



# CRC TiME NEWSLETTER

DECEMBER 2022



# In the newsletter this month...

[#BreakingBarriers2022](#)

[Reflecting on FY2022](#)

[Research Update](#)

- [Building our research portfolio](#)
- [Read our latest publications](#)
- [Mapping foundation research by region](#)

[Sharing project findings: helping reimagine what's possible](#)

[Team Update](#)

[CRC TiME scholar visits Adelaide](#)

[2023 event placeholders: mark your calendars!](#)

[Thank you](#)





# #BreakingBarriers2022

Thank you to the more than 120 people from across Australia who joined CRC TiME's first in-person Forum on the 23 and 24 November.

**Day 1** highlights included a Welcome to Country by Whadjuk and Ballardong Noongar man Christian Miller-Sabbioni, a pre-recorded opening address by Minister for Resources The Hon. Madeleine King and an exploration of Foundational Project Portfolio findings and lessons.

Rebecca Tomkinson also opened an insightful session exploring the meaning of transformations in her first address since joining the Chamber of Minerals and Energy of Western Australia as Chief Executive Officer.

One of the most impactful moments was when Oral McGuire challenged participants to consider spiritual elements of mine closure and post-mine transitions, in addition to physical and economic elements.

**Day 2** highlights included a pre-recorded message from the Minister for Industry The Hon. Ed Husic MP, discussion about the social dimensions of mine closure and post-mine transitions, with the case for more research on social dimensions put forward.

CRC TiME First Nations Advisory Team Chair, Jim Walker, led a panel of First Nations leaders, who powerfully challenged industry to improve how it works with Aboriginal and Torres Strait Islander peoples and communities.

A significant highlight over the two days was the involvement of CRC TiME's incredible Higher Degree by Research Scheme students. Project posters gave attendees insights into their research and the student-led 'You Can't Ask That' session was the perfect finish to the Forum.

**Importantly, CRC TiME received feedback that the Forum provided a safe space for challenging conversations, driving new thinking and helping foster new and deeper connections.**

**A special thank you to all speakers and panellists for sharing their research, insights, advice and lessons learnt. In lieu of speaker gifts, CRC TiME donated to the [EON Foundation](#).**



Mr Miller-Sabbioni welcomed attendees to the lands of the Whadjuk Noongar people after receiving cultural authority to do so.

Click [here](#) for more Forum Photos

Click [here](#) for the Reflections and Insights Summary





# Reflecting on FY2022

CRC TiME was proud to release its second [Annual Report](#) alongside the Partner Forum and Annual General Meeting.

The [Annual Report](#) provides a progress update and outlines what's next for CRC TiME as we bring diverse partners together to reimagine and transform mine closure.

Highlights in the [Annual Report](#) include:

- Our work to deliver trusted, collaborative research
- The landmark assessment of mine closure and transition knowledge developed through the Foundational Project Portfolio
- Completed, ongoing and new projects, including the flagship *Australian Seed Scaling Initiative* and *Improved prediction, remediation and closure of acid and neutral metalliferous drainage sites* projects
- Regional engagement highlights, including 'Regions in Transition' workshops in Brisbane and Morwell
- Governance, organisational and financial information.



[Read the Annual Report here](#)





# Research update

Thank you to everyone involved in CRC TiME research during 2022.

Interested in application of a spectral and structural digital library in the mine closure context?

Contact [Dr Jason Kirby](#), Program Leader 4, for more information.

## Recognising excellence

We were delighted to announce [CRC TiME's Distinguished Paper Awards](#) at the 2022 Annual Forum.

The purpose of the awards is to recognise excellence in peer-reviewed research conducted by CRC TiME authors.

All peer-reviewed papers by CRC TiME researchers may be submitted for consideration by the Awards Committee.

## Sharing lessons learnt

**Our research profile is growing!**

Researchers, CRC TiME staff and partners recently presented at the Mine Closure 2022 conference, WA Mining Conference and Exhibition, International Mining and Resources Conference, International Mine Water Association Conference (Christchurch) and the National Innovation Policy Forum.

Check out [pages 10-11](#) for more about our involvement in recent conferences and events.



# Building our research portfolio

## We've been making strong progress building our next phase of research.

The following approved projects have recently been contracted:

- Evidence for effectiveness of climate-adapted seed sourcing strategies for revegetation success and transition to mine closure in a changing climate
- The Department of Climate Change, Energy, the Environment and Water has contracted CSIRO and CRC TiME to deliver the *Mining Sector Natural Capital Accounting System* Project comprising a capacity building project plus four case studies.

In addition, the following projects have been approved and are proceeding to contracting:

- Future proofing a small community from the impacts of the mine lifecycle
- Collaborative planning for post-mining development in Latrobe Valley
- Identifying development pathways and increasing transition capacity
- Opportunities for Growth in Australia's Mine Closure Solutions Industry
- Mine Pit Lake Assessment and Management: A National Initiative to Support Mine Closure and Regional Opportunities
- A Systematic Approach to Regional Cumulative Effects Assessment to Support Transitions in Mining Economies – Stage 1.
- Algae-based technologies for improved environmental outcomes and sustainable post-mining futures

Find out more about the research portfolio in our [2022 Annual Report](#).

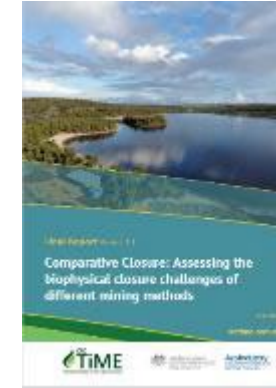
Stay tuned for webinars in the new year.

# Read our latest publications

Six new project reports are now available:

- A roadmap for adapting to technological change in remote sensing and monitoring capabilities
- Understanding the values of stakeholders in Australian post-mining economies
- Developing the business case for responsible acid and metalliferous drainage (AMD) management
- Dynamically transforming environmental assessment through a shared analytics framework: Bowen Basin case study
- Comparative closure: assessing the biophysical closure challenges of different mining methods

[Read our publications here](#)



# Mapping foundation research by region

More than 400 people worked together to deliver the Foundational Research portfolio within a very short period of time

It can be challenging for people and communities in our focus regions to quickly find local case studies and information.

To make this information easier to find, CRC TiME is developing maps for each focus region highlighting:

- Case studies and specific references
- Current projects regions are actively involved in.

Our aim is to make this available in Q1 2023.

## 5 South West Western Australia

### 5.1 Background

The South West Western Australia case study focuses predominantly on the coal mining area around Collie (Figure 11). Mining has taken place in Collie since the discovery of coal in 1883, and the town of Collie is a direct consequence of coal mining. In 1931 the first power station was constructed and as a result of both mining and coal power generation, Collie has become a major contributor of energy for southern part of the state, providing up to 30% of required generation. This coal mining transition case study is supported by the perspectives of research participants whose professional experience relates to other forms of mining transition in the South West, notably mineral sands mining on the coastal plain.



Figure 11: Collie locality in South West Western Australia. Source: <https://www.google.com/maps>.

The historical trajectories of mining and coal-mining transition and specific place-related impacts in the South West differ depending on whether the mineral is coal, mineral sands, or gold. Nonetheless, it is possible to identify a "transitioning mining region", with certain common values and general institutional arrangements which are common across different minerals (see section 6.1 for discussion).

Coal mining has been a major source of employment and revenue in the region; however, as Collie is well-served by a range of other businesses, alongside and stimulated by the generation of energy, the town is also an economic hub contributing around 12% of the region's Gross Regional Product (Collie Economic Development Task Force, 2011). At its most populous, Collie comprised around 10,000 people in the 1980s, but has dropped to around 8,500 with around 2,000 directly employed by mining and power generation.

42



# Sharing Research Findings

Helping reimagine what's possible

Over the past four months, CRC TiME staff, researchers and partners have been busy sharing Foundational Project Portfolio research findings.



## Mine Closure Conference

CRC TiME research was centre stage at the Mine Closure 2022 conference, hosted by the Australian Centre for Geomechanics (ACG) in Brisbane in October.

Research presented included:

- [Transformations for positive post-mine futures](#)
- [Planning for mine closure: Comparative mapping of the regulatory frameworks for mine closure planning](#)
- [Cumulative impact assessment, Indigenous peoples and the extractive sector: literature review and potential methods.](#)

CRC TiME's involvement in the conference Program Committee ensured Foundational Project findings were shared beyond our partnership, to a broader and international audience.

Congratulations to ACG for an exceptional event!

## Making connections at Brisbane events

- During Mine Closure 2022, CRC TiME co-hosted networking drinks with [AusIMM](#) and the [Closure Planning Practitioners Association \(CPPA\)](#). 120+ mine closure and associated practitioners enjoyed casual pub drinks and food
- Our valued partner, The University of Queensland's Sustainable Minerals Institute (SMI), welcomed the CRC TiME Board and leadership team in October for a luncheon and strategy discussion. Timed to coincide with Mine Closure 2022, this was an excellent opportunity to bring together several CRC TiME project leaders, researchers and students.
- SMI hosts the CRC TiME east coast office along with Research Director Professor Tom Measham, Research Project Manager, Keryn Hassall and Program 3 Leader, Dr Agnes Samper.
- The next day, the CRC TiME Board met with various mine closure leaders at a breakfast event.

# Sharing Research Findings

Helping reimagine what's possible



## Sharing insights at IMARC

The International Mining and Resources Conference solidified its position as a major global industry conference in November.

CRC TiME had a strong voice at IMARC with CRC TiME Board Director, Adjunct Professor Christine Charles, First Nations Advisory Team Chair, Jim Walker, External Relations and Impact Director, Jillian D'Urso, Program 1 Leader, Professor Fiona Haslam-McKenzie and HDR PhD candidate, Liz Wall all joining panels at the conference.

In addition, CRC TiME was able to expand its impact and engagement through invitations to attend the Indigenous Women in Mining and Resources Welcome Reception and Transparency International Australia Breakfast.



## Out and about

October's **WA Mining Conference and Exhibition** brought together technical and digital innovation with operational and executional excellence.

CRC TiME CEO Dr Guy Boggs participated in a conference panel exploring the role of innovation in solving industry challenges and discussing how research and development can be accelerated.

In November, Guy attended **MinEX CRC's Annual Forum** to reinforce the importance of ESG in closure – and across the sector.

Also in November, the Department of Climate Change, Energy, the Environment and Water held the 'Making Nature's Wealth Count' online forum. Alongside finance, technology, science and government leaders, Guy outlined CRC TiME's work on Natural Capital Accounting and its importance in ensuring sustainable investment.



# Team update

We are grateful for the service, contribution and legacy Graeme Stewart, Jane Stacey and Adam Carriero, who were integral to our foundational period.

As they move onto their next chapters, we wish them the very best for the future.

We are also pleased to welcome two new members to the CRC TiME team: Mark Killmier and Caroline Williams.

## Mark Killmier



**Mark joined CRC TiME in October as Business Manager and Company Secretary.**

Mark is a qualified CPA and Company Secretary with extensive banking and finance experience. Mark has worked across a range of sectors, including heavy engineering, wholesaling, manufacturing, government and mining, oil and gas.

His past roles include CFO and Company Secretary for several ASX-listed mining companies and External Audit Technical Director roles with clients including major gold producer Northern Star Resources Ltd.

## Caroline Williams



**Caroline will join CRC TiME as Engagement Manager (First Nations) in the new year.**

Caroline is a Yamatji woman from the Midwest, Murchison, Gascoyne region of Western Australia and brings extensive experience in business and economic development, employment, health care, out of home care and education to her role. She is an Associate Fellow through the UWA Higher Education Academy.

Caroline is a PhD researcher investigating what traditional, complementary and alternate medicines Indigenous peoples are using and what influences their decision making. She holds a Bachelor of Social Science (Indigenous Services), Masters of Business Administration and a Diploma of Executive Coaching.

# Visit to the Latrobe Valley

After many years of virtual meetings, our CEO, Dr Guy Boggs was delighted to visit the Latrobe Valley in September along with Chair, Dr Bruce Kelley and External Relations and Impact Director, Jillian D'Urso.

Visit highlights included:

- Discussions with Interim CEO of the [Mine Land Rehabilitation Commissioner](#) Dr Jenny Brereton and her team
- A visit to the Yallourn lookout to learn about the history of the area, view current rehabilitation and understand plans for the future
- A meeting with Federation University's Head of Campus Leigh Kennedy and some of the researchers working on CRC TiME projects
- Discussions with Daniel Miller, CEO, Gunaikurnai Land and Waters Aboriginal Corporation
- A CRC TiME-hosted lunch to share a CRC TiME update with Hub participants.

The visit highlighted the resilience of the Latrobe Valley community, and the importance of translating CRC TiME research into practical insights that the community can use. Thank you to the MLRA and Dr Jess Reeves for your assistance coordinating the visit.





# CRC TiME scholar visits Adelaide during internship programme

CRC TiME Higher Degree by Research scholarship recipient Amelia Lee Zhi Yi recently travelled to South Australia as part of her internship programme. Amelia is a UQ Sustainable Minerals Institute student.

Amelia and her CRC TiME sponsor, CSIRO's Dr Ewan Sellers, met with Leon and Philippa Faulkner, founders of EnviroCopper Ltd (ECL).

ECL is working with CSIRO to implement an In-Situ Recovery (ISR) pilot study on recovery of copper minerals from the heritage Kapunda Copper Mine.

There are plans to transition the former mine site – currently used for tourism - into active mining where tourism and ISR will co-exist. It aims to leave minor visual impacts while value-added recovery of copper is performed.

Amelia's research is exploring stakeholder engagement best practices to ensure mine transition outcomes are optimised. She is studying sociotechnical aspects of the implementation of novel technologies such as ISR.

During a visit to Kapunda, ECL shared their experiences – successes and lessons learnt – engaging with the local community as well as plans for progressing the pilot study.

Amelia also met with Mr Alex Hayes, another CRC TiME scholar based at Flinders University studying Acid Mine Drainage with Dr Sarah Harmer-Bassell.



# 2023 event placeholders



## Mark your calendars!

**9 January**

CRC TiME reopens following the Christmas break

**17 February**

CRC TiME Webinar: Partner Update\*

**22 May**

CRC TiME Biodiversity webinar (International Day of Biological Diversity)

**28 June**

[World Mining Congress Special Symposium on Mine Closure & Post-Mining Transitions](#)

**21 July**

CRC TiME Webinar: Partner Update\*

**Tell us what events we should attend in your sector, community, region or organisation during 2023.**

Send your ideas (with the date and any background information) to [Jillian D'Urso, External Relations and Impact Director](#).

\*Based on your feedback, we'll be hosting virtual Partner Updates every six months to keep you up-to-date about CRC TiME's progress, projects and priorities.

Look out for your invitation in early 2023.





# THANK YOU



**Our collaborative partnership is proving to be greater than the sum of all parts.**

Thank you for your support, ideas, time, investment and commitment this year.

Please have a safe, happy and peaceful summer break.

We look forward to working with you again in the new year.