

Community participation in mine closure planning processes

Report for the Social Aspects of Mine Closure Research Consortium



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Acknowledgements

This project report is part of a broader initiative, the Social Aspects of Mine Closure Research Consortium. Established in 2019, the consortium is a multi-party, industry-university research collaboration challenging accepted industry norms and practices around mine closure and demanding new approaches placing people at the centre of closure. Industry partners in the consortium include: Anglo American, BHP, MMG, Newcrest, Newmont, OceanaGold and Rio Tinto.

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¹ QS World University Rankings and Performance Ranking of Scientific Papers for World Universities, 2018.

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Executive summary

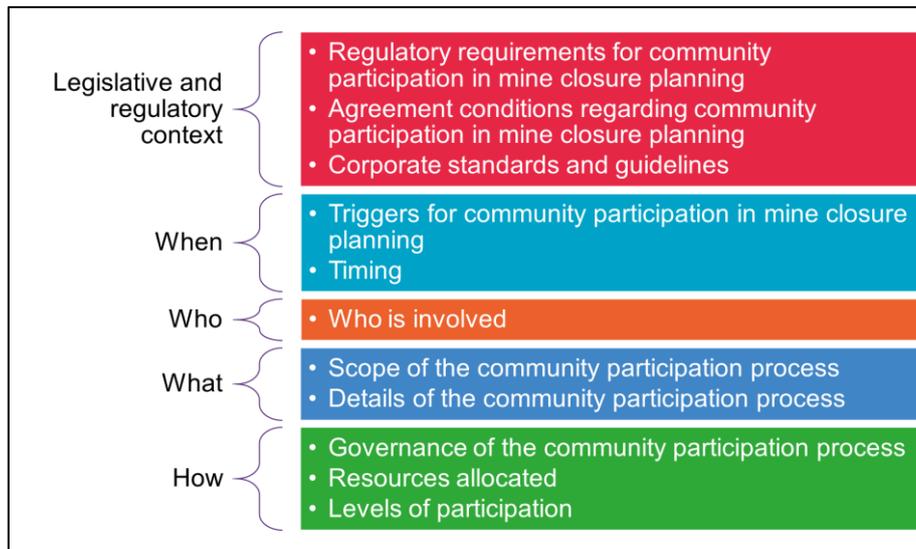
This brief report presents the results of a study on community participation in mine closure planning processes. This research has been conducted under the auspices of the CSRM Social Aspects of Mine Closure Research Consortium.²

The aim of this study is to identify, categorise and describe the **‘mechanics’** of actual community participation in the mine closure planning process across a selection of case examples, including: how these processes are scoped, who is involved, what resources are allocated, timeframes and triggers, and the structures and arrangements that are set in place.

Three case study sites were chosen based on feasibility (access to data), jurisdiction (seeking diversity of sites), and recent status (examples from last 5 years):

- Globe Mine, Reefton, New Zealand
- Diavik Mine, Canada
- Leigh Creek Coal Mine, Australia.

The study was guided by a framework of elements that outlines the range of steps, structures and processes, timeframes, resources, and actors etc. involved in mine closure. The framework provided the basis for collecting and organising data for each case study:



Summary observations from the three cases indicate that even where there are no formal requirements for community participation in the mine closure planning process mandated through legislation, corporate policy or local level agreements, companies will still need to engage with the social dimensions of closure. This may occur as a result of community or government pressure, or as specific issues and impacts arise that require management and mitigation.

The Reefton and Leigh Creek cases highlight the difficulties and risks (and potential missed opportunities) that can arise when community participation processes only occur after mining operations have ceased (or closure has already been announced). Ultimately, these cases reinforce foundational principles for managing the social aspects of mine closure (as set out in good practice

² See: <https://www.mineclosure.net/>

guidance³), including: early consideration of the social aspects of closure, underpinned by a life-of-project planning and assessment approach; integrating the planning processes for the physical and social aspects of mine closure; understanding the level or intensity of engagement and participation that is required for specific operations; and adequately resourcing the planning and engagement process.

³ See for example, ICMM: <https://www.icmm.com/en-gb/environment/mine-closure/integrated-mining-closure>

1. Introduction

This brief report presents the results of a study on community participation in mine closure planning processes. This research was conducted under the auspices of the *CSRM Social Aspects of Mine Closure Consortium*.⁴

The aim of this study is to identify, categorise and describe the **‘mechanics’** of actual community participation in the mine closure planning process across a selection of case examples, including: how these processes are scoped, who is involved, what resources are allocated, timeframes and triggers, and the structures and arrangements that are set in place.

Three case study sites were chosen:

- Globe Mine, Reefton, New Zealand
- Diavik Mine, Canada
- Leigh Creek Coal Mine, Australia.

These were selected on the basis of:

- **feasibility** (access to data and key personnel)
- **recent status** (mine closure planning process occurred within the last five years)
- **jurisdiction** (seeking a range of contexts)
- **strategic interest** (research interest for CSRM).

By focussing on the mechanics of the mine closure process, the objective of this study is to provide mine affected communities, regulators, and mining companies with examples of community participation in mine closure planning processes. The results of this study provide a resource for mining companies and stakeholders to inform their own approach to engagement and planning for the social transitions that accompany mine closure and the development and implementation of Mine Closure Plans.

The focus is on ‘actual situations’, rather than ‘ideal scenarios’ or the provision of abstract ‘guidance’.

The report contains an overview of the context for this research, the methodology, case studies for the three sites, and summary observations.

1.1 Context

Recent research highlights the importance of community participation in mine closure planning processes.⁵ When conscientiously planned and diligently executed, communities can positively support the social transitions associated with mine closure.

Parallel research on the regulation of the social aspects of mine closure demonstrates that existing guidance in Australian states contains provisions for the development of Mine Closure Plans *with community input*.⁶ In Australia, Mine Closure Plans are the basis of the regulatory system and they require community participation – it is a regulatory requirement to not only engage communities in a process, but in the development of an output (the Plan), which is to be approved by the regulator. There are similar requirements for community participation in closure decisions in other jurisdictions around the world, such as Canada, Peru, Chile, South Africa and Philippines.

⁴ See: <https://www.mineclosure.net/>

⁵ Everingham, Jo-Anne, Svobodova, K., Mackenzie, S., Witt, K. 2020. ‘Participatory processes, mine closure and social transitions’. Centre for Social Responsibility in Mining. University of Queensland: Brisbane.

⁶ Vlado Vivoda, Deanna Kemp & John Owen. 2019. Regulating the social aspects of mine closure in three Australian states. *Journal of Energy & Natural Resources Law*, 37:4, 405-424,

Despite this requirement, little publicly available information exists about the nature of these participatory processes or their effectiveness over time. This study was driven by the need to **document the specific scope, drivers, requirements, and structures – or the *mechanics* – of the planning and participation process**. In the absence of detailed and specific regulatory guidance on the social aspects of closure, communities and companies are constrained in the examples they are able to draw upon to inform these participatory processes, and the structure and content of the Mine Closure Plans that are the focus of their engagement.

1.2 Methods

The methods for this study included:

1. Development of a 'framework of elements' that captures the range of steps, structures and processes, timeframes, resources, and actors etc. involved in mine closure planning and implementation. This was informed by a scan of the existing literature on planning for closure and good practice guidance, and a research team workshop to map the elements.
2. Using the framework of elements as a guide, the project team undertook desktop data collection, and phone discussions with key informants to identify where / how the elements have been addressed in the planning process.

The purpose of the discussions was to seek information on 'what happened' and 'what was set in place', and access to information. These discussions were not intended to elicit opinions or evaluation on success/failure of the mine closure planning process or participant experiences.

Ethics approval was granted by the University of Queensland Engineering, Architecture and Information Technology, Low & Negligible Risk Sub-Committee, approval number: 2020001402.

2. Framework of elements

The study was guided by a framework of elements that outlines the range of steps, structures and processes, timeframes, resources, and actors etc. involved in mine closure planning process (Table 1). The framework provided the basis for collecting and organising data for each case study.

Table 1 Framework of elements for community participation in the mine closure planning process.

Aspect	Element	Details
Legislative and regulatory context	Regulatory requirements for community participation processes in MCP (specific jurisdiction)	<ul style="list-style-type: none"> • Policy • Legislation • Guidance notes
	Agreement (Company-Community) conditions regarding community participation in MCP	<ul style="list-style-type: none"> • End date for agreement • Clauses concerning MCP and participation
	Corporate standards and guidelines	<ul style="list-style-type: none"> • Standards and guidelines on MCP • Stakeholder engagement • SIA and risk management
When	Triggers for community participation process in mine closure	<ul style="list-style-type: none"> • Regulation • Agreements • SIA for closure process • External pressure (i.e., stakeholder request) • Corporate standards and guidelines
	Timing	<ul style="list-style-type: none"> • When did the process start (dates)? • What stage of the mine life cycle? • Frequency of participation in the process (i.e., regular or annual engagement etc.) • Duration of the process
Who	Who is involved	<ul style="list-style-type: none"> • Process / criteria for participation • Representation
What	Scope of the process	<ul style="list-style-type: none"> • How was the process scoped (decision making process for scoping)? • What was included / excluded from the process (i.e., infrastructure, tailings, towns, economic aspects, heritage etc.)
	Details of the process	<ul style="list-style-type: none"> • Did the process build on existing participation mechanisms / structures? • What kind of participation processes were utilised, e.g. <ul style="list-style-type: none"> ○ Visioning ○ Foundations and trusts ○ Agreements ○ SIA for closure ○ Participatory monitoring and evaluation ○ Committees and reference groups ○ Participatory GIS ○ Consultation ○ Surveys
How	Governance of the process	<ul style="list-style-type: none"> • Appointment of independent chair / facilitator for the process • Governance processes guidelines
	Resources for the process	<ul style="list-style-type: none"> • What resources are provided • Who provides the resources • Governance of the resources
	Levels of participation	<ul style="list-style-type: none"> • Communication, consultation, coordination, cooperation, collaboration, ceding control

3. Diavik Mine and the Mackenzie Valley Land and Water Boards

The Diavik Mine is a joint-venture diamond mine operated by Rio Tinto in the Northwest Territories of Canada. The operation comprises a series of open pit and underground mines on East Island within Lac de Gras, about 300km northeast of Yellowknife (Figure 1).



Figure 1 Diavik mine map⁷

⁷ Source: <https://www.riotinto.com/-/media/Content/Documents/Operations/Diavik/RT-Diavik-Constructing-the-legacy.pdf>

Environmental approval for the mine was granted in 1999 and production began in 2003. Since 2012, operations have been entirely underground until a fourth expansion to the mine occurred in 2018, giving the mine an expected closure date of 2025 (end of production). The mine has participation agreements with the Tłıchǝ Government, the Yellowknives Dene First Nation, the North Slave Metis Alliance, the Kitikmeot Inuit Association, and the Łutsël K'édene First Nation. A socio-economic monitoring agreement with these partners and the Government of the Northwest Territories operates in parallel.

According to Rio Tinto, Diavik's closure has been planned since the outset. For example, buildings have been designed to be removable and the pit was designed to be filled by the surrounding Lac de Gras. These, and other issues, were covered in the original project Comprehensive Study Report and have been updated regularly throughout production. As closure approaches, more detailed closure planning is occurring at Diavik focussing on site reclamation and employee, community and business transition planning.

3.1 Legislative and regulatory context for mine closure

3.1.1 Northwest Territories

In the Northwest Territories (NWT), where Diavik is situated, a co-management approach to resource management is in place. In this system, authority and responsibility for decision-making is shared between federal and territorial governments and Indigenous Government Organizations. Federal resource management acts, territorial legislation and settled land claims form the regulatory context.⁸

Commitments in the settled land claims (and interim measures in advance of the settlement of claims) led to the *Mackenzie Valley Resource Management Act (MVRMA)*. The MVRMA is implemented by public land management boards for each land claim region, and the region as a whole. As the regulatory authorities, the public boards undertake preliminary screening of development proposals, environmental impact assessment and impact reviews, and issue water licenses⁹ and land use permits.¹⁰ Closure and Reclamation Plans (CRPs) are required under water licencing conditions.¹¹ Diavik is in the Wek'èezhii region so is regulated by the Wek'èezhii Land and Water Board (WLWB).

Depending on the preliminary screenings, proposals can be assessed at board level or referred to the more substantial Environmental Assessment (EA) or Environmental Impact Review (EIR) process. The environmental impact assessment process is administered by the Mackenzie Valley Environmental Impact Review Board (MVEIRB).¹² If an EA/EIR is required, final sign off must come from the territorial Minister of Lands.

⁸ Along with other potential authorizations for specific activities https://mvlwb.com/sites/default/files/2020-09/lwb_guide_to_the_water_licensing_process_-_final_-_sep_16_20.pdf#page=58&zoom=100,92,56

⁹ The Land and Water Boards (the Boards) of the Mackenzie Valley regulate the use of water and deposit of waste through the issuance of water licences in accordance with the *Waters Act* and Waters Regulations, and the *Mackenzie Valley Resource Management Act (MVRMA)* and Mackenzie Valley Federal Areas Waters Regulations (MVFAWR).

¹⁰ The Land and Water Boards (the Boards) of the Mackenzie Valley regulate the use of land through the issuance of land use permits in accordance with the *Mackenzie Valley Resource Management Act (MVRMA)* and the Mackenzie Valley Land Use Regulations (MVLUR).

¹¹ MVLWB 2013 https://mvlwb.com/sites/default/files/wlwb_5363_guidelines_closure_reclamation_wr.pdf

¹² <https://reviewboard.ca/about>

3.1.2 Internal to the company

Rio Tinto has an established management system for Communities and Social Performance, with a policy and performance standards underpinned by procedures, and further elaborated in guidance notes.^{13, 14}

In relation to closure, a Closure Standard sets out the company's priorities for effective closure and actions required.¹⁵ In Rio Tinto's words, 'All Rio Tinto businesses must plan for closure from the earliest stages of project development. This planning is intended to minimise financial, social and environmental risks when the operation eventually closes and optimise social, economic and cultural opportunities for the host community.' The Standard also notes, 'Both our Closure and Communities standards require that our operations engage with stakeholders, including employees, traditional landowners, local communities and governments, so as to incorporate their concerns and priorities into our closure plans.'

The Rio Tinto Board's Sustainability Committee has oversight of closure planning, and Rio Tinto has recently (2019) established a cross-functional closure team (Rio Tinto Closure – RTC) to support sites with studies and asset management post-operation. Rio Tinto's studies team – which is responsible for guiding operations through the process of developing studies and plans at increasing levels of detail – is currently working on the Diavik closure pre-feasibility study. The team for Diavik's closure planning includes Communities, Social Performance and Communications practitioners. These study teams are functionally separate from the operational Communities and Social Performance teams. Ultimately, the relevant parts of the internal closure plan are used to develop the interim and final Closure and Reclamation Plan required by Diavik's water licence (see below, section 3.2.1).

3.1.3 Company-community agreements

Three types of company-community agreements are in place at Diavik.

(i) Socio-Economic Monitoring Agreement (SEMA)

The Diavik Socio-Economic Monitoring Agreement is the result of requirements in the environmental assessment for the Diavik Diamonds Project, to monitor the impact of the mine in order to maximise benefits to the most impacted communities. The signatories to the SEMA were:

- Diavik Diamond Mines Inc.
- Government of the Northwest Territories (as represented by the Department of Resources, Wildlife and Economic Development)
- Tłı̨chǫ government (formerly the Dogrib Treaty 11 Council)
- Łutsël K'é Dene Band
- Yellowknives Dene First Nation
- North Slave Metis Alliance
- Kitikmeot Inuit Association.

The SEMA sets out monitoring and reporting requirements for Diavik and the Government of the Northwest Territories. The SEMA was amended in 2015 to increase direct monitoring and reporting to

¹³ Rio Tinto 2014 https://www.riotinto.com/sustainability/policies#policy-results_sxatags=english,Communities&policy-results_e=0

¹⁴ The standard links to other relevant policies, standards, procedures or guidance notes including: Cultural heritage management – Australian businesses Group procedure; Rio Tinto management system standard and Group procedures; Communities and Social Performance guidance notes; Rio Tinto Human rights policy; Rio Tinto Risk standard; Rio Tinto Business integrity standard; Rio Tinto Exploration procedure – Communities and Social Performance; Communities and Social Performance Roadmap for Rio Tinto Projects; Projects Environmental and Social Impact Assessment guidance note.

¹⁵ Rio Tinto 2014 https://www.riotinto.com/sustainability/policies#&policy-results_e=0&policy-results_sxatags=english%2CClosure

impacted communities and generally make it more effective, building on a decade of mine operations and community relations.

(ii) Participation Agreements

A second requirement of the environmental assessment was to negotiate participation agreements with the five Indigenous groups that were party to the SEMA. These individual participation agreements cover issues including access to employment, scholarships and training, and local business benefits (Figure 2).

Economic Contribution	Local Procurement	Community Investment
C\$8.5B	C\$370.6M	C\$383.5K

Figure 2 Economic contribution figure for period 2000 - 2019¹⁶ (Local procurement and community investment for 2019 only.)

(iii) Diavik Diamond Mines Environmental Agreement (2000)

The Environmental Agreement is with the five Indigenous groups, and the territorial government of the Northwest Territories and the federal government of Canada. The agreement provides funding for independent environmental oversight of Diavik, and government regulators. This agreement also established the Inuit Qaujimajatuqangit/Traditional Ecological Knowledge Panel (IQ/TEK Panel) which meets periodically and provides advice to Diavik.

3.2 When

Engagement on closure and reclamation plans (with parties potentially affected by the project) is required in the regulatory process, the company's policies and the agreements with impacted communities. Each of these governance mechanisms has slightly different procedures (and in some cases, none); however, the intent is that engagement on closure should start early and become more specific and detailed as closure approaches. A combination of regular reporting and as-needed reviews and amendments characterise all processes. All processes have procedures for escalation of areas of concern.

3.2.1 Triggers for community participation in mine closure

Community participation is a requirement of water licences, land use permits, and closure and reclamation plans in the Mackenzie Valley as per the Boards' Engagement and Consultation Policy.¹⁷ According to this policy, engagement is to ensure that affected parties are able to:

- Develop an understanding of a proposed project or component of a project.
- Provide feedback during the engagement process on issues of concern with regards to a project.
- Work towards building relationships with proponents that are operating in an area.

Engagement plans and records must be submitted to the appropriate Board, and should include engagement activities/plans commensurate with the scale of impact and the level of detail required. Engagement plans and records are available for public review on Board websites. The Boards may require additional or fewer engagement activities at the request of the company or affected party.

¹⁶ Rio Tinto 2020 <https://www.riotinto.com/operations/canada/diavik/diavik-communities>

¹⁷ MVLWB 2019 https://wlvb.ca/sites/default/files/mvlwb_engagement_and_consultation_policy_-_nov_25_19.pdf

In cases where operational plans are amended (including renewals, amendments, assignments, extensions, storage authorizations, management plans, and/or changes to surveillance network programs) and could be cause for public concern, additional engagement may be required.

Specific Closure and Reclamation Plans (CRPs) are required to demonstrate that they comply with all permits and licences governing the operation. For example, CRPs are required under Type A water licences, with the initial/interim CRP due within 12 months of licencing. Per the water licence, a final CRP is due 2 years prior to the end of operations and a progress report annually. The MCLWB/AANDC guidelines¹⁸ include provision for engagement on the CRPs throughout their development, and for publication of an annual CRP progress report including details of consultation outcomes, gaps, concerns and any changes to the plan. Proposed changes (including significant studies) must be approved by the Board.

As with initial application, a Board has the option to refer an amendment application to the EA/EIS process if they deem the change significant. In this case, additional public hearings and technical advice may be sought.

3.2.2 Timing

As noted above, consultation about closure planning occurs throughout the project lifecycle as decisions need to be made about values and options. Closure planning is an iterative process within Rio Tinto, with updates put in place as design options and revisions are evaluated. External reporting on the CRP is required periodically, and substantial revisions are meant to be submitted for review and approval to the appropriate board.

Early in the discussions about the operation (1995-1997), community members conveyed their perceptions, concerns and values to the company. Workshops and discussions resulted in the following key design principles being incorporated into the original project description:

- *Consolidate the mine site and locate all components on the East Island*
- *Locate the PKC within the central depression on the East Island and not in Lac de Gras between the two islands*
- *Manage water discharged to Lac de Gras*
- *Consider aspects of closure in the design of the mine and associated facilities.*¹⁹

Engagement on operational issues is reported to have continued throughout mine operation.

Further, specific engagement on closure commenced again in 2009 to support the next iteration of the closure and reclamation plan. A combination of workshops, community meetings, and long-term work with an IQ/TEK Panel have generated further findings and recommendations for Diavik to incorporate in the plans for closure and post-closure monitoring. Diavik anticipates increasing engagement as closure draws nearer. A Final CRP is scheduled for 2022, and final engagement is anticipated to be about 10 years later to confirm final closure performance.²⁰

¹⁸ MVLWB 2013 https://mvlwb.com/sites/default/files/wlwb_5363_guidelines_closure_reclamation_wr.pdf

¹⁹ DDMI 2019 http://registry.mvlwb.ca/Documents/W2015L2-0001/Diavik%20-%20Closure%20and%20Reclamation%20Plan%20-%20Version%204.1%20-%20Dec%2017_19.pdf

²⁰ P103, DDMI 2019 http://registry.mvlwb.ca/Documents/W2015L2-0001/Diavik%20-%20Closure%20and%20Reclamation%20Plan%20-%20Version%204.1%20-%20Dec%2017_19.pdf

3.3 Who

The co-management structure allows for a wide range of participants to be consulted as part of the closure planning process. Indeed, the Land and Water Boards rely on the knowledge of other parties brought to the consultations in order to make their decisions. Applicants must identify and contact any parties potentially affected by the project, such as:

- Indigenous governments/organizations (not restricted to those parties to the Environmental Agreement and SEMA)
- Individuals occupying the land for traditional purposes
- Private landowners;
- Lease holders (e.g., lodges, cabins, other licensees and permittees)
- Communities.

Federal and territory government departments, independent monitoring agencies, technical experts, interested organisations and the general public are also involved in the process.

The distribution list for the CRP includes approximately 100 individuals from approximately 55 organisations and/or agencies including the Indigenous, territorial and federal governments, the review board system, Indigenous communities and other regional organisations.²¹ The CRP is published online for comment.

3.3.1 Did the process cater for Indigenous rights and interests?

Diavik is both within Indigenous self-governing territory and regulated by a framework that emerged out of the land claims process in the Mackenzie Valley. As a result, mine planning is meant to also draw on Traditional Knowledge. Indigenous governments are the key parties to agreements with the mine and key stakeholders in the Land and Water Boards.

3.4 What

The co-management process allows for collaborative determination of criteria for the CRPs, water licences and land permits (Figure 3). This is an iterative process to help ensure that commitments are met in the short- and long-term period over the life of a project. The planning process encourages final closure goals to be determined at the start of the project, and then broken down into specific principles, objectives and activities that can be monitored and adaptively managed along the way.

²¹ MVLRB 2020 http://216.126.96.250/LWB_IMS/WebAccess/IMS_P1427_PDF/WLWB/12964_nBVrcKuS.pdf

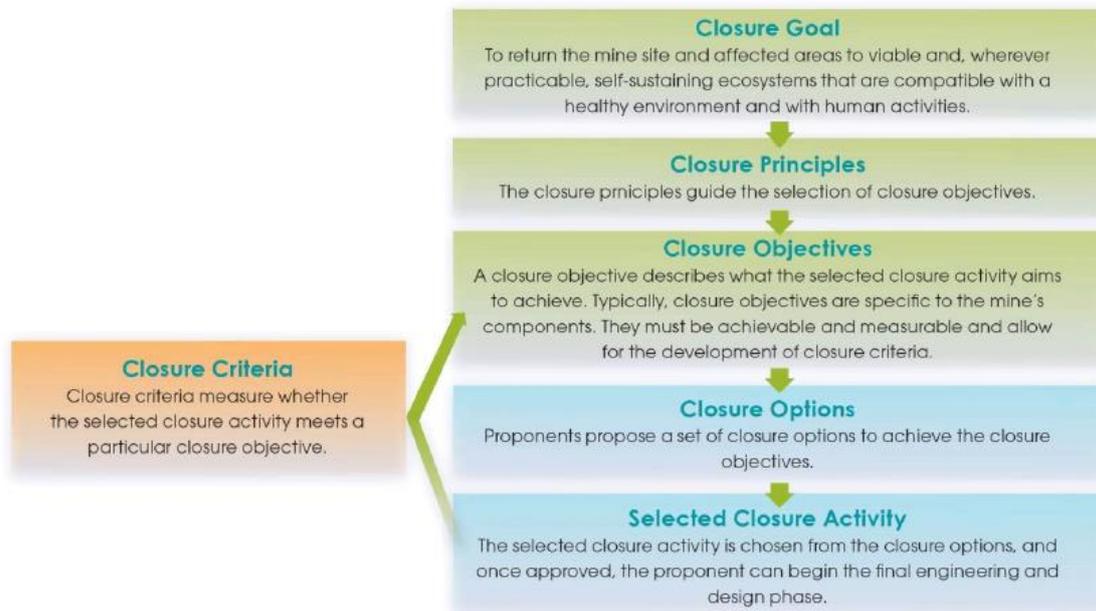


Figure 3 Objectives-based approach to closure and reclamation planning²²

The co-management process also encourages parties to engage in further studies on areas of concern, and to develop collaborative working groups to progress the tasks. The MVRMA and Boards require the consideration of Traditional Knowledge in all of their processes.²³ It recognises that adhering to Indigenous government policies and guidelines for engagement and/or Traditional Knowledge is a key step in the process of reconciliation. When assessing CRPs against the objective of 'sustainable closure', the Boards use the definition:

*Sustainable closure refers to the concept that successful closure and reclamation not only involves appropriate levels of engineering, Traditional Knowledge and science but that stakeholders are comfortable with the end result and play an active role in reclamation activities and post-closure monitoring.*²⁴

The closure goals identified in the 1998 Comprehensive Study Report as Community & DDMI Goals were:

- *Land and water that is physically and chemically stable and safe for people, wildlife and aquatic life*
- *Land and water that allows for traditional use*
- *Final landscape guided by Traditional Knowledge*
- *Final landscape guided by pre-development conditions*
- *Final landscape that is neutral to wildlife – being neither a significant attractant nor deterrent relative to pre-development conditions*
- *Maximize northern business opportunities during operations and closure*

²² MVRMA 2018

<https://slwb.com/sites/default/files/images/MVRMA%202018%20Workshop%20Summary%20%20Final%20April%2012%202018.pdf>

²³ "MVEIRB 2005 Guidelines for incorporating traditional knowledge in environmental impact assessment, July 2005

²⁴ MVLWB 2013 https://mvlwb.com/sites/default/files/wlwb_5363_guidelines_closure_reclamation_wr.pdf

- *Develop northern capacities during operations and closure for the benefit of the north, post-closure*
- *Final site conditions that do not require a continuous presence of mine staff.*

Subsequent meetings, workshops and studies overseen by the Traditional Knowledge Panel have refined and elaborated these objectives.²⁵ Further iterations of the CRP will involve assessing the benefits and risks of incorporating these concepts. The options proposed will then be subject to corporate, community, government and regulatory review and approval.

3.5 How

It is up to the company and affected parties to determine how engagement on closure should take place, with the approval of the Board. Some examples of successful communication and engagement on CRPs were supplied by the WLWB, including:

- *For mine sites, a closure and reclamation stakeholder working group could meet periodically to share information and provide comments and guidance to the proponent.*
- *The development of a 3-D model to scale of the pre-development landscape, the mine during operations, and the final closure landscape.*
- *Hosting regular site visits throughout the project to discuss closure planning and monitor remediation progress.*
- *The establishment of community-based programs for activities such as aquatic and terrestrial ecosystem health monitoring, stream flow measurements/monitoring, reclamation progress, re-vegetation, etc.*
- *Reporting to [Indigenous] governments, communities, and other stakeholders to discuss how their input was considered and to obtain feedback on the CRP development process.²⁶*

In the case of an EA/EIS, there are also procedures for public comment including publication of submissions, public hearings and other options for intervention.

3.5.1 Levels of participation

The purpose of the MVRMA is to establish a system that enables people to participate in the decisions that affect them. They describe their role as one of co-management, integration and coordination.

Co-management:

Under co-management, authority and responsibility for decision-making is shared between federal and territorial governments and Indigenous Government Organizations. Land claim agreements led to the creation of the Review Board and a network of other boards to implement the co-management system. These independent administrative tribunals must run fair, transparent, and inclusive processes, and are responsible for making many resource management decisions. The jurisdiction of the co-management boards applies to all types of land ownership (Crown, Indigenous, and other private ownership).²⁷

²⁵ DDMI 2019 Appendix IX Traditional Knowledge Panel Reports And Community Engagement Summaries, [http://registry.mvlwb.ca/Documents/W2015L2-0001/Diavik%20-%20Closure%20and%20Reclamation%20Plan%20-%20Version%204.1%20-%20Appendix%20VII\(5\)-IX%20-%20Dec%2017_19.pdf](http://registry.mvlwb.ca/Documents/W2015L2-0001/Diavik%20-%20Closure%20and%20Reclamation%20Plan%20-%20Version%204.1%20-%20Appendix%20VII(5)-IX%20-%20Dec%2017_19.pdf)

²⁶ MVLWB 2013 https://mvlwb.com/sites/default/files/wlwb_5363_guidelines_closure_reclamation_wr.pdf

²⁷ MVEIB 2020 http://reviewboard.ca/sites/default/files/news/files/review_board_perspectives_paper_and_cover_letter_-_april_2020_1.pdf

Integration and coordination:

Land claim agreements and the MVRMA outline an integrated and coordinated resource management system including surface and subsurface land management, land use planning, environmental impact assessment, land and water regulation, and wildlife and renewable resource management (see Figure 3). The different parts of the system are meant to work together to manage land and resources in a holistic way that reflects the interconnectedness of the environment and the different ways people interact with it.²⁸

The WLWB have consistently evaluated Diavik's plans and logs of community consultation and have considered how well Diavik has integrated community values, priorities and interests in the subsequent resource management plans. A particular complaint has been the 'over reliance' on the Traditional Knowledge Panel, and that it cannot be exclusively relied on for engagement. Diavik has acknowledged this in their recent work and have elaborated plans for increasing the breadth of engagement efforts.²⁹

3.6 Current status

Diavik's expected date for closure is 2025. They are currently in the process of developing their final Closure and Reclamation Plan, which is due in 2022. To support this development they are undertaking consultation, virtual panel discussions and workshops with the relevant stakeholders, particularly the Indigenous governments who are signatories to the agreements, the Traditional Knowledge Panel, and the Land and Water Boards.

One significant amendment to the Water Licence and Closure and Reclamation Plan has recently been reviewed by the Mackenzie Valley Environmental Impact Review Board (after referral from the Wek'èezhii Land and Water Board). This amendment changes the mine's plans for the storage of some processed kimberlite from land-based storage to be backfilled into one of the pits before flooding. The MVEIRB reinforced its commitment to collaborative management and Indigenous values in the measures it requires Diavik to implement.

Specifically, the Review Board requires measures to:

- *Ensure that water in the pit lake(s) meets new water quality objectives*
- *Collaboratively develop criteria for judging if water will be good for cultural use*
- *Update water quality modelling*
- *Establish an independent review panel to improve updated modelling*
- *Conduct additional and more effective engagement with potentially affected Indigenous communities*
- *Develop community-specific indicators of well-being and adaptively manage project specific and cumulative impacts on cultural use of Lac de Gras.³⁰*

²⁸ MVEIB 2020 http://reviewboard.ca/sites/default/files/news/files/review_board_perspectives_paper_and_cover_letter_-_april_2020_1.pdf

²⁹ MVERB 2020 http://reviewboard.ca/upload/project_document/EA1819-01%20Diavik%20Report%20of%20Environmental%20Assessment_FINAL%20%281%29.pdf

³⁰ MVERB 2020 http://reviewboard.ca/upload/project_document/EA1819-01%20Diavik%20Report%20of%20Environmental%20Assessment_FINAL%20%281%29.pdf

4. Globe Mine, Reefton, New Zealand

Background and History

Gold was discovered on the West Coast of New Zealand's South Island in the 1860s. The town of Reefton was established in 1870. The key economic drivers for the region are tourism, mining, and agriculture. The 2018 census gives the town's population as 927, down from 1,056 in 2013.



The Globe Progress Mine was one of the first gold bearing mines in the Reefton area, operating from 1876 to 1920 (Figure 5,6,7).³¹ Left abandoned, Beech forest regrowth reclaimed the site until OceanaGold acquired the title in 1991. Resource consents initially granted in 1994 lapsed, and the company reapplied in 2001³², proceeding with construction of the Globe Progress Mine in 2004. In line with environmental legislation, the mine plan included a closure and rehabilitation plan from the outset, particularly as the mine is located in a Department of Conservation forest park.

Gold production commenced at the Globe Progress Mine in 2007, with an original mine life plan to 2011. This plan was revised as the date approached. In 2012, the mine life was extended to 2013 and then to 2017.

Figure 4: NZ Territorial Authorities. Source: Ulanwp, CC BY-SA 4.0, <https://commons.wikimedia.org>



Figure 5: Circa 1910, view of the Globe Hill Mine, near Reefton, Inangahua County. Source: Alexander Turnbull Library, Wellington, New Zealand.



Figure 6: Reefton by night. Source: Creative Commons, Ulrich Lange, Bochum, Germany.

³¹ Sustainable Solutions Global. 2019. Community and Social Research Report.

³² Brown, Copeland & Co Ltd. 2012. Oceana Gold (New Zealand) Ltd's Reefton gold project: Assessment of economic effects of Reefton phase 2 project – extension of mine life to September 2013.

As part of the extension approvals process, OceanaGold conducted environmental assessments as well as socio-economic baseline assessments, and consulted with the Department of Conservation, Historic Places Trust and Ngāti Waewae, the local Iwi.³³ In 2013, OceanaGold signed a Memorandum of Understanding with Te Rūnanga (the representative body) of the Ngāti Waewae, as required under the Resource Management Act of 1991, to manage communication and impacts of operations.

In June 2013, the company announced early closure, citing a dramatic drop in global gold prices. Mining ceased in 2015, and the company continued to process stock-piled ore until February 2016. After ten months of care and maintenance, the company moved to full closure in December 2016, transitioning to the 'Reefton Restoration Project' in line with the regularly updated closure plans. The restoration work aims to re-establish ecosystems with indigenous species. Post restoration areas will consist primarily of forested areas populated by Beech and Manuka species, complemented by native conifers including Rimu and Miro trees.

The Reefton Restoration Project includes a closure and rehabilitation program with works including the removal of process plant and infrastructure, water treatment and ground preparation, waste rock reshaping and landscaping, backfilling operations, spreading of topsoil and planting trees, and pest and weed control (Figure 8). Once complete, management of the site will be returned to the Department of Conservation, as required by the Resource Consent and access agreement.³⁴



Figure 7 Reefton Pit Banner, OceanaGold.

4.1 Legislative and regulatory context for mine closure

4.1.1 National

In New Zealand, mining activities fall within the remit of the following laws, regulations and guidelines:

- Crown Minerals Act, 1991³⁵
- Resource Management Act, 1991 (Ministry for Environment)³⁶
- Minerals Programme for Minerals (regulation), 2013³⁷.

³³ OceanaGold. 2012. OceanaGold (New Zealand) Limited, Reefton Gold Operations – Phase 2 – 2012, Assessment of Environmental Effects, 28 February 2012.

³⁴ OceanaGold. 2019. Reefton Restoration Project Fact Sheet.

³⁵ <http://www.legislation.govt.nz/act/public/1991/0070/latest/DLM242536.html>

³⁶ <http://www.legislation.govt.nz/act/public/1991/0069/latest/DLM230265.html>

³⁷ <https://www.nzpam.govt.nz/assets/Uploads/our-industry/rules-regulations/minerals-programme-2013.pdf>

Guidance on the resource Management Act is provided in a series of booklets, available on the Ministry of Environment website under the heading 'An Everyday Guide to the RMA'.³⁸ The booklet titled 'Consultation for Resource Consent Applicants', provides guidance on expectations regarding consultation, but only with regard to the consent process.

There is no specific act or regulation focusing solely on mine closure, and no clear pathway to relinquishment. The resource consent process is usually managed by local councils ('consent authorities'). Often, the local council conditions of resource consent for mining activities require the preparation and annual review of a Rehabilitation and Closure Plan. Some resource consent applications are decided by a board of inquiry or the Environment Court instead of the local council.³⁹ There is no general guidance about public consultation or participation in the closure planning process. In New Zealand, the foundations and principles of public consultation are stipulated in the 1991 Resource Management Act. The Treaty of Waitangi (Te Tiriti o Waitangi), reflects the right to self-determination for tangata whenua (Indigenous peoples), and recognises Indigenous rights and property rights. It recognises Māori property interests in lands and other taonga (property or possessions), although not specifically minerals. The mining law, regulations and rules provide some recognition of Māori interests in minerals.⁴⁰

The Minerals Programme specifies the matters on which iwi and hapū ('clan') must be consulted, sets out principles and procedures for consulting with iwi and hapū, and specifies the matters of which they must be notified. Specifically, decision makers must recognise and provide for 'the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, wahi tapu, and other taonga'⁴¹.

These provisions for public consultation are focused on building and operating a mine, and do not make specific mention of the mine closure context.

4.1.2 Internal to the company

OceanaGold's current corporate policies and standards, including stakeholder engagement and participation as outlined in their External Affairs & Social Performance Manual 2019, apply to all aspects of business activities, at all stages of the mine lifecycle including closure planning, closure and post closure.

At the time of closure of the Globe Progress Mine however, the company did not have a specific procedure or process to develop a community engagement plan around closure.

4.1.3 Company-community agreements

In 2013, as part of the planned mine-life extension, the company signed a Memorandum of Understanding (MOU) with the local Iwi, the Ngāti Waewae. This MOU is aligned with the aforementioned legislation; however, it focuses on the operation of the mine and does not include any provisions for mine closure.

The company has worked closely with the Department of Conservation in the planning and execution of rehabilitation work. The closure and rehabilitation plan has been regularly updated and execution has been closely monitored because the site is in a protected area. The document does not make specific provision for public participation, although it does mention community interest in possible recreational uses for the site post closure, communicated through consultations with the Inangahua

³⁸ <https://www.mfe.govt.nz/rma/processes-and-how-get-involved/everyday-guide-rma>

³⁹ Kung, A., Everingham, J., and Vivoda, V. 2020. 'Social aspects of mine closure: governance & regulation'. Centre for Social Responsibility in Mining. The University of Queensland: Brisbane

⁴⁰ Ibid.

⁴¹ Ibid.

Community Board. The closure and rehabilitation plan document stipulates that any decisions will be made in consultation with the community.⁴²

4.2 When

4.2.1 Triggers for community participation in mine closure

Without any requirements in national legislation or regulatory frameworks for community participation in mine closure processes, and no relevant internal policy or procedure, there was no specific policy or legislative trigger to instigate engagement and participation in mine closure planning.

Community pressure on the company to improve its engagement served as the primary trigger. The community were engaged, and participated in the planning process, after the company had announced the impending closure and started decommissioning the operation.

4.2.2 Timing

In 2015, as closure approached, the company conducted internal processes to guide employees, including counselling and job-seeking support. They also held meetings with town business owners to inform them of plans.⁴³ In 2016, the company hired KPMG to conduct a community perceptions study, which identified key community concerns and visions for the future. It also offered recommendations, including development of an on-going consultative forum to bring together OceanaGold, the community and other key stakeholders to discuss concerns and expectations for the future of the site.⁴⁴ The study itself represented a form of engagement with the community, providing an opportunity for the company to hear their concerns and ideas for the future. In the same year, the company issued a general call for community ideas around post-closure mine-site use. Submissions closed in early 2017.

At this time, the company was focusing on environmental restoration work and did not develop a community engagement plan or follow up on the community submissions. By 2018, tension had increased considerably within the community. Without feedback or clear information from the company, rumours abounded.⁴⁵ Late 2018, the company commissioned Sustainable Solutions Global (SSG), an environmental and social consulting firm, to undertake a Community and Social Research project for the Globe Mine, Reefton.

The purpose of this project was to provide a Social Research Database, undertake community and stakeholder engagement around two areas and develop a Community Engagement Plan to deliver potential Community Benefit projects and to manage engagement with the community and other stakeholders throughout the mine closure process.⁴⁶ Their work also followed up on the 2016 KPMG study and the community submissions.

The work of SSG precipitated a process for increased community participation in the mine closure process. SSG consultants engaged with a range of stakeholders, opened communication between stakeholders and the company, and facilitated discussions around how to continue engagement moving forward.

In July 2019, an MOU was signed between OceanaGold and Buller District Council, for a three-year period (July 2019-June 2022). The agreed objectives were to:

1. Establish an Economic Diversification Governance Board

⁴² OceanaGold. 2019. Globe Progress Mine, Reefton Gold Operations, Restoration Plan, February 2019.

⁴³ <https://www.stuff.co.nz/business/industries/70382411/reefton-braces-for-loss-of-local-goldmine>

⁴⁴ Sustainable Solutions Global. 2019. Community and Social Research Report.

⁴⁵ Personal communication, OceanaGold.

⁴⁶ Sustainable Solutions Global. 2019. Community and Social Research Report.

2. Create a role for a Socio-economic Development Officer within Buller District Council
3. Provide funding contributions to agreed economic diversification projects
4. Fund the reinvigoration of the i-site interpretation centre.

The overarching aim of the collaboration under the MOU is to promote diversification within the local economy. In 2019, the position of Socio-economic Development Officer (SEDO) was advertised and filled and in 2020, the Economic Diversification Governance Board was established. In collaboration with the SEDO, the Board's objective is to work with potential partners to secure contributions and grants that will support sustainable economic diversification activities.

Tight New Zealand Covid-19 restrictions from March to June 2020 hampered direct engagement, but in June 2020, the Economic Diversification Governance Board announced the first 2020/21 tranche of funding on Buller District Council website, calling for applications for diversification projects.

The company has also sought to engage more directly with the community since 2019, with regular communication through the local paper, *The Clarion*, and a Facebook page, open days, a car rally and tree planting with local primary school children.

4.3 Who

The company has engaged actively with the Department of Conservation in the context of closure planning and restoration. Under the 2013 MOU, and in line with legislative requirements, they have also engaged with the Ngāti Waewae as per consent requirements under the mining Resource Management Act.

With the support of SSG, community engagement widened to include representatives of all local stakeholders including local government (West Coast Regional Council and the Buller District Council), community members (Inangahua Community Board), and local business owners.

The Economic Diversification Governance Board and the SEDO, provide further conduits for the community to engage with the company. Individual community members can apply for support in their economic diversification projects.

4.3.1 Did the process cater for Indigenous rights and interests?

The Treaty of Waitangi is the founding document of New Zealand. It is an agreement entered into by representatives of the Crown and of Māori iwi (tribes) and hapū (sub-tribes). It is named after the place in the Bay of Islands where the Treaty was first signed, on 6 February 1840.⁴⁷

As described in Section 4.1.1, while the treaty reflects the right to self-determination, Indigenous rights and property rights and interests, it does not specifically mention minerals. However, some recognition of Māori interests in minerals is provided through mining law, regulations and rules.

The Ngāi Tahu is the principal Māori iwi of the southern region of New Zealand, and its Takiwā or territory is the largest in New Zealand. It is comprised of 18 rūnanga, corresponding to traditional settlements, including the Ngāti Waewae, whose territory comprises the area in which OceanaGold operates. The company consulted with the Ngāti Waewae in the context of mine extension planning in 2013. An MOU was signed between the two parties, with the objective of 'establishing an effective and efficient working relationship between the Rūnanga and OceanaGold in relation to each of their interests in the Takiwā'.⁴⁸

The Ngāti Waewae were also consulted by SSG and are represented on the Economic Diversification Governance Board.

⁴⁷ <https://nzhistory.govt.nz/politics/treaty/the-treaty-in-brief>

⁴⁸ Memorandum of Understanding, Te Rūnanga o Ngāti Waewae and OceanaGold (New Zealand) Limited, p.2

4.4 What

Community participation in mine closure planning and decision-making has occurred post-closure.

It has consisted in the gradual building of company engagement with the community around their views and visions for a post-mining future through the support of consultants. Initially KPMG, in 2016 and then with SSG, in 2018-2019.

Through the work with SSG, this participation evolved into an MOU between the company and the community with four objectives aimed at supporting local economic diversification. The first two are the creation of a participatory governance mechanism and provision of practical day-to-day support through the SEDO. Third, seed funding is to be provided over three years to support local economic diversification initiatives. The final objective, to fund reinvigoration of the i-site interpretation centre, is intended to support the local tourism industry and help to preserve the mining heritage of the area which dates back over 150 years.

4.5 How

4.5.1 Governance

The participation of the community in working towards post-mining economic diversification is governed by means of a representative board. The Economic Diversification Governance Board is made up of:

- The SEDO
- A representative of OceanaGold Ltd
- The Chair of the Inangahua Community Board
- A representative of the Department of Conservation
- A representative of the Ngāti Waewae
- Two local business representatives
- Two local community representatives.

The Board is appointed for the three years of the MOU.

The position of SEDO on the Buller District Council provides a point of contact between the community and the company. The SEDO can facilitate interaction with local businesses. The SEDO is based in town, is accessible, and in direct contact with the company.

The company continues to communicate through social media⁴⁹ and the local press.

4.5.2 Resources

The Economic Diversification Governance Board relies on voluntary participation and meets monthly. OceanaGold has provided funding for the SEDO position on council part-time for three years. This position is intended to support local economic development initiatives by providing support to community members in seeking and accessing external funding and grant opportunities, as well as submitting proposals to the board for funding under the MOU.

Further resources have been assigned to upgrading the i-site interpretation centre. The company continues to provide ad-hoc support for local events as possible.

⁴⁹ Facebook page: <https://www.facebook.com/OceanaGoldReefton>

4.5.3 Levels of participation

Initially, community participation consisted of ad-hoc information provided through the council or community board and the local press. There was limited consultation commissioned through external consultants. With the work of SSG, the company moved towards enabling a more coordinated approach. OceanaGold and the Buller District Council collaborated to define the scope for a project that would involve a wider range of stakeholders. The community will play a role in managing the resulting project as defined by the MOU, through a participatory board. The company still participates in the Board and provides funding.

4.6 Current status

The activities agreed between OceanaGold and Buller District Council as defined in the MOU, signed on 18 June 2019, are underway and will continue until July 2022. The SEDO is working to support local economic diversification initiatives and facilitate communication between the company and the community. The Economic Diversification Governance Board is also in place and meets periodically to oversee implementation of the agreed activities. Various community outreach activities are also organised, including a recent open day (October 2020) where the public was able to visit the site and learn about the restoration work.

5. Leigh Creek coal mine, South Australia

The historic Leigh Creek coal fields, in remote South Australia, were operated by the Electricity Trust of South Australia (ETSA) since the late 1940s (established for power security post World War II). The four mines were transferred to the private company, Flinders Power Partnership (FPP) in 2000. The mines continued to operate under the Perpetual Leases held by FPP until their closure in 2015. The coal was used exclusively to supply the company's two Port Augusta Power Stations, which was the major energy supplier to South Australia.

The mine's closure is linked to the decision by Alinta Energy (who formed FPP) to close the Port Augusta power stations, which were the only customers of the coal from the mine. In late 2014, the Flinders Power management team were developing business improvement plans to ensure continued electricity generation in the state. Six months later, the closure of the Leigh Creek mine was announced. Within six months of the announcement, by November 2015, all coal mining had ceased. As both FPP and the SA government noted in a joint conference paper about the closure, 'a swift decision to close, followed by short mining operations shutdown period, presented significant technical and regulatory challenges for both the mine operator and for Regulators'.⁵⁰

The historic mining leases included exemptions from multiple sections of the SA Mining Act 1971, which has had implications for closure planning in relation to the mining town of Leigh Creek (560 km north of Adelaide) (Figure 9). The town was built by the State Government in 1982 to support the state-owned electricity company. Since then, the town has been leased to Alinta Energy, remaining a 'closed town' until the closure of the mine, when consideration about 'normalising' the town began.

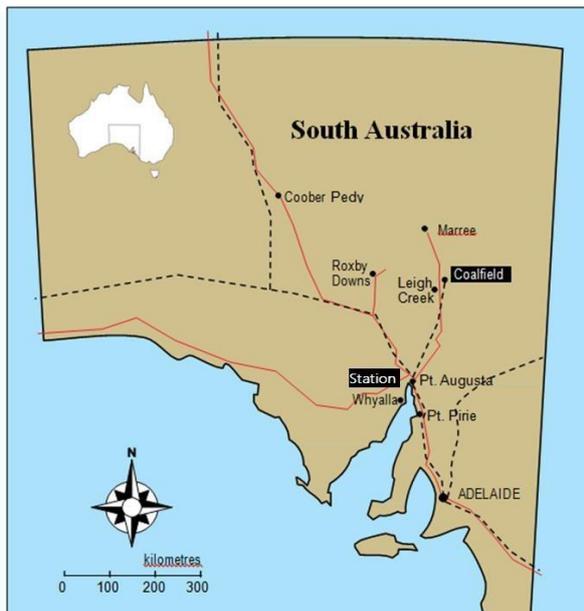


Figure 8 Leigh Creek, SA. Source: FPP Environmental Closure and Post Closure Plan, Power Stations. October 2016.

Though the focus of this case study is on closure of the mine and impacts on Leigh Creek town, consideration will also turn to communities affected by the closure of the power stations, and, if there was any inter-related closure planning for these groups – as all of these assets were under the control of the one company (FPP). Likewise, the company engaged in two distinctive processes, not only in terms of regulation – but notably community engagement – for the mine closure and the closure of the power station infrastructure.

According to the report *Social aspects and opportunities of the closure of Leigh creek mine and Port Augusta power station* (2016), there were approximately 440 Alinta Energy employees affected by the mine and power station closure, as well as many businesses, regional communities and service providers.

⁵⁰ See Williams, B. and A. Querzoli. 2018. "Risk Management for Minesite Closure planning and Execution – Start Now! Lessons from the closure of the Leigh Creek Coalfield, South Australia." Life of Mine Conference.

5.1 Legislative and regulatory context for mine closure

5.1.1 Historical mining leases (privatisation of the energy network and the associated coalmines)

The perpetual lease under which the Leigh Creek coal mines have operated falls outside of the SA Mining Act 1971. The coalfield is situated entirely within the area of four perpetual Crown Leases granted under the Electricity Trust of South Australia Act, 1946 (SA), being legislation of restricted application specifically authorising (ceased) coal mining and ancillary operations at Leigh Creek.⁵¹

The Mine Closure Plan that FPP was required to develop only focused on rehabilitation and relinquishment criteria. The company assumed that the preceding Approved Development Program (ADP), agreed 17 years prior, would form the basis for closure commitments and could be modified to meet current expectations.⁵² However, the rehabilitation plan had to be significantly modified and updated, and the SA government had to lead discussions with all stakeholders on the social aspects the mine closure. As will be described below, some aspects of the environmental rehabilitation were modified by FPP after these community stakeholder discussions.

Current South Australian Regulatory Guidelines include greater regional, social, economic and environmental benefits in the approval process for a proposal for mine site activity.⁵³

The need for the SA government to step in and manage the socio-economic aspects of mine closure is not exceptional to Leigh Creek.⁵⁴ There are many other long-life mines that were developed prior to contemporary mining regulations, as new regulations are not necessarily retrospective for pre-existing operations, though this depends on each state.

While this mine closure is in some ways unusual, as the company only had to focus on environmental rehabilitation, it nonetheless provides insight into community expectations in relation to mine closure planning – that the state subsequently stepped in to manage. These community expectations were very clear during the Port Augusta power station closures and the raft of community engagement measures that FPP undertook with this set of stakeholders and community groups, under different legislation.

⁵¹ The Electricity Trust of South Australia (ETSA) was the South Australian Government-owned monopoly vertically integrated electricity provider from 1946 until its privatisation in 1999. See https://en.wikipedia.org/wiki/Electricity_Trust_of_South_Australia

⁵² Williams, B. and A. Querzoli. 2018. "Risk Management for Minesite Closure planning and Execution – Start Now! Lessons from the closure of the Leigh Creek Coalfield, South Australia." Life of mine Conference.

⁵³ Lomax-Smith, J and Heneker, K. 2016. "Leigh Creek Futures". Government of South Australia, Department of State Development. See www.leighcreekfutures.sa.gov.au

⁵⁴ In other states (such as NSW) where state owned coal mines and associated power plants were also privatised from the late 1990s – there may be similar issues associated with outdated approvals processes that do not require consideration of the social aspects of mine closure. For instance, in NSW the Centennial mining company purchased all of the NSW government owned coal mines and associated power plants (that used the coal). Most of these mines are over 100 years old. One of the mines, Newstan Colliery, began mining operations in 1887, prior to the implementation of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act), and operated under continuing use rights pursuant to section 109 of the EP&A Act. They do not have separate mine closure plans – instead closure requirements are embedded in the Mine operations plans. Likewise, in Victoria, the Anglesea coal mine was approved by State Agreement Act in 1961 and granted a 50+50 year lease that was renewed in 2011. The mine produced 1.1 mtpa for an adjacent power station, which fed electricity to the Point Henry Aluminium Smelter in Geelong. With the closure of the smelter on 1st February 2014, the mine and power station were offered for sale - some 45 years earlier than expected. There has been considerable critique of their lack of closure planning (as the operation was no longer viable and did not sell). Whether this is due to the issue of the operation not being party to current regulation (due to the age of the asset), or the exceptionalism of the type of operation as an energy provider, the lack of closure planning was evident.

5.1.2 Guidelines

The SA government has recently established two guidelines for stakeholder engagement, one for general landowners (2014)⁵⁵ and another for native title holders (2019).⁵⁶ Both focus on early engagement from the access and exploration stage and are thorough in regards to establishing the range of rights and interests of these land-holders and ensuring that extractive companies have a framework for engagement. Neither set of guidelines consider mine-closure or life-of-mine stakeholder engagement, focusing on the ‘front-end’ of the process (the 2014 guidelines have 1 page on ‘disturbed areas’ and ‘program completion’, while the 2019 guidelines do not contain any information on closure).

Neither of these resources was available for this historic mine. As a result, there are also no mining land use / local agreements with Indigenous groups. They appear to have had little to no involvement in the mine and thus, residency in the closed mining town of Leigh Creek.

5.1.3 Corporate Standards and Guidelines

Alinta Energy took over the mine with the rest of the assets (coal fired power stations). They do not have any publicly available standards or guidelines relevant, or appropriate, for a mining operation.

In their ‘Augusta Power Stations Closure Plan and Post Closure Plan’ they list ‘Our Values’, which includes: ‘Unified team – despite very different operational programs across sites we will always work as one team to deliver the best outcome for closure overall’; and ‘Respect – we will have regard for every stakeholder and always consider their views. We will manage our relationships with sensitivity and always respond appropriately.’

5.1.4 FPP and the power stations (Port Augusta)

The site was regulated by South Australian Environment Protection Authority (EPA) under the SA *Environment Protection Act 1993*. A condition of licence requires the owner to implement an ‘Environmental Closure and Post Closure Plan’ (Oct 2016). The closure plan includes ‘social objectives’ and addresses environmental and social risks to neighbouring ecosystems, landholders and communities.

This closure plan includes contemporary expectations of stakeholder and community engagement, as it states: ‘This Stakeholder and Community Engagement Plan sets out a framework for FPP to maintain effective relationships, mitigate communication risks, ensure good corporate citizenship and minimise reputational damage over the course of the Flinders Operations closure project’.⁵⁷

5.2 When

5.2.1 Triggers for community participation

There were no legislative requirements under FPPs Perpetual Mining lease, or internal policy standards, to manage the impacts to the mining community of Leigh Creek. One month prior to the coal mine ceasing operations in November 2015, ‘the SA government establish[ed] a request for

⁵⁵ Department of State Development. 2014. *Guidelines: landowner rights and access arrangements in relation to mineral exploration and mining in South Australia*, Minerals Regulatory Guidelines MG4, Mineral Resources Division. V 2.2. Department of State Development, South Australia, Adelaide.

⁵⁶ Department for Energy and Mining. 2019. *Guidelines for explorers on Aboriginal engagement, good faith negotiation and agreement making*, Minerals Regulatory Guidelines MG25, Mineral Resources Division. Department for Energy and Mining, South Australia, Adelaide. Available at <https://sariqbasis.pir.sa.gov.au/WebtopEw/ws/samref/sariq1/image/DDD/MRGMG25.pdf>

⁵⁷ See https://flinderspower.com.au/wp-content/uploads/2017/01/12425_station_closure_plan_18_oct_2016.pdf

information process...(Department of State Development) to belatedly plan for transitioning the town from 2016'.⁵⁸

The trigger for community engagement was thus, the mine closure – when in June 2015 Alinta Energy informed the Government of South Australia of its business decision to close its Leigh Creek coal mine, and planning began for the closure of the mine site. Operations at the Leigh Creek mine ceased on 17 November 2015 (less than 4 months after the closure announcement).⁵⁹

The SA government funded report, by Lomax-Smith and Heneker (2016), subsequently found: 'There is a level of urgency in embarking upon schemes to support the Township in the transition period between a closed mining town and an open, independent community to avoid irreversible decline'.⁶⁰ Noting this, FPP was to maintain Leigh Creek, the closed mining town, for a further 2 years until the state government would transition it to an open town.

As the Lomax-Smith and Heneker report also stated: The community consider that the timing for critical decisions is imperative so as not to lose community interest or miss any opportunity to benefit from Alinta Energy's required investment in the town over the next three years (i.e. until July 2018).

5.3 Who

5.3.1 SA Department of State Development led the community consultations over Leigh Creek town:

The SA government's response to the Alinta / FPP announcement was to establish the Upper Spencer Gulf and Outback (USG&O) Taskforce and to commission, what they have referred to as, 'an extensive community consultation'.⁶¹

One perspective, from the Port Augusta Mayor Sam Johnson, was that the closure would have an 'absolutely catastrophic effect on the town and the people that reside in Leigh Creek'.⁶² Communities and stakeholders involved in the engagement program for Leigh Creek and the mine included:

- The Adnyamathanha Traditional Lands Association
- Alinta Energy employees and Management team
- Businesses: Leigh Creek and the region
- Flinders Ranges Council
- Leigh Creek and regional service providers, such as SA police, health services, Leigh Creek area school
- Leigh Creek residents
- Leigh Creek and surrounding communities: individuals, families and community groups / Progress Associations from:
 - The surrounding 11 small towns, including Arkaroola, Beltana, Blinman, Maree, Nepabunna, Innaminka and Iga Warta
- Outback Communities Authority and other regional bodies

⁵⁸ See S. Robertson, B. Blackwell and J McPharlane. 2017. "The Viability of remote mining communities: insights from community perceptions and employment impact assessments". In *Impact Assessment and Project Appraisal*.

⁵⁹ http://www.energymining.sa.gov.au/minerals/mining/mines_and_quarries/leigh_creek_coal_mine

⁶⁰ Jane Lomax-Smith and Kylie Heneker. 2016. *Leigh Creek Futures*. Department of State Development, SA Government.

⁶¹ Jane Lomax-Smith and Kylie Heneker. 2016. *Leigh Creek Futures*. Department of State Development, SA Government.

⁶² In Daily <https://indaily.com.au/news/2015/06/11/mining-town-devastated-as-old-energy-era-ends/>

the rehabilitation contract to ensure that it is undertaken in a way that is culturally appropriate'.⁶⁵ There is, however, no indication on the public record, as far as could be ascertained for this project, that they were engaged.⁶⁶

There also appeared to have been very limited (possibly no) employment of local Aboriginal people in the mine, as suggested by the fact that they did not reside in the closed township. The consultation process with the Adnyamathanha revealed that they:

*Have an interest in the future use of housing in Leigh Creek. The community view that housing could be made available in the town for elderly members of the Aboriginal community so they can be closer to health services, and parents with children can be closer to education. ATLA [Adnyamathanha Traditional Lands Association] has requested that the SA government consider them for a management role of the Leigh Creek township.*⁶⁷

5.4 What

According to a conference paper jointly prepared by an FPP employee and a senior staff member of the SA government's Mining Regulation Branch: 'Early meetings [between FPP and the mine regulator] were challenging as there was a gap in closure expectations...the company had limited experience of the regulatory systems, culture, expectations and timeline... A joint working party was formed between Flinders Power and regulators'.⁶⁸ FPP/Alinta Energy stated that it 'is committed to supporting their employees and the welfare of their families and is providing additional support services to assist during the transition to closure'.

This joint working party focused on the environmental rehabilitation of the mine site – as there were some immediate and urgent issues to manage in relation to 'self-heating and spontaneous combustion' of the pit and tailings.

The Department of State Development focused on social aspects of the closure. This included issuing a Request for Information (RFI) for Commercial Opportunities for 'Leigh Creek and Surrounds'. This RFI process was essentially to assist the state to divest itself from its fiscal responsibility to support the Leigh Creek Township once FPP ceases to manage the town.

The RFI focussed on the Township and associated infrastructure and did not include entities with commercial interest in the mine site or the rail line or Port Augusta facilities related to the Power Stations, unless they were expected to result in a requirement to use the Township. As reported at the time in the media: 'Leigh Creek for Sale after Alinta Energy closes SA coal mine'. This highlighted the precarious position of the town, as the SA government was seeking investors to buy or lease Leigh Creek infrastructure after Alinta energy ceased to support it in January 2017.⁶⁹

As the Request For Information (RFI) report *Leigh Creek Futures* (Lomax-Smith and Heneker 2016) found: 'There is a level of urgency in embarking upon schemes to support the Township in the transition period between a closed mining town and an open, independent community to avoid irreversible decline. However, these proposals, if pursued as a co-ordinated strategy for the Township, could contribute toward keeping the town and its businesses functioning and viable, better

⁶⁵ See "Leigh Creek Community Views – A Summary: Social Aspects and Opportunities of the Closure of Leigh Creek Coal Mine and Port Augusta Power Station".

⁶⁶ See for instance, Williams. B. and A. Querzoli. 2018. "Risk Management for Minesite Closure planning and Execution – Start Now! Lessons from the closure of the Leigh Creek Coalfield, South Australia." Life of mine Conference

⁶⁷ "Leigh Creek Community Views – A Summary: Social Aspects and Opportunities of the Closure of Leigh Creek Coal Mine and Port Augusta Power Station".

⁶⁸ Williams. B. and A. Querzoli. 2018. "Risk Management for Minesite Closure planning and Execution – Start Now! Lessons from the closure of the Leigh Creek Coalfield, South Australia." Life of mine Conference

⁶⁹ <https://www.abc.net.au/news/2016-01-22/sa-outback-town-leigh-creek-for-sale/7107922>

using existing government infrastructure, adding value to the local economy and growing visitation to the Township and surrounding regions.’

As they also noted, with the closure of the coal mine, there is opportunity to leverage past investment in the town (resulting in its high-quality infrastructure and services) through effective and timely decision making to create a sustainable future for the town and the region.⁷⁰

Responses received were to assist the SA government to determine a way forward for the economic and social sustainability of the region. They noted that this may involve further steps, including:

- The SA government formulating a strategy for the future of the region
- Discussions and negotiations with selected respondents, and possibly also Alinta Energy, either seeking additional information or seeking to further potential commercial arrangements and implement appropriate proposals
- A subsequent competitive process
- A combination of the above.

5.4.1 The scope of the processes

There were two engagement and participation processes for Leigh Creek:

- 1) The Upper Spencer Gulf and Outback (USG&O) Taskforce and commission undertook an ‘extensive community consultation’, which concluded in October 2015.
- 2) The Request for Information (RFI) process from the state government took over from this Taskforce, commencing in December 2015 – and ending in early February 2016.

Process for the power stations (led by FPP and the SA government):

- 1) Community Open Day held by the Environment Protection Authority (EPA) on 6 February 2017 in Port Augusta. As a result, Flinders Power established a community reference group.
- 2) 11 community reference group meetings were held between the 1st meeting in April 2017 and the final meeting (on the website) in June 2018.⁷¹

5.5 How

5.5.1 Governance

5.5.1.1 SA government community consultations over Leigh Creek town

The first consultation process (June 2015 - October 2015) engaged affected employees and residents, and also documented the role the township played in providing services to surrounding pastoral stations, residents, businesses and communities.⁷²

The purpose of the work of the Upper Spencer Gulf and Outback Community Engagement Team was to support affected workers and communities and to identify options and opportunities for the future of Leigh Creek and the surrounding region.⁷³

⁷⁰ “Leigh Creek Community Views – A Summary: Social Aspects and Opportunities of the Closure of Leigh Creek Coal Mine and Port Augusta Power Station”.

⁷¹ Note the meeting minutes for the power stations <https://flinderspower.com.au/community-information/>

⁷² See Lomax-Smith and Heneker 2016: p 7.

⁷³ According to the government summary report Social aspects and opportunities of the closure of Leigh creek mine and Port Augusta power station. By Lomax Smith and Heneker 2018.

The communication channels were:

- Facebook
- Websites – Flinders Power website has regular updates for the range of assets
- Newsletter updates
- Community meetings.

The submissions from the RFI process were commercial in-confidence, as they were business propositions.

5.5.1.2 Flinders Power Augusta Power stations

FPP established a Terms of Reference to establish a community reference group to maintain a conduit between community leaders and key individuals and Flinders Power, and to enable dialogue regarding the short and longer-term management and future of the ash storage area. This group has met since early 2017. The group was to help guide and shape community engagement and communications activities throughout the delivery of the closure project to mid-2018, or until Flinders Power's responsibilities are discharged.

FPP contracted an SA-based, independent facilitator to form, chair, manage and support the community reference group. The group helped to guide and shape their community engagement and communications activities. Representing the issues, concerns and values of the broader Port Augusta community, the group acted as a conduit to facilitate open, accurate and reciprocal communication between the community and Flinders Power.

The communication channels were:

- Email updates
- Facebook – a dedicated Flinders Power Facebook page
- SMS information direct to mobile phones
- Community newsletter and fact sheets
- Website updates
- Community information sessions
- A community open day and sausage sizzle and tour of the sites via bus.⁷⁴

5.5.2 Resources

FPP / Alinta Energy continued to maintain Leigh Creek for two years post mine closure – when the state took over and it became an 'open' town.

The SA government resourced the Leigh Creek consultations and the RFI process and Alinta (via Flinders Power) resourced the power station closure consultations.

5.5.3 Levels of participation

5.5.3.1 Leigh Creek town / Mine

The USG&O Taskforce consultation engaged affected employees and residents but also documented the role the township played in providing services to surrounding pastoral stations, residents, businesses and communities. The RFI attracted 34 responses from a diverse range of proponents.

⁷⁴ See <https://flinderspower.com.au/wp-content/uploads/2016/06/FP%20APS%20Fact%20Sheet%20June.pdf>

For Leigh Creek Township, following assessment against the RFI criteria, 21 of these (34) were the focus of further examination and consultation between **8 February 2016 and 8 April 2016**. During this period, the advice of over 100 specialists across state and federal government as well as non-government organisations was sought to assess the economic potential of the proposals. The *Leigh Creek Futures* report, released on 6 June 2016, made 30 recommendations to the SA government to maintain and revitalise the township (exactly one year after the company announced its intention to close and 6 months after it actually closed).

5.5.3.2 Augusta Power plants

Prior to closure, a group of power station employees, known as the Hunters & Collectors, were tasked with finding and handing over historical items to the Port Augusta City Council and ETSA Museum for preservation and public display.

According to a case study by Minter Ellison (legal firm engaged by FPP), 'Flinders Power maintained an open and collaborative relationship with local residents throughout the closure process, through an active Community Reference Group.' In addition, over 250 local residents, including many schoolchildren and university groups, toured the power station site during various stages of the demolition and rehabilitation process.⁷⁵

5.6 Current status

According to a media article entitled 'Anger Mounts for a Town in Limbo' in 2017 (two years post closure), the outcomes at Leigh Creek Town are summarised thus:

Empty driveways are everywhere in Leigh Creek. Driving around the once prosperous tiered mining town built in the late 1970s for 2000-plus residents, there's an eerie sense of emptiness that is to be expected when an industry is on its way out. Census data from 2016 suggests 245 people call Leigh Creek home. Locals say around 100 is more accurate. The discrepancy, they say, is due to people leaving town since the survey and former inhabitants who have kept Leigh Creek as their primary address, paying the peppercorn rent while they seek work elsewhere.⁷⁶

In a case study by the legal firm Minter Ellison, entitled 'Closing a coal fired power station: Lessons in leaving a positive legacy', they provide a useful summary of outcomes from both sites (in terms of the role that FPP played):⁷⁷

At the Leigh Creek mine:

- 14 million lcm (loose cubic metres) of earthworks were undertaken, and 4 million lcm of inert cover put in place, to remediate the mine.
- Over 70 kms of 3m high x 9m wide base surface water bunds constructed.
- The very large mine retention dam was retained and redesigned for ongoing use by the Leigh Creek community for recreational purposes, and for the future benefit of native flora and fauna.

⁷⁵ See <https://www.minterellison.com/articles/closing-a-coal-fired-power-station-lessons>

⁷⁶ See the Adelaide Advertiser. Nov 25, 2017. https://www.adelaidenow.com.au/subscribe/news/1/?sourceCode=AAWEB_WRE170_a_GGL&dest=https%3A%2F%2Fwww.adelaidenow.com.au%2Fbusiness%2Fsa-business-journal%2Fleigh-creek-digging-in-for-survival-two-years-after-coal-mine-closure%2Fnews-story%2F93057ef1ac76ce34625876117f4442d6&memtype=anonymous&mode=premium&v21suffix=155-a

⁷⁷ See <https://www.minterellison.com/articles/closing-a-coal-fired-power-station-lessons>

At Augusta power stations:

- Around 100 full-time workers were employed over a 30-month period at the height of the closure program, with more than 30% of that workforce and external spend sourced within local districts.
- The local community had been the home to this business for 60 years, four public auctions were held, allowing locals to secure their own piece of power station history.
- 75,000 tonnes of steel were dismantled and removed from the power stations, 97% of which was recycled.
- Better-than-industry-standard safety outcomes were ensured when carrying out the demolition and removal, with 100% compliance on all contractual and regulatory obligations.
- The 273-hectare ash storage area at the power station was completely rehabilitated, with over 6,500 truck movements and the sowing of over six tonnes of native seed that will ultimately cover the entire ex-storage area.
- An enormous site contamination assessment and remediation works program was completed, culminating in sign-off by an independent auditor.
- The remediated site was intentionally sold to a significant commercial enterprise for the purpose of creating new and replacement employment opportunities for the local community.

6. Summary observations

Key observations from these three case studies include the following:

- At Diavik, legislative requirements, corporate policies and standards, and agreement conditions have triggered and guided community participation in the mine closure planning process.
- Whereas at Reefton and Leigh Creek, there were no internal company policies and standards relating to the management of the social aspects of mine closure that would trigger the need to engage community members in the mine closure planning process. Similarly, there were no legislative provisions for engaging community members in the mine closure planning process. In both cases, community participation has essentially taken place post-closure and in response to community pressure.
- Despite these differences, in each case, the company has been required to consider the social aspects of mine closure and to engage communities in the mine closure planning process. In short, even where there are no formal requirements to do so, companies will invariably be forced to engage with the social dimensions of closure. The Reefton and Leigh Creek cases also highlight the difficulties and risks (and potential missed opportunities) that can arise when community participation processes only occur after mining operations have ceased (or closure has already been announced).
- Ultimately, these cases studies reinforce foundational principles for managing the social aspects of mine closure (as set out in good practice guidance⁷⁸), including
 - early consideration of the social aspects of closure, underpinned by a life-of-project planning and assessment approach
 - integrate the planning processes for the physical and social aspects of mine closure
 - understand the level or intensity of engagement and participation that is required for specific operations
 - resource the planning and engagement process.

⁷⁸ See for example, ICMM: <https://www.icmm.com/en-gb/environment/mine-closure/integrated-mining-closure>



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