



**Leading
collaboration**



**to lift
conservation**

**and restoration
outcomes in
Western Australia**



Addressing the environmental challenges of
climate change and biodiversity loss

Acknowledgements

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Acknowledgement of Country

We acknowledge the traditional custodians throughout Western Australia and their continuing connection to, and deep knowledge of, the land and waters. We pay our respects to Elders both past and present.

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Globally, the world is responding to the interconnected crises of biodiversity loss, climate change and human development inequities. Australia needs to undergo significant and rapid change over the next decade to protect its people and environment.

Since its establishment, WABSI has been leading a collaboration of end users and scientists to develop long-term strategies to respond to the challenges of climate change and biodiversity loss. It continues to build trusted relationships, provide stakeholders with the tools to improve environmental performance and work towards actions that deliver nature positive outcomes and transformative change across Western Australia.

WABSI's conservation and restoration research programs continually work with government, industry, and community to deliver meaningful outcomes and forward thinking for on-ground change.



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Photo courtesy: Mount Gibson Iron

2019



WABSI developed a practical tool to help end users address the environmental challenges of mine closure: The Completion Criteria Framework

The Western Australian Biodiversity Science Institute (WABSI¹) took an innovative, collaborative approach to develop the scientifically informed Completion Criteria Framework. WABSI engaged partners from the mining industry, government and research sectors to work together to deliver the Framework. Endorsed by the Department of Mines, Industry Regulation and Safety, it is provided to proponents as a guide, for the preparation of mine closure plans.

¹ <https://wabsi.org.au/>





Developing acceptable and achievable completion criteria is a necessary part of mine closure, providing agreed standards or levels of performance to indicate the success of rehabilitation, following mining activity.

The Completion Criteria Framework is a practical, useable tool which end users apply in the planning process to help address environmental challenges and better meet their obligations during mine closure.

- WABSI Completion Criteria – An overview²
- Completion Criteria Framework – Endorsed by the Department of Mines, Industry Regulation and Safety³
- Full project report – A Framework for developing mine site completion criteria in Western Australia⁴

² <https://wabsi.org.au/wp-content/uploads/2019/08/Completion-Criteria-2pp.pdf>

³ https://wabsi.org.au/wp-content/uploads/2019/08/Completion-Criteria-Framework_-DMIRS.pdf

⁴ https://wabsi.org.au/wp-content/uploads/2019/08/Completion-Criteria-Project-Report_updated-24.9.2019.pdf



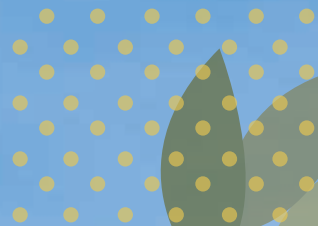
2020

WABSI helped secure \$135m in research funds to establish CRC TiME

Working with Western Australia's mining industry and science researchers, WABSI played the leading role and undertook extensive stakeholder engagement, built trusted partnerships and developed a successful bid for the Cooperative Research Centre for Transformations in Mining Economies (CRC TiME⁵). These efforts secured \$29.5 million in Commonwealth funds, in addition to industry co-investment, as part of a total 10-year co-investment of \$135 million.

CRC TiME now undertakes social, economic and environmental research to facilitate mine closure and develop new, post-mining economic opportunities. WABSI continues to work closely with CRC TiME, providing support and leading projects.





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Photo courtesy: Alcoa

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2022

New approaches for improved outcomes: Integrating social, cultural, economic and environmental assessments for regional planning

WABSI's Mine Closure and Rehabilitation Program is formally recognised in CRC-Time's research and has led two collaborative projects. The first project explored how environmental data sets held in the public domain could be supplemented with data collected by resource companies. The second, focused on building capacity for dynamic assessments of cumulative impacts on regions from mining activity and mine closures. These collaborative efforts have delivered new knowledge which has been published and made available to end users.

- Dynamically transforming environmental assessment through a shared analytics framework: Bowen Basin case study⁶
- Towards a framework for cumulative regional impact assessment⁷



⁶ <https://crctime.com.au/research/projects/project4a/>

⁷ <https://crctime.com.au/research/projects/project1a/>





The Restoration Economy: A roadmap for jobs, growth and environmental stewardship

WABSI led the development of a state level roadmap for restoration investment. The roadmap synthesised complex interactions of global events and associated responses and outlines a pathway towards a culture shift of targeted, large-scale, resilient, landscape-scale restoration. This will position Western Australia to capitalise on available investment and innovation, delivering economic and social benefits to society. The roadmap refers to a 'Restoration Economy', which is the market that encapsulates businesses, investors and consumers engaging in economic activity related to rehabilitation and restoration.

WABSI undertook a stakeholder survey to inform the roadmap and guide investment to areas of highest priority. The efforts are building a collective understanding of capacity and identifying the knowledge and technology required to fill demand in an emerging environmental service marketplace.

Economic prospects can thus be built to support jobs and growth for local economies whilst delivering environmental stewardship.

- Report — The Restoration Economy in Western Australia⁸
- A Restoration Economy Advisory Group has been established to oversee initiation and the delivery of prioritised research projects.

⁸ <https://wabsi.org.au/category/publications/reports/>

Integrating science into on-ground restoration: End user guidance for experimental plantings

As part of a science partnership of 20 organisations, WABSI helped develop new planting guidelines to enable continual learning for end users and help lift ecological restoration practice.

The guidelines are a practical and easy-to-apply tool. End users can implement them on project sites and undertake experimental plantings to address several important restoration questions; for example, what is the impact of seed choice in restoration outcomes and how do plants adapt to different environmental stressors? This collaborative work has built a state network and infrastructure to enhance knowledge exchange and support improved science and restoration outcomes for Western Australia.

- Guidelines for Experimental Plantings⁹



WABSI established new global partnerships to showcase world leading restoration: Natural Capital Laboratory-Australia

WABSI brought together industry, science and academia from across the globe to help establish Natural Capital Lab (NCL)-Australia. Situated within Gondwana Link in South West WA along the Gordon River, ecological restoration at the ex-agricultural site will form the foundation for the collaborative, outdoor laboratory to build on best-practice ecological restoration, develop and test monitoring methodologies and develop Natural Capital Accounts.

In a truly collaborative model, WABSI will co-lead the NCL-Australia project and the site will join a global network reaching a wide audience, showcasing world leading environmental practice and the economic value delivered through Natural Capital. Teaming up with NCL-Scotland, the NCL model is receiving global recognition, featuring at the 2021 UN Climate Change Conference (COP26) in Glasgow.



2023 and beyond



Leading engagement and collaboration to achieve nature-positive outcomes for Western Australia

WABSI continues to lead collaboration to identify emerging end user science needs and develop new and timely programs to address them.

An emerging priority for end users identified through extensive stakeholder consultation and published in WABSI's publication *Biodiversity Knowledge Priorities*¹⁰ is the global trend towards meaningful Environmental, Social and Governance reporting, nature-positive outcomes and the move of environmental outcomes from the realm of compliance, through social licence, towards an organisation's balance sheet. This change will drive the consideration of nature and nature-loss to become a critical factor in management decision-making and in turn, will drive demand for greater scientific knowledge to help tackle climate change and biodiversity. It will also generate the need to better understand the valuation, and not just monetisation, of Natural Capital.

WABSI's conservation and restoration programs continue to empower end users and are a key component of its 10-year strategy in making an impact through 'Creating meaningful opportunities for biodiversity conservation and enabling sustainable development for Western Australia' (WABSI Strategic Plan 2022–2032¹¹).



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¹⁰ <https://wabsi.org.au/category/publications/reports/>

¹¹ https://wabsi.org.au/wp-content/uploads/2022/04/WABSI-Strategic-Plan-2022_2032.pdf



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