of Science (DES) and has been employed by the state government for about 30 years. As an Indigenous ethnobotanist, Gerry has a strong cultural commitment to facilitating effective partnerships that support Indigenous communities to protect, manage and maintain their cultural knowledge on the use of plants.

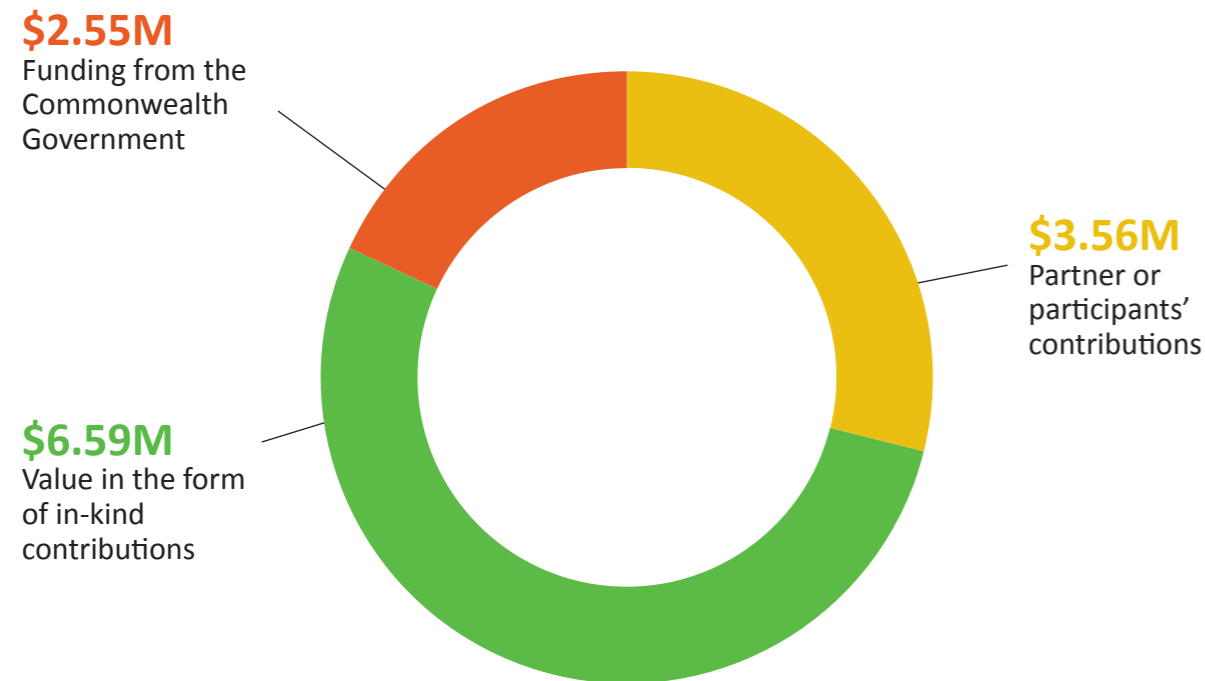
We thank Dr Bep Uink and Liz Santo for their contributions, prior to retirement in June 2024.

Funding

2023-24 Financial Year

CRC TiME continues to receive financial and in-kind support as committed by our partners.

In the 2023/2024 financial year, funding was received from the Commonwealth Government, and both funding and in-kind support were provided by our committed partners and other organisations participating in our projects.



At the end of the 2023/2024 financial year, CRC TiME is well-positioned to fund upcoming programs and commitments, with cash on hand of \$11.2 million.

During the year, CRC TiME further developed its position as a valued project delivery agent. Since CRC TiME commenced, we have attracted \$4.5 million of additional funding..

Please note these figures are for illustrative purposes. The full audited financial statements for 2023/2024 are available at crctime.com.au.



Image source: BHP

2023–2024 NEW PROJECTS

Below are the new projects that were approved or commenced in the 2023–24 financial year.

RESEARCH PROGRAM	PROJECT ID	PROJECT TITLE	PROJECT PARTNERS	RESEARCH ACTIVITIES INCLUDE:	COMMONWEALTH OUTPUTS	PROJECT TIMEFRAME
Regional Economic Development	1.7.2	Collaborative planning for post-mining development in the Latrobe Valley (Stage 2)	Federation University; CSIRO; Department of Energy, Environment and Climate Action (Victoria); Energy Australia; Mine Land Rehabilitation Authority (Vic); AGL Energy; Hazelwood Power (Engie); Latrobe Health Assembly; Loy Yang B; Gunaikurnai Land and Waters Aboriginal Corporation; Latrobe City Council; Latrobe Valley Authority; Gippsland Tech School; University of SA First Nations Inclusion (co-design)	<ul style="list-style-type: none"> • Host public deliberation forums on the feasible land use options, through three separate forums which consist of demographically-representative community panel, Indigenous community reference group and youth panel, respectively. • Synthesize the forum outcomes, along with aspirations, concerns and opportunities elucidated by each group, in a report that informs the steering committee on the mine lands' future vision. • Provide a written response to forum participants, acknowledging their contribution and the intentions for this work in future land use planning for the Latrobe Valley. 	1.3 Frameworks, tools and capacity building to enable shared vision development	2024–2025
	1.9	Mine closure guidance: review and comparative analysis	University of WA; Department of Environment, Parks and Water Security (NT); Department of Industry, Tourism and Trade (NT)	<ul style="list-style-type: none"> • Undertake comparative analysis of Australian and international mine closure and rehabilitation guidance. • Provide recommendations to inform choices about mine closure regulatory regimes and appropriate forms of guidance material. 	1.1 Roadmap for co-developed relinquishment policy	2023–2024
Risk, Evaluation and Planning	2.9	Broadening NPV through a multi-criteria optimisation framework based on CRC TiME values research	Curtin University; BHP; Deswik; Hanson Construction Materials; Iluka Resources; MMG; Newmont; Quantified Strategies; Rio Tinto; Roy Hill; South32; Office of the Queensland Mine Rehabilitation Commissioner	<ul style="list-style-type: none"> • Address issues associated with net present value methods. • Support dialogue based on transparent and impartial analyses. • Develop a multi-criteria optimisation framework with the functionality to incorporate a more diverse range of perspectives held by different stakeholder groups. • Quantify the varying perspectives of value and risk that have been identified through CRC TiME research conducted to date, notably in Project 2.1 and 2.2. 	2.1 Advanced evaluation framework for long life assets 2.2 Real time predictive models	2024–2026
Operational Solutions	3.15	Algae-based technologies for improved environmental outcomes and sustainable post-mining futures	CSIRO; Fortescue; Hanson Construction Materials; Minerals Research Institute of Western Australia; Murdoch University; Rio Tinto; South32; University of Queensland; Department of Water and Environmental Regulation (WA); Energy Australia; Office of the Queensland Mine Rehabilitation Commissioner	<ul style="list-style-type: none"> • Compile information on algae types that could be grown in mine water. • Review micro- and macroalgal culturing and harvesting technologies that could be applied at mine sites. • Consider existing technologies for using algal biomass for beneficial uses in mining context • Review possibilities of bringing together Traditional Ecological Knowledge (TEK) and western science to add to new understanding. • Identify research gaps for further work. 	3.2 Prototype risk management technologies for successful post-mine futures	2023–2024

2023–2024 Projects continued...

RESEARCH PROGRAM	PROJECT ID	PROJECT TITLE	PROJECT PARTNERS	RESEARCH ACTIVITIES INCLUDE:	COMMONWEALTH OUTPUTS	PROJECT TIMEFRAME
Data Integration, Forecasting and Scale	4.7.2	A systematic approach to Regional Cumulative Effects Assessment and Management (RCEAM) to support transitions in mining economies (Stage 2 – Developing capacity)	Murdoch University; BHP; Curtin University; Hanson Construction Materials; Newmont; Rio Tinto; Roy Hill; WSP Australia; Mine Land Rehabilitation Authority (Vic); Mineral Resources; Department of Energy, Environment and Climate Action (Victoria); Federation University; Kalkadoon Indigenous Social Services; Loy Yang B; MMG; Premier Coal; The PKKP Aboriginal Corporation; Western Australian Biodiversity Science Institute; AGL Energy; Alcoa; Banjima Native Title Aboriginal Corporation; Department of Climate Change, Energy, the Environment and Water; Department of Water and Environmental Regulation (WA); Pershke Consulting; Queensland Resources Council; University of SA; WA Development Commissions First Nations Inclusion (co-design and collaboration)	<ul style="list-style-type: none"> • Develop a roadmap and toolkit to support RCEAM for transitions in mining economies. • Analyse the potential for Indigenous-led RCEAM in Australia, drawing from the experiences of First Nations and other Indigenous groups in Canada, which were a significant finding of Stage 1. • Identify and evaluate analytical tools and methods for RCEAM, with findings and recommendations to be incorporated into the process roadmap. • Identify a suitable opportunity for an RCEAM pilot study to be undertaken in Stage 3. 	<p>1.2 Decision tools for regional planning of post mine uses</p> <p>1.3 Frameworks, tools and capacity building to enable shared vision development</p>	2024–2025
	4.10	Optimizing ecosystem management in mining areas: Integrating ground validation with remote sensing for enhanced solutions	University of Queensland; BHP; CSIRO; Department of Climate Change, Energy, the Environment and Water; Fortescue; Geoscience Australia; MMG; Oceana Gold; Rio Tinto; Roy Hill; South32 First Nations Inclusion (collaboration)	<ul style="list-style-type: none"> • Develop a centralised and accessible repository of species spectral & structural information. • Standardise methods and guidance for use by mine practitioners in data collection. • Assess the usefulness (and limitations) of data collected to better assess over time the different ecological attributes relating to vegetation communities and individual species. • Conduct foundational work to assist multiple parties in utilizing the spectral and structural data to assess rehabilitation performance and better assist in closure management planning. • Organise workshops to identify the data's commercial opportunities (e.g. using the data to guide timber harvesting, land management, and seed collection). 	<p>3.1 Smart architecture for closure design</p> <p>2.3 Planning tools to identify transferrable residual risk</p>	2024–2027

Continued overleaf..

2023–2024 PUBLICATIONS

Published	Project Number	Title	Project Type	Author/s
23/7/2023	4.9	Mine pit lake assessments and management: A National Initiative to support mine closure and regional opportunities	Project summary	Linge, K.
23/7/2023	4.7	A systematic approach to Regional Cumulative Effects Assessment (RCEA) to support transitions in mining economies	Project summary	Young, R & Pope, J.
23/7/2023	4.6	Evidence for effective climate-adapted seed sourcing strategies for revegetation success and transition to mine closure in a changing climate	Project summary	Jordan, R.
23/7/2023	3.14	Opportunities for growth in Australia's mine closure solutions industry	Project summary	Banfield, D.
23/7/2023	3.13	Australian Seed Scaling Initiative: Large-scale deployment of diverse, enhanced seed mixes using customised precision seeding technologies	Project summary	Erikson, T.
23/7/2023	3.1	Improved prediction, remediation and closure of AMD/NMD sites by examination of mine waste behavior at the meso-scale	Project summary	Harmer, S.
23/7/2023	3.9	Climate change induced risks for the performance of vegetation on mine rehabilitation soil covers in the Latrobe Valley	Project summary	Baumgartl, T.
23/7/2023	1.8	Identifying future economic development pathways for mining regions and increasing transition capacity	Project summary	Poruschi, L & Fleming-Munoz, D.
23/7/2023	1.7	Collaborative planning for post-mine land use in Latrobe Valley	Project summary	Reeves, J.
1/8/2023	1.1	Post mine land use planning: Goldfields Region, Western Australia	Case study	
1/8/2023	1.1	A foundational framework for RCIA	Framework	Sinclair, L., Pope, J., Holcombe, S., Hamblin, L., Pershke, D., Standish, R.J., Kragt, M.E., Haslam McKenzie, F., Subroy, V. & Young, R.E.
1/8/2023	1.1	A foundational framework for RCIA (expanded)	Framework	
1/8/2023	1.1	Priority elements of RCIA framework identified for further development	Diagram	
1/8/2023	1.1	Post mining land use: Stawell Underground Physics Laboratory (SUPL), Stawell Victoria	Case study	
1/8/2023	1.2	Post mining land use: Kidston Clean Energy Hub, Queensland	Case study	
1/8/2023	1.2	Post mining land use the FAWNA Inc wildlife hospital and Kaatjnip biodiversity park, Capel, Western Australia	Case study	
1/8/2023	1.2	Post mining land use: The Eden Eco Tourism Redevelopment, Anglesea, Victoria	Case study	Beer, A., Haslam McKenzie, F., Weller, S., Davies, A., Cote, C., Ziemski, M., Holmes, K. & Keenan, J.
1/8/2023	1.2	Post mining land use: Lake Kepwari, Collie, Western Australia	Case study	
1/8/2023	1.2	Post mining land use: Newmont Boddington Gold Mine, Western Australia	Case study	
1/8/2023	1.2	Post mining land use: Gove Bauxite Mine East Arnhem Land, Northern Territory	Case study	
1/8/2023	1.2	Post mining land use: Hazelwood Lignite Mine, Latrobe Valley, Victoria	Case study	
1/8/2023	1.2	Post mining land use: Hannans North Tourist Mine, Kalgoorlie, Western Australia	Case study	
1/8/2023	1.2	Post mining land use: Moranbah Region, Queensland	Case study	
1/8/2023	1.3	Simple representations of mining life cycles in Australia	Diagram	
1/8/2023	1.3	State regulatory framework: Queensland	Diagram	
1/8/2023	1.3	State regulatory frameworks: Western Australia	Diagram	Hamblin, L., Gardner, A & Haigh, Y.
1/8/2023	1.3	State regulatory frameworks: Victoria	Diagram	
1/8/2023	1.3	Relinquishment of Iluka South Capel, Western Australia	Case study	
1/8/2023	2.1	Understanding the values of stakeholders in Australian post mining economies: Latrobe Valley, Victoria	Case study	
1/8/2023	2.1	Understanding the values of stakeholders in Australian post mining economies: South Western Australia	Case study	Foran, T., Barber, M. & Ackermann, F.
1/8/2023	2.1	Understanding the values of stakeholders in Australian post mining economies Gove, Northern Territory	Case study	

2023–2024 Publications continued...

Published	Project Number	Title	Type	Author/s
1/8/2023	2.2	Hybrid Complex Adaptive System Framework for exploring mine closure planning issues	Framework	
1/8/2023	2.2	Integrated Mine Transitions Framework (IMTF) for mine closure planning	Framework	
1/8/2023	2.2	Classification of mine closure planning approaches	Diagram	Dzakpata, I., Qureshi, M., Kizil, M. & Maybee, B.
1/8/2023	2.2	Exploring the issues in Mine Closure Planning	Diagram	
1/8/2023	2.2	Key beneficiaries (custodians and end-users) of mine closure	Diagram	
1/8/2023	2.2	Publicly assessable regulatory and legislative provisions in mining across Australia	Table	
1/8/2023	3.3	Pit lakes: water quality guidelines and case studies of uses	Case study	Cook, P.G., Black, S., Cote, C., Kahe, M.S., Linge, K., Oldham, C., Ordens, C., McIntyre, N., Simmons, C. & Wallis, I.
15/8/2023	N/A	Mapping the Regulatory Framework of Mine Closure in Queensland and Western Australia	Journal article	Hamblin, L. & Gardner, A.
15/8/2023	N/A	Understanding Local Readiness for Closure: Initiating a Multi-Stakeholder Participatory Approach: paper presented at the 4th international congress on planning for mine closure	Conference paper	Worden S., Mackenzie S., Bourke P., Crosbie J. & Osgerby B.
15/8/2023	N/A	Creating Operational Solutions to Enable Effective Mine Closure	Conference paper	Corder, B., Boggs, G. & Measham, T.
15/8/2023	N/A	Planning for Mine Closure: Comparative Mapping of the Regulatory Frameworks for Mine Closure Planning in Western Australia, Queensland, and Victoria Mine Closure 2022	Conference paper	Hamblin, L. & Gardner, A.
15/8/2023	N/A	Repurposing of the Genex Kidston Mine Site in Queensland, Australia Mine Closure 2022	Conference paper	Williams, D.J., McGhie, A & Short, T.
15/8/2023	N/A	Exploring biophysical limitations and post-mining native ecosystem rehabilitation outcomes in Queensland	Conference paper	Spain, C.S., Gagen, E.J., Nuske, S.J. & Purtill, J.
15/8/2023	N/A	Cumulative Impact Assessment, Indigenous Peoples and the Extractive Sector	Conference paper	Holcombe, S.E.
15/8/2023	N/A	Transformation for Positive Post Mine Futures	Journal article	Boggs, G., Measham, T., Littleboy, A. & Haslam McKenzie, F.
15/8/2023	N/A	A Method for Benchmarking Two Different Resilience Assessment Methods	Journal article	Yong, S., Maru, Y.T., Herr, A., Measham, T.G. & Loechel, B.
15/8/2023	N/A	Soil Seed Bank Development of Smoke-responsive Plant Species in a 23-year Restoration Chronosequence and Implications for Resilience to Fire	Journal article	Cowan, E., Miller, B., Fontaine, J., Enright, N. & Standish, R.
15/8/2023	N/A	Environmental, Social and Governance (ESG) Risk, Uncertainty, and the Mining Life Cycle	Journal article	Maybee, B., Lilford, E., & Hitch, M.
15/8/2023	N/A	Time for and Outcome Evaluation? The Experience of Indigenous Communities with Mining Benefit Sharing Agreements	Journal article	Wall, L. & Haslam McKenzie, F.
4/9/2023	2.8	Limitations and issues with using the DCF NPV method for valuations of mine closure and post mine closure	Project report	Lilford, E.
2/10/2023	N/A	Re-thinking our model of mine rehabilitation and closure—is it time for a new model of mined lands stewardship?	Conference paper	Purtill, J.
2/10/2023	N/A	What are we transitioning into? Re-thinking the model of mine closure	Conference paper	Boggs, G., Measham, T. & D'Urso, J.
2/10/2023	N/A	Water and energy integration towards post-mine transition	Conference paper	Clerc, C., Sharma, V. & Pagliero L.
26/10/2023	N/A	Drivers of post-fire resprouting success in restored Banksia woodlands	Journal article	Cowan, E.L., Fontaine, J.B., Standish, R.J., Miller, B.P.
1/11/2023	3.17	Enabling mine closure and transitions: Opportunities for Australian Industry	Project report	Banfield, D. Moisi, A. Francisco Carranceja, J., Cohen, J. & Srinivasan, V.
11/12/2023	N/A	Australian Resources & Energy Law Journal	Journal article	Gardner A. & Hamblin L.
24/1/2024	1.6	Future-proofing a local government authority for a post-mining future	Journal article	Haslam McKenzie, F. & Eyles, S.
17/1/2024	N/A	Pilbara Iron Ore State Agreements and Mine Closure Regulation	Journal article	Brown, N.
20/5/2024	N/A	Rehabilitation of the Latrobe Valley Coal Mines: Integrating Regulation of Mine Rehabilitation and Planning for Land and Water Use	Journal article	Gardner, A., Poletti, E., Downes, L. & Hamblin, L.
19/6/2024	1.7	Regional development aspirations for the Latrobe Valley and Gippsland: Setting the context for post-mine land use planning	Project report	Haque, K.N.H., Reeves, J. & Foran, T.
19/6/2024	1.7	Collaborative planning for people navigating mine land transition: Progress in Australia's Latrobe Valley	Project report	



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