

Argyle diamond mine: a model for First Nations engagement

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Abstract

The Gelganyem Group represents the Traditional Owners (TOs) of Argyle diamond mine in the remote East Kimberley region of North Western Australia. In November 2020 mining ceased at Argyle after 37 years of operations and the production of more than 865 million carats of rough diamonds.

Just as Argyle's TOs pioneered new ways to engage during exploration and mining, they have now designed a robust engagement strategy to lead the charge for the negotiation of positive technical, environmental, economic and cultural outcomes for all parties in mine closure.

Whilst most mining companies appreciate the critical need to engage with First Nations groups to agree a closure vision and strategy, many do not know how best to do this.

Gelganyem's closure work plan (CWP) model:

- provides a comprehensive, culturally appropriate, and economically aware engagement strategy for all mining companies and First Nations groups to use to facilitate mine closure by reducing time and cutting costs*
- applies principles of free, prior and informed consent*
- ensures streamlined First Nations participation in closure design and the establishment of an agreed closure vision*
- understands the criticality of an agreed post-mining land use and provides ways for mining companies to engage with First Nations groups to understand*
- provides clarity for closure criteria*
- aligns closure objectives and steps toward achieving them*
- streamlines budgeting and forecasting for engagement and consultation*
- reduces closure costs, delays, stakeholder dissatisfaction/disengagement and conflict.*

There are many lessons to be learned from the Argyle closure; the first mine closure of its size globally. First Nations participation in mine closure is critical to ensure its success. The CWP model will help mining companies and First Nations people work together to improve mine closure outcomes for everyone. Argyle TOs are keen to ensure that mining companies and other First Nations groups benefit from the Argyle experience and maximise positive, meaningful and effective First Nations engagement and participation in mine closure planning, design and execution.

Keywords: mine closure, First Nations, engagement, finding better ways

1 Introduction

The mining industry is increasingly recognising the importance of engaging with key stakeholders – particularly the First Nations people upon whose land each mine sits – however, very few know how to do so

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effectively. Similarly, many companies will appreciate that First Nations groups have a cultural and spiritual connection to Country but will underestimate the extent to which those groups have experience in the technical, environmental and ecological aspects of land rehabilitation and management.

Whilst effective engagement will differ according to each place and each group, through the closure of Argyle diamond mine, the Traditional Owners (TOs) of that land have developed a robust process for parties to work together on each component of land rehabilitation and management.

This paper explores some of those lessons learned by TOs and aims to provide guidance to the mining industry and First Nations groups on the engagement model developed by TOs so that it may be adapted for use at other sites to simplify the transition from mining to post-industry land use.

2 Argyle diamond mine

The Argyle diamond mine, located in the remote East Kimberley region of Western Australia, was one of the world's largest producers of diamonds. Operated by Rio Tinto (RT), the mine began production in 1983 and continued for 37 years until its closure in 2020. Over its life, Argyle produced more than 865 million carats of rough diamonds, including the rare and iconic pink diamonds for which it became globally renowned (RT website and associated literature).

The mine lies on the traditional lands of the Miriwoong, Gija, Malignin and Woolah peoples (Argyle Participation Agreement) (Freehills Legal 2004). The rugged landscape of the Argyle diamond mine is demonstrated in Figure 1.



Figure 1 Landscape of Argyle diamond mine

RT has completed 70% of its closure execution work at Argyle and is scheduled to move into post-closure monitoring and maintenance in Q1 2026. The objectives, commitments, process and strategy for the Argyle closure and rehabilitation are outlined in a mine closure plan (MCP) submitted to the Western Australian state government for approval. The MCP describes how the Argyle site will be decommissioned, rehabilitated and relinquished to enable the land to be transitioned to the TOs. At the time of writing, the MCP had not been approved by the TOs or by the state government.

The mine's closure marks a pivotal moment in Australian mining history. As the first mine of its scale in Australia to move into closure with a formal agreement involving Traditional Owners, Argyle has become a reference point globally for First Nations involvement in mine closure planning. Gelganyem, the

representative body supporting the TOs, is working hard to develop better ways to create meaningful partnerships in mine closure.

The location of Argyle diamond mine is shown in proximity to the closest towns in Western Australia and the Northern Territory in Figure 2 below.



Figure 2 Map showing location of Argyle diamond mine

3 Gelganyem: from trust to representative body

Gelganyem was formed as a result of the Argyle Participation Agreement (APA), which was set up to manage the social, cultural and economic benefits of mining on Country. Established as a charitable trust, Gelganyem was initially responsible for managing financial benefits and supporting education, health, cultural maintenance and community programs, and advocating for other APA benefits such as training, employment and contracting outcomes for Traditional Owners. Over time, as the relationship with RT matured and the mine neared closure, Gelganyem was asked by TOs to take on greater responsibilities by advocating on their behalf to prioritise outcomes in closure design and implementation that are most important to them.

In 2022 Gelganyem became the nominated representative body for TOs in mine closure, with endorsement from both community leadership and corporate partners. The Traditional Owner group comprises seven estate/family groups (dawang/daam) from the Miriwoong and Gija people. Gelganyem represents the collective voice of those seven Miriwoong and Gija groups with regards to their interests at Argyle.

These groups are culturally linked by the story of the Barramundi Dreaming and the journey of the Barramundi fish as she swims through traditional water sources. Whilst the Miriwoong and Gija stories differ in language and in content, and have cultural importance in their telling, they both include the Barramundi jumping and shedding her scales as she does so: changing the landscape of the region forever and leaving diamonds behind (www.gelganyem.com).

The Gelganyem Group logo shows a traditional painting of the Barramundi, as demonstrated in Figure 3 below.

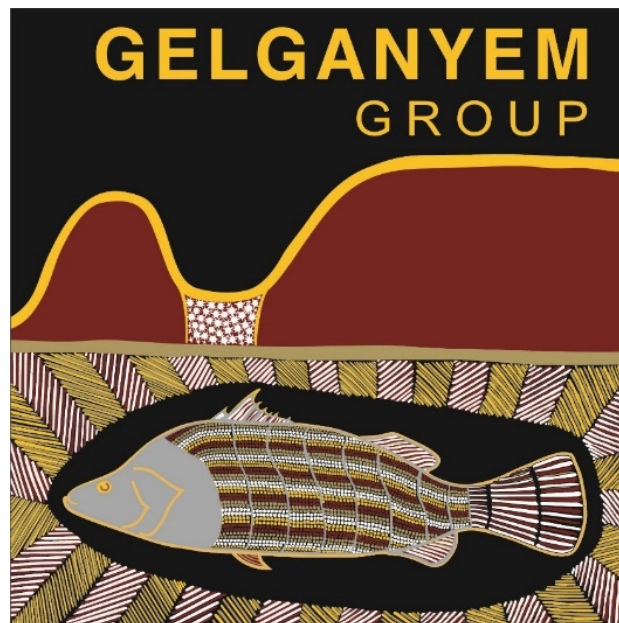


Figure 3 Gelganyem Group logo

4 Closure work plan development

4.1 Background

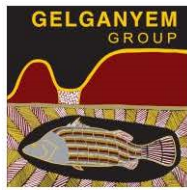
Between 2018 and 2021 it became evident that the closure strategies being proposed for Argyle had not – in the opinion of TOs – adequately considered their aspirations, principles and objectives.

Whilst there was an increasing need for TO endorsement and consent following operations, TOs did not feel adequately informed, consulted, engaged or aware of closure planning, design or proposed outcomes. Tensions and mistrust therefore increased, TO participation reduced, and decision-making/consent and endorsement became problematic.

In late 2023, with closure progressing quickly and an MCP draft due in 2024, Gelganyem designed, implemented and adapted a framework referred to as the closure work plan (CWP) to develop a transparent, structured and staged model for participatory mine closure. At its heart, the CWP intertwines meaningful Traditional Owner engagement with the receipt of independent technical advice direct from the experts. TOs were able to speak directly to the experts and to ask all questions of them from their unique environmental, spiritual and cultural perspective.

The CWP provides a roadmap to a codesigned MCP aligned with principles of free, prior and informed consent (FPIC) and grounded in cultural and technical integrity. This model not only ensures better closure outcomes but provides a replicable framework for other mine sites and Indigenous groups globally.

A summary of the CWP process is set out in Figure 4 below. It shows the different stages of engagement throughout all aspects of the technical review work.



GELGANYEM GROUP 2024 CLOSURE WORK PLAN SUMMARY

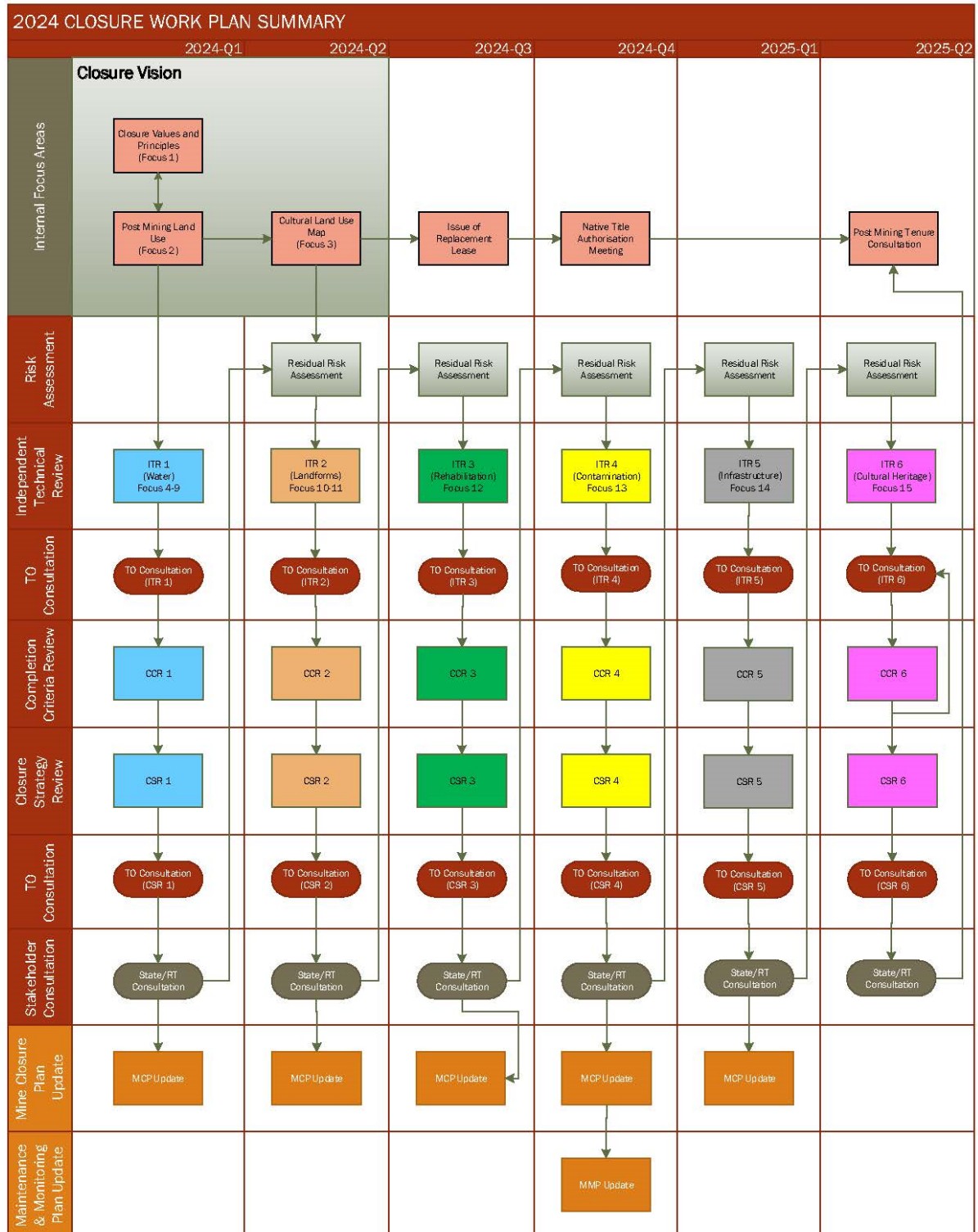


Figure 4 Closure work plan summary

4.2 Development of the closure work plan concept

There were a number of key development stages that Gelganyem and TOs navigated through which ultimately led to the implementation of the formal CWP framework.

4.2.1 Traditional Owner surveys

Gelganyem developed a simple, visual survey which was intensively distributed via several accessible methods throughout the TO community. This survey provided important feedback about TO readiness for and awareness of mine closure activity. Over several weeks, Gelganyem received feedback from over 100 responders from a range of ages across all seven TO estate groups. The survey provided Gelganyem with a clear picture about the status of TO closure awareness, the knowledge gaps, the consultation and engagement gaps, and the areas that were of the greatest concern to them. Figure 5 demonstrates the reach of the survey across the relevant estate groups.

1. Which Daam/Dawang (Estate Group) are you connected with? (Select all that apply)

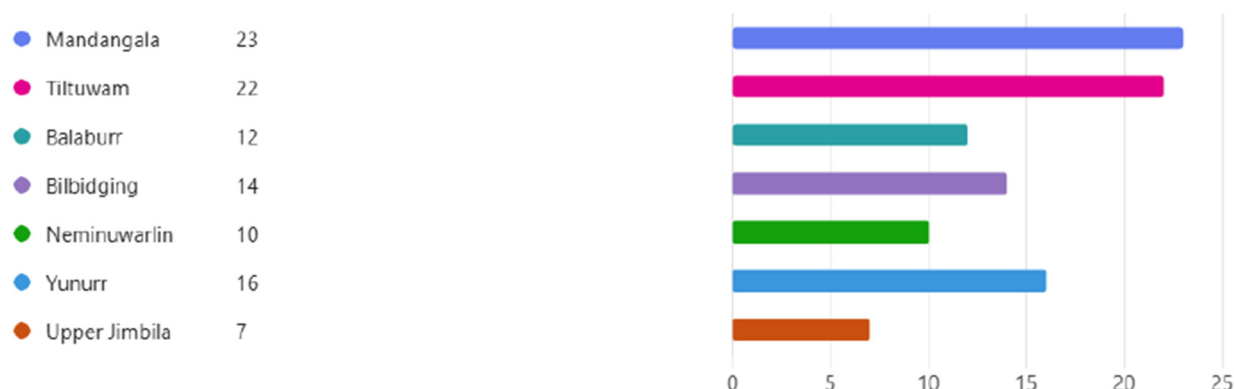


Figure 5 Image of Traditional Owner survey reach

4.2.2 Development of an issues log

As the survey progressed, Gelganyem developed a central repository to collate current, historical and unresolved closure concerns raised by Traditional Owners. The issues log provides a platform to effectively manage and approach topics with RT and to guide consultation to become more contextualised and responsive. The issues covered a range of topics including social, economic and governance concerns, however, most were focused on the environmental and cultural impacts of closure.

Through the building of the issues log, Gelganyem recognised that TO concerns were broad, extending far beyond the limits of RT-specific domains. As such, issues were instead categorised according to site-wide disciplines including water, landforms, rehabilitation, contamination, infrastructure and cultural heritage.

An image of part of the issues log is set out in Figure 6, showing the different disciplines and the issues pertaining to each of those disciplines, as well as the categories of concern, the status of the issue and the actions needed to manage each issue.

Issue Topic	Issue Description	Date Raised	Raised by	Status	Status Comments	Action/s Required	Action Owner	Priority
Analogue	Question around how adequately and accurately analogue sites have been chosen, recorded and reflected in the revegetation strategy.	28/11/2023	TWG Q4 2023	Completed		Managed through ITR 3 - Closure Work Plan		
Analogue/ Reference Sites	1. Have the reference sites been agreed by TOs? 2. Does the completion criteria adequately reflect the reference site in a way that is agreed by TOs? 2. Is the baseline data adequate and has it been shared with TOs ? 3. Missing baseline data used for harvest schedule	19/10/2022	TO Survey/ Technical Advisor	In Progress		1. GL/ RT to coordinate site visit to view all analogue sites and understand transects. 2. GG to undertake independent assessment of analogue information as part of broader rehab risk review (ITR 3)	Gelganym	
Cultural Species	Bush Foods - need a plan to ensure they are present. Treeline to work on this and provide info to RT about which ones and how/ where to grow. Culturally important species missing from rehab establishment. 1. Bush tucker (Fleshy fruits) generally have to be sown fresh, to be included as greenstock i.e. Black plum, Wild mango. 2. Species to be re-introduced i.e. Cypress pin 3. Spinifex lacking in rehab 4. Bush Tucker and Bush Medicine	23/08/2023	Info Session- rehab	In progress	Work being completed as part of broader cultural mapping requirement	1. GG to develop list of keystone species and locations.		
		24/04/2022	Technical Advisor	In Progress		1.GL technical Advisor to work with GSO and Curtin to identify the best establishment method for cultural species. 2. GL TE and RT SME to work together to improve Spinifex outcomes	Gelganym	
Fauna Management and Monitoring	1. Are fauna numbers being actively monitored 2. What is being done to actively encourage fauna 3. Is there any fauna reporting - can there be? 4. What is the pest management strategy? eg Toads 5. Is there a contamination risk for fauna on site (land or water)	19/10/2022	TO Survey & information sessions and TWG Q4 2023	In Progress		1. RR- RT to provide copies of all fauna related data or information- RR 2. RT to provide a TO Information Summary sheet regarding Fauna 3. Fauna to be examined as part of GG independent Risk Review (ITR 3) and ITR 1	RT	
Fire	Is there a sufficient fire management plan ?	30/05/2023	Restoration Technical progress Discussion	In Progress	Ongoing discussion but not yet resolved and still an ongoing concern	Managed through ITR 3 - Closure Work Plan	RT	
6. Progress towards completion of closure works								
< > Lookup ACTIONS 1. INFRASTRUCTURE 2. REHABILITATION 3. WATER 4. LANDFORMS 5. CONTAMINATION 6. CULTURAL 7. PMLU 8. Risk & Liability		+		: ◀				

Figure 6 Image of issues log

4.2.3 Development of a request for information register

Many of the TO concerns in the issues log came from a lack of transparency around information and required access for TOs and Gelganyem to more precise/specific data/reports from RT. The added value of this was the opportunity it presented in the important, but less considered, step of repatriation of key materials, documents and records for the TOs.

To effectively manage this process and provide regulation around timing and priority, Gelganyem designed a request for information (RFI) register. This critical tool was TO-led and managed, and provided a live/shared process to request, receive and coordinate the sharing of information from RT to TOs.

An image of the RFI register is set out in Figure 7 below. The register includes a request number and date, the nature in which the information was requested (e.g. whether in a meeting or via email), the name or content of the information requested, the mine closure discipline to which the request relates, the status of the request and the likely information location. It also includes a comments section so that each party can make comments as the request process is followed.

M169	A	B	C	D	E	F	G	H	I	J	K	L
RFI No.	Date of RFI	Request Form	Data/Information Request	Domain / Discipline	Info Type	Notes/Assignment	Date Received	Status	ADMC Contact	Date Provided	Comments	Storage Location
81	2/20/2024	RFI Substructure meeting	RFI to get copies of representations of APIA video to Ishtar group.	Historical/Heritage	Media	DLRFO request	04/02/2024	RFI NOT LOGGED	DE Cuddy		Part of Keeping Project To Check	
82	28/09/2024	TUW 2024	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
83	28/09/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Cultural/Heritage	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024	Some reviewed but under if that is it?	
84	02/07/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
85	02/07/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
86	02/07/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
87	02/07/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
88	02/07/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
89	02/07/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
90	02/07/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
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94	02/07/2024	RFI	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Reliability	Calendar	05 request	09/09/2024	Reviewed	T Scott	02/07/2024		
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100	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024				No Appendices received	
101	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
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153	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
154	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
155	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
156	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
157	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
158	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
159	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
160	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
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162	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
163	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
164	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
165	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
166	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
167	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
168	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
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175	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
176	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10	Landform	Reports	David Brett	02/09/2024					
177	05/09/2024	RFI2 Landform	RFI to provide a list of information, related reports, publications and permits etc to Etoile 6 and TUW 10									

Figure 7 Image of the request for information register

4.2.4 Technical working group

With an extensive list of issues, an increasing RFI register, a need for improved engagement and a desire by TOs to participate in decision-making more meaningfully, Gelganyem established and implemented the technical working group (TWG).

The TWG was established to provide all parties (RT, TOs and Gelganyem) with equal membership and participation rights. The TWG provided an opportunity for constructive, evidence-based and solutions-focused dialogue and knowledge-sharing on specific technical issues relating to closure and rehabilitation activities being undertaken at Argyle in accordance with the MCP, as well as the overall closure planning detailed in the MCP itself.

The TWG meets quarterly to review the issues log and the RFI progress, coordinate technical review work and consider how best to engage with the broader TO group. In addition to the members, the TWG supported the involvement of subject matter experts to guide progress and troubleshoot key issues. The CWP framework stemmed from the implementation of the TWG and the realisation from Gelganyem that TO input into the next MCP (Argyle Diamonds Limited 2024) based on a comprehensive technical review of the existing (Argyle Diamonds Limited 2021) MCP was the best way forward to achieving alignment.

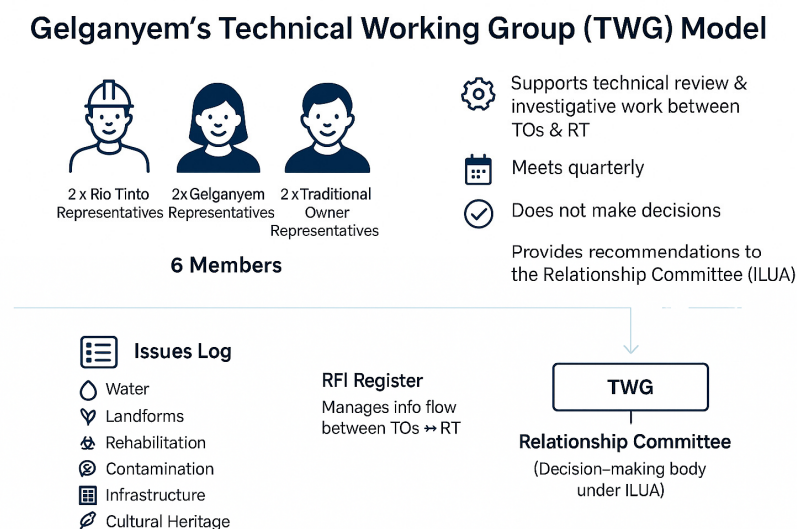


Figure 8 Diagram of the technical working group membership

4.2.5 Challenges

The development of the CWP did not come without its challenges:

- As a general rule, there was resistance to the CWP concept – with differences of opinion as to the role of TOs in closure. Is their consent required for closure work or not?
- Obtaining funding, not only for independent technical advice but also for resourcing within Gelganyem to manage the CWP, took many months of painful negotiation to receive and was certainly never offered. Once received, funding was constricted and limited in scope (both in terms of content and time frames). The receipt of funding also resulted in confused expectations as to who worked for whom and what constitutes effective resourcing (effective for whom?).
- Notwithstanding the existence of the RFI register, there were significant delays in receiving the information and in receiving the right information. There were gaps and inconsistencies in the information provided and in the manner in which that information was shared. Much of the information requested was found to not exist or to have been lost – given the long history of the mine, baseline data and recording were scarce.

- As a result of delays in receiving information, or the limited information available, the independent technical experts engaged by Gelganyem were forced to complete their reports with only the limited information made available to them.
- As closure execution work was progressing apace, all Gelganyem staff and experts were working retrospectively and time pressures were keenly felt.
- Technical experts who had been involved in the development of the MCP were not often available to meet, had not been a part of the project for years and were, in some cases, reluctant to share their modelling. There were clear conflicts for those technical experts about what they were able to share with Traditional Owners.
- Many TOs felt that the TWG meetings were overly reliant on Gelganyem, that information was not freely shared and that meetings were not attended in good faith. As a result, TWG meetings were halted for a period of time as TOs did not want to be seen to be engaging in a flawed process.

5 The closure work plan framework

The CWP offers a clear framework to support considered discussions, targeted consultation and informed decision-making throughout closure. It was designed to support improved engagement and achieve the aspirations of the co-design of the 2024 MCP, informed by a thorough and comprehensive technical and cultural review of the 2021 MCP.

The CWP summary (Table 4) details the process used by Gelganyem to progress through a series of key stages alongside TOs, and subsequently RT and state government engagement and consultation. The key stages of the CWP are as listed below with further detail provided in section 6:

- establishment of a closure vision
- independent identification and assessment of key risks
- independent technical review of key risks
- review of completion criteria
- review of closure strategies
- mine closure plan update
- monitoring and maintenance planning.

The CWP was progressively staged to allow sufficient time for TOs to have access to the right information at the right time, followed by TO-led discussion during consultation and incorporation of outputs by RT into the next MCP. Each of the stages sought to re-establish the fundamental concept of co-design and would enable progress to occur in a manageable and considered way with vastly improved access to information, TO consultation, strong application of FPIC, integration of TOs' advice and greater transparency for all parties (TOs, Gelganyem, RT and the state government). The CWP includes focus areas specific to the site, as shown in Figure 9 below.

 GELGANYEM GROUP 2024 CLOSURE WORK PLAN WORK SCHEDULE		
INTERNAL FOCUS AREAS (IFA)		
CLOSURE VISION		
FOCUS 1	Closure values and principles	Gelganyem/ Traditional Owners
FOCUS 2	Post-mining land use	Gelganyem/ Traditional Owners
FOCUS 3	Cultural land use mapping	Gelganyem / Traditional Owners
INDEPENDENT TECHNICAL REVIEW (ITR)		
ITR 1 – WATER QUALITY AND QUANTITY		
FOCUS 4	Acid and metalliferous drainage (AMD) risks	Independent Technical Expert
FOCUS 5	Hydrogeology and groundwater risks (Pit Lake)	Independent Technical Expert
FOCUS 6	Cover system design risks	Independent Technical Expert
FOCUS 7	Groundwater rebound review (Wesley Springs)	Independent Technical Expert
FOCUS 8	Contaminated groundwater management -DA/ LIA area	Independent Technical Expert
FOCUS 9	Site-wide water sources assessment	Independent Technical Expert
ITR 2: LANDFORM DESIGN AND STABILITY		
FOCUS 10	WRL- open pit stability	Independent Technical Expert
	AK1 TSF and ATD Stability	Independent Technical Expert
	Landform stability (geomorphological)	Independent Technical Expert
FOCUS 11	Landform stability (erosion/ slope failure)	Independent Technical Expert
ITR 3: REHABILITATION		
FOCUS 12	Rehabilitation strategy: revegetation, fauna and ecosystems, threats.	Independent Technical Expert
ITR 4: CONTAMINATION		
FOCUS 13	Contaminated sites review	Independent Technical Expert
ITR 5: INFRASTRUCTURE		
FOCUS 14	Infrastructure: retention, removal, and maintenance	Independent Technical Expert
ITR 6: CULTURAL HERITAGE		
FOCUS 15	Cultural heritage management	Independent Technical Expert

Figure 9 Closure work plan focus areas

6 Closure work plan stages

6.1 Stage 1: establishment of a closure vision

The closure vision is presented as the preliminary stage of the CWP as a critical foundation to inform closure planning, design and strategy, and an area that TOs believed had been inconsistent and lacking to date. There are three focus areas included in this stage which, combined, create a comprehensive closure vision. These

elements of work were internal focus areas due to the lack of a need for external technical expert input. The focus areas worked to:

- Define the closure values, principles and objectives which underpin the response of the TOs to the closure of Argyle diamond mine.
- Confirm the agreed post-mining land use which reflects the social, cultural, economic and environmental aspirations of the TOs.
- Undertake cultural land use mapping to highlight and illustrate areas of cultural importance and significance, as well as present a layout and considerations for historic, current and future land use by TOs.

6.2 Stage 2: independent identification and assessment of key risks

Based on the clear closure vision developed in focus area 1, Gelganyem undertook an independent preliminary assessment of risks associated with the closure strategy of the mine as set out in the 2021 MCP. For consistency and comparison, this utilised RT's risk assessment framework and judgement criteria. The risk assessment considered inherent risks prior to the implementation of closure strategies as well as residual risk associated with implementation of RT's closure strategy.

This preliminary risk assessment was critical in establishing the CWP schedule which could be easily categorised under existing TO established site-wide disciplines. These included:

- water (surface and ground water quality and flow)
- landforms (stability and design)
- rehabilitation (revegetation, fauna, soils, ecology)
- contamination (contaminated sites and ecological contamination)
- infrastructure (new, retained, removed)
- cultural heritage (management, protection).

Once this schedule was established, Gelganyem was able to assemble a panel of relevant independent technical experts, establish an accurate project budget for RT, and design and plan a complementary engagement model for TOs, RT and the state government.

6.3 Stage 3: independent technical review of key risks

With an established expert panel, a structured schedule and a clear budget, Gelganyem progressed with the facilitation of a series of independent technical review (ITR) rounds investigating the key risks established in focus area 2 and outlined in the CWP schedule.

The panel of experts negotiated access through Gelganyem to relevant data and reports via formal requests managed through the RFI register. As the experts progressed with their reviews they were connected directly with RT technical representatives and engaged with them individually and in groups as required. The purpose of these technical inter-team workshops was to validate, contextualise and confirm any findings or technical clarifications.

6.4 Stage 4: review of completion criteria

Once the technical experts had completed their review, connected with global industry colleagues and engaged intensively with TOs, they were able to finalise their reports. Each expert was asked to consider the proposed closure strategy and make an informed assessment of the related risks. They were also tasked with an evaluation of related completion criteria and asked to critique these and make recommendations for better alignment with the TO closure vision.

In order to ensure consistent assessment methodology, Gelganyem worked with the experts to develop a set of benchmarks against which they could measure each criterion, as can be seen in Figure 10 below.

Level of Development	Definition
	The closure criterion is not compliant with WA guidelines.
	The closure criterion is in nascent stages of development with WA guidelines.
	The closure criterion is compliant with WA guidelines.
	The closure criterion is compliant with WA and consistent with ICMM guidance.
	The closure criterion is compliant with WA, consistent with ICMM guidance, and aligned with existing Rio Tinto commitments to TO.

Figure 10 Completion criteria assessment

6.5 Stage 5: review of closure strategy

In addition to reviewing the completion criteria, each ITR round produced important technical recommendations and feedback around the current closure strategy, including, where applicable, key risks, consequences, industry standards and recommendations for adaptation or improvement. In several cases, this assessment of strategy triggered a broader conversation about the importance of TOs being involved in the options analysis stage of closure strategy design to ensure options are not removed from the table without TO/post-mining land use consideration.

6.6 Stage 6: mine closure plan amendments and monitoring and maintenance planning

The final stage of the CWP is where any negotiated changes or updates have been accepted and adopted into the MCP and the monitoring and maintenance planning. This is the final point of co-design where review, investigation, negotiation and analysis become reality. It is at this point that ultimate collaboration and co-design is achieved.

6.7 Stage 7: evaluation

Finally, Gelganyem has embedded an evaluation stage into its CWP in order to ensure that the effectiveness of what was agreed can be independently assessed at regular intervals.

Gelganyem has requested that formal, independent evaluations be carried out by the CWP technical experts at least every three years to ensure that what was agreed is progressing and, if it is not, adaptations that may be made.

7 Traditional Owner consultation

7.1 Information sessions

Towards the conclusion of the review, experts were invited to attend a discipline-specific workshop with the TO leadership group in which they could explain their preliminary findings, understand TO concerns, respond to questions and ensure any further clarifications could be finalised prior to submitting their report.

These workshops, referred to as information sessions, created a point of intensive consultation with TOs at the first and earliest progress point and at the completion of each ITR round. Information sessions were an integral part of the improved TO engagement model and a critical step in the CWP framework.

Each information session was designed to focus on one discipline only, enabling thorough investigation of a complete topic, encouraging the momentum of discussion/learning, and the contextualised sharing and transfer of knowledge between TOs and technical experts. When appropriate, representatives from the state government and RT were invited to attend, and at times present at, these sessions.

Information sessions were also extremely valuable in identifying further site-based niche engagement opportunities for TOs/Gelganyem (fish testing, water sampling etc.) as well as expanding investigations into further areas as feedback from TOs required.

They were also critical in ensuring the reciprocal transfer of ecological knowledge throughout the CWP engagement process. Photographs showing attendees at some of the Gelganyem information sessions are shown in Figure 11 below.



Figure 11 Information sessions

7.2 Site visits

Each of the CWP disciplines anticipated and budgeted for practical site-based activities in which TOs, Gelganyem representatives and experts could actively participate. The TWG also played a role in the identification and planning of these events based on the issues log. TOs engaged in site-based activities such as rehabilitation trials, fish testing and monitoring, water testing, drone seeding, etc.

The site visits correlated with the CWP disciplines and were timed, where possible, according to the context of that work.

Photographs of the Gelganyem team and TOs engaging in TWG discussions on site at Argyle are shown in Figure 12 below.



Figure 12 Site visits

8 State/Rio Tinto consultation

Once the TOs are consulted about the findings, the CWP encourages connection between Gelganyem, TOs, RT and the state government. This point of consultation provides an opportunity for the sharing of findings and, ideally, negotiation around how these findings will be reflected in the MCP.

The CWP allows considerable flexibility about how this consultation should be delivered or managed, however, the intention is that both RT and the state government have engagement, transparency and accountability around concerns, risks, recommendations or proposed adaptations to the MCP (and the mine closure strategy more broadly).

9 Outcomes

9.1 Outcomes with Traditional Owners

As the CWP progressed there was a significant improvement in the engagement, participation and response from TOs. Where the room had once remained silent, Gelganyem were now having to triage questions. Where technical knowledge and fluency had once been limited, we were now seeing TOs advance considerably in their learning, questions and transfer of this knowledge to broader engagement platforms. TOs were retaining knowledge from each meeting and understanding complex issues in a way that they could truly consider the impacts or opportunities being raised.

In terms of participation, attendance at meetings and site visits was high. TOs began to increasingly ask for family to come along so that the sharing of information and learning could be facilitated. Similarly, the technical experts were benefitting greatly from open dialogue, confident feedback and very active two-way learning opportunities. The CWP framework restored transparency and empowerment to this TO group.

9.2 Outcomes with the state government

Through the CWP, Gelganyem opened the door for the state government to experience a new way of consultation, engagement and collaboration. Attendance of state government representatives at information sessions increased, as did their participation. Further to this, Gelganyem transformed the way in which annual compliance site visits occurred (without any TOs/Gelganyem involvement) into an annual collaborative experience involving a site visit and an intensive workshop all together. As the CWP framework progressed, Gelganyem saw a direct change made by the state government to the regulatory MCP guidelines. These changes reflected vastly improved stakeholder engagement protocols and recommendations to be adopted by mining companies throughout Western Australia.

10 Conclusion

Gelganyem's model is more than a consultation framework – it is a strategic partnership platform that aligns cultural, technical and economic outcomes. It offers a blueprint for mine closure globally – one where First Nations voices are not only heard but lead. By investing in this approach, mining companies can reduce costs and delays while building stronger, more enduring and respectful relationships with Indigenous communities.

The model recognises the critical role that First Nations people play in managing and restoring the land on which the mining activity took place. It separates mine closure into specific disciplines and focus areas in recognition of the way that the ecosystem interrelates as a whole, rather than in relation to the mining activity which took place on that land specifically. In so doing, the model works better with best environmental practice and industry standards for ecological restoration.

This holistic approach also allows the cultural and spiritual significance of the land to be incorporated into mine closure strategies and completion criteria, as well as a better-informed view of the agreed post-mining land use and how best to transition the land away from mining.

In developing the model, it was clear to Traditional Owners (TOs) that the way that Country is valued and understood differs significantly between mining companies and First Nations groups. Whilst the miner sees the land use as now being exhausted and is planning to leave the site, Aboriginal people can see the new opportunity that mine closure brings and the return of Country to its original users.

As TOs at Argyle have shown, when given the tools, respect and opportunity, First Nations people can and should shape the legacy of their lands – long after the last truck rolls out.

Acknowledgement

As always, the Gelganyem Group acknowledges the Traditional Owners of the Barramundi Dreaming.

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