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Closure IS change. Change takes time and needs support. It's a smouldering fuse, not a 'burning platform'

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Abstract

Closure IS change. When a mine ramps down and ceases to operate, it is a change that happens whether we plan for it or not, to the company and workforce, the environment, and future land users. Unplanned change results in unforeseen outcomes that force a new direction. To leave a positive legacy for closure we need to plan for change, which takes time.

We need time to ask questions and gain knowledge, to understand what land capability is needed for the post-closure vision. We need time to identify and discuss options, design and co-design the legacy we want to leave, starting as early as possible. This relies on meaningful engagement with our partners in change who are people that have differing views. Significant change can invoke grief, with different emotions at each stage needing time for adaptation.

Right from the start, we need to collaborate and integrate closure with the mine life plan with all disciplines and functions. This is not new. It was acknowledged in the late 1990s by the World Bank and in 2000 by the Mining, Minerals and Sustainable Development project and is still discussed now as one of the main challenges to closure. Integration is not easy. It needs culture, supporting processes, trust and based on shared language and goals.

A typical change management phrase uses a 'burning platform' to drive urgent change through fear or reaction to something unfavourable. But a burning platform for closure means we're too late. We've run out of time, we don't have options, and our legacy will be 'what's left' rather than our vision. Closure is the smouldering dynamite fuse, and if we don't plan and integrate closure early and throughout the entire mine lifecycle, we can be left with an expensive surprise.

At BHP, we recently updated our global standard for closure. BHP requirements for Closure and Legacy Management took eight months to develop. Our objective was to collaborate, support early integration, and emphasise the interconnectedness of closure. We embedded closure language in BHPs Master Glossary and defined time, including the Life of Asset' "… until BHP no longer holds liabilities."

This paper describes the process and key lessons learned along the way. What legacy do you want to leave?

Keywords: *closure, integration, legacy, time, risk*

1 Introduction and background

Closure is a process of change and change management over long time frames. Having abundant time to define and redefine a vision as knowledge improves should be an advantage, but all too frequently, the activities needed to plan, design and execute a closure vision are deferred. Common explanations include that there is plenty of time for closure tasks later because closure happens after production ceases, the time value of money makes closure costs more appealing when scheduled later, and short term production targets take priority, as without revenue who will pay for closure (Dowd & Slight 2006; Haymont 2012)? Systemic short-termism erodes any time advantage there may have been for closure and even worse, can increase a company's closure risk and liabilities by constraining opportunities, failing to obtain a shared vision, and failing to test and validate closure assumptions while the people and resources are available (Mackenzie et al. 2006). This can ultimately result in damage to the environment, communities and company reputation, and reduces our chance of leaving a positive legacy.

Mining is becoming more difficult, with complex and deeper deposits in more challenging locations. The world is changing, energy transition demands more critical metals, and technology and societal expectations for responsible and sustainable mining are developing faster than before (Mononen et al. 2022; McKinsey & Company 2022). Time is both a gift and a challenge for closure planning.

To define the legacy we want to leave, early and ongoing planning is needed across four key areas to include appropriate timeframes.

1. Time for meaningful collaboration. Defining acceptable closure outcomes with multiple internal and external stakeholders requires early and ongoing dynamic and reciprocal engagement (Bainton & Holcombe 2018; Edwards et al. 2021; Morrison-Saunders 2019). It takes time to build trust, adapt to change, and gain consensus across differing views and expectations as more knowledge is obtained. Complex information must be understood and discussed in line with the principles of free, prior and informed consent (FPIC), and earlier tensions may need resolution (Holcombe et al. 2022, Owen & Kemp 2014).
2. Early and ongoing integration. The best opportunity to manage closure risk is at the design phase, incorporating closure as early as possible, and throughout operations (Sommerville & Ferguson 2022). Hence, early integration with business planning across all interconnected disciplines and functions that inform and are informed by closure planning is essential for developing robust strategies and plans that are as stable as possible (Getty& Morrison-Saunders, 2020; ICMM, 2019).The Cambridge dictionary definition of integration is "to combine two or more things to become more effective" (https://dictionary.cambridge.org/dictionary/english/integration).
3. Time for review and continual improvement. The complex biophysical and social relationships at a site mean there are inherent uncertainties in closure plans that are not verified. Time is needed for progressive closure, to trial rehabilitation and innovation, monitor results over multiple years for continual improvements and provide evidence of a trajectory towards success(Edwards & Maritz, 2019; ICMM, 2019).
4. Time to develop social resilience. Communities, partners, Indigenous Peoples and the workforce face significant socioeconomic changes when a mine closes. Understanding what these impacts, experiences and expectations is important to inform transition plans (Edwards et al., 2022). Building resilience for transition takes decades, and may face significant socioeconomic challenges (Government of Western Australia 2020; Parshley & MacCallum 2016; World Bank 2021).

Following an eight-month review and consultation process, BHP recently updated its global standard for closure. “Our Requirements Closure and Legacy Management” is applicable to everybody across the business, and defines the performance requirements to manage closure risk in line with BHP's values and public commitments, including BHP's purpose to leave a better world. Our objectives for the review were to: develop a company-wide standard that is informed by international good practice and the business; be transparent and meaningfully engage with a broad range of internal stakeholders to incorporate feedback and learnings; and emphasise the interconnectedness of closure to raise awareness and support early and integrated closure planning. As a member of the International Council on Mining and Metals (ICMM), the previous global standard for closure was aligned with the Integrated Mine Closure: Good Practice Guide (ICMM 2019) as part of BHP’s commitment to integrate closure into planning and decision-making. This update aimed to strengthen the focus on integration and early and processive implementation of closure activities.

During the process the in-house Organisational Change Management team provided advice for communicating the updates. We were advised to define the ‘burning platform’ for closure. The burning platform analogy, said to be derived from the 1988 Piper Alpha oil rig disaster’, describes the choice between staying on the platform or jumping into the freezing North Sea. Those who jumped were rescued so the metaphor aims to create a sense of urgency for change based on fear (Krarup 2019; Reid 2020). A sense of urgency can reduce the time necessary for change, but not always (Gupta 2018).

However, the positive and negative impacts are not often instant when I think of closure. They accumulate over time. If we are on the burning platform, we're too late. We've run out of time. We have fewer options and less certainty that we can deliver our outcomes, and our legacy will be 'what's left' rather than proactively realising our vision. Closure is the smouldering dynamite fuse. If we don't integrate early and throughout the entire mine lifecycle, we'll likely be left with a large and expensive surprise.

The rest of this paper describes how BHP collaboratively developed “Our Requirements for Closure and Legacy Management” to emphasise integration across the business and key lessons learned along the way.

2 Method

2.1 Planning

At BHP, the minimum process for reviewing and updating requirements requires a minimum of four weeks consultation with internal stakeholders as well as regular consultation with the “Our Requirements” Advisor to answer queries, confirm the process is followed, and review drafts to for alignment with BHP standards and values.

The Resource Centre of Excellence (RCoE) Closure team is responsible for “Our Requirements for Closure and Legacy Management”, with an aim to front end load the review process. The schedule was tight, and the workload was mainly between a small team of four (consultants and a BHP project lead), so detailed planning was essential to maximise the availability of the team and their respective, diverse skill sets.

It was important for us to consult with the broad range of functions and disciplines that are needed to plan, design and deliver progressive closure activities, including but not limited to mine planning, finance, risk, environment, water, communities and Indigenous Peoples engagement teams as well as technical managers across different sites. When planning consultation we needed feedback to be open and transparent to maximise improvement opportunities. A lot of consideration was given to consistent messaging, so the process was clear, stakeholders could see how their feedback was considered and valued and to provide assurance that we were only changing what mattered. Initial planning only went as far as Stage 2, not wanting to make assumptions about early outcomes. We focussed on internal consultation as the global standard (including the previous version) incorporated guidance in the Integrated Mine Closure: Good Practice Guide. This was developed by extensive consultation with the ICMM Closure Working Group, made up of mine closure practitioners from leading global mining companies including BHP and input from other key disciplines and industry specialists, academia and government representatives (Brock 2021).

2.2 Stage 1

The interconnected nature of closure means there are multiple interlinks with disciplines and functions from across the business and their “Our Requirements” and Technical Standards, among many others “Our Requirements for Environment and Climate Change”; “Our Requirements for Communications, Community and External Engagement”; “Our Requirements for Corporate Alignment Planning”, and the Water Management Standard. The links were mapped, strong links and opportunities to close gaps were identified which also guided consultation .

An initial engagement with a smaller targeted group of stakeholders occurred before any draft changes were made. This was to understand which elements of “Our Requirements for Closure” were working well and the opportunities for improvement. The discussion supported where the existing global standard was strong and supported strengthening the focus on early and ongoing integration of closure planning, and the need for transparent and informed decision making as important when making business decisions about the deferral of progressive closure due to short term drivers. This resulted in a Working Draft for Stage 2 consultation.

2.3 Stage 2

This engagement was where the bulk of the consultation occurred, and most of the effort was focused. Small groups between two to eight people with differing skills and experiences, were engaged online using collaborative "whiteboards". This meant we were able to consult with more internal stakeholders than might have been possible a few years ago. All comments and feedback were added to a detailed stakeholder engagement register, and important comments were clarified. An Initial Draft was issued for feedback. A summary of how feedback had been considered was made freely available.

Importance was placed on fit-for-purpose planning to allow both business and closure objectives to met, and that this requires that urgency is commensurate to closure risk and the time needed to implement controls, which is linked to complexity, available knowledge, and the level of certainty.

At this stage, consistent language became important. We proposed twelve definitions for closure to be added into BHPs Master Glossary which is applicable to the entire business. This included ‘entire lifecycle of the asset’ or ‘Life of Asset’ which was refined to include the post-production phase until closure objectives have been met.

2.4 Stage 3

Extensive early and robust engagement meant the Final Draft revisions were typically to refine language and content because key changes had been broadly agreed earlier. Any additional consultation at this stage was typically one on one. Based on the consultation outcomes and feedback from the Our Requirements Advisor, the RCoE conducted change impact and readiness assessments, a standardised gap assessment with links to supporting guidance and tools, and information packs, alongside the stakeholder feedback summary, which were all made available for anyone in the business to review and provide feedback on. The final version was prepared and approved by senior leadership.

3 Key outcomes

The engagement and positive feedback level was high across a wide range of stakeholders. There was broad support for the changes to strengthen integration with business planning across all interconnected disciplines and functions and promote delivery of progressive closure, and that is integrated with external engagement strategies. Planning that is fit-for-purpose, at appropriate scale, level of detail and timing based on risk, uncertainty and complexity.

A huge amount of valuable information was shared, which resulted in a useful and robust global standard. Across all individual and group engagements, 59 consultations occurred, and 64 people gave individual feedback. The data also showed where further guidance was needed to support the closure and legacy management framework. The time spent on planning communication was worth the effort as, overall, stakeholders felt their contributions were valued, the process was robust, and even where changes meant that there would be some additional work, there was a broad acceptance that the changes were positive and necessary to drive continual improvement.

Embedding consistent language to support understanding and cultural change included twelve closure definitions being added into BHPs Master Glossary. One key term defined was ‘Life of Asset’, synonymous with the ‘entire lifecycles of that asset’, to mean 'All periods of the site or asset lifecycle commencing when there is a plan to have an impact, or when there is an impact, on community or the environment (which can be before acquisition of land or tenure), through all phases including (but not limited to) projects, exploration, operations, operations in care and maintenance, closure and post-closure active or passive management until BHP no longer holds liabilities'.

The changes between the previous global standard and the revised version were mainly to define language, strengthen links with company standards and ICMM guidance, and support the mindset to enable integration of closure activities and manage long-term liabilities. There is support for closure and legacy management when understood because it does not need to differ. It can be built into optimised designs at no extra cost

to the business, just the time and effort to consider it. Three closure cultural goals have been defined that support “Our Requirements for Closure and Legacy Management”:

- Be risk driven. We strive to manage closure risks throughout the entire lifecycle of our assets. We are transparent in our reporting and planning and assign the right level of accountability for closure risk based on a better understanding of uncertainty. We are focused on achieving long term value outcomes.
- Integrated contributions. We understand our role in closure and have clear and defined roles and responsibilities. We collaborate across our disciplines. We take ownership of tasks and accountability to manage risk in our areas. We champion the “Our Requirements for Closure and Legacy Management” within our teams.
- Early and progressive management. We strive to leave a long-term positive legacy even though we may not be around to realise it. We consider closure timeframes and implications as part of our day-to-day work. We understand the value of closure within our sites and assets. We seek information and integrate our inputs as and where required.

With more time and more innovative methods, we could have enabled broader consultation and feedback. We underestimated how much time was needed for rigorous and open consultation. Identifying stakeholders was complex with regional organisational variations coupled with the fact that BHP is a company that is very supportive of people moving across the business, there were several changes over the eight months of consultation. Preparing messaging for communications conducting engagement, and managing comments and feedback was a large job. The document underwent a significant review to create a streamlined and robust product.

4 Conclusion

Closure IS change. It is about transitioning the company, the land, and the people connected to it from one use to one or many others. It is an environmental and a social change that can have long-lasting impacts, and planning for that change needs to start early and be integrated throughout the entire lifecycle of the asset. The best opportunity to manage closure risk is during planning, design and operations. Incorporating closure considerations early so that business decisions are transparent and fully incomed is important to manage the tension between short term drivers and incentives and long-term closure objectives.

Time is both a gift and a challenge for closure planning. This was relevant to the consultation process for “Our Requirements for Closure and Legacy Management” and for closure planning generally. Time is needed to plan, meaningfully engage, adapt and learn, refine the knowledge base and enable continual improvement. Meaningful engagement with internal stakeholders for “Our Requirements for Closure and Legacy Management” was complex and took eight months to complete. Gaining consensus to agree closure outcomes from regulators and future land users is even more complex, and to transition a workforce and communities has been shown to need plans that span decades. There may be some time until production stops, but failure to proactively manage closure risk can mean opportunities are missed, closure liabilities are increased, and there is damage to the environment, communities and our reputation. Failure to proactively manage closure risk reduces our chances of leaving a positive legacy.

The evolution of a company-wide standard, “Our Requirements for Closure and Legacy Management” defines the minimum closure requirements that apply to everybody at BHP. It has strengthened closure culture goals and supports proactive integration of closure planning across multiple disciplines and functions across the business. It utilises a common understanding of closure language and empowers decision makers through being fully informed of long term risks and opportunities. There will always be competing interests for short-term production targets and long-term sustainability goals, and a single BHP standard will not change that. But it's a good start. Embedding our closure culture goals is next.

Let's avoid the burning platform at the end of the mine life. If we start early and integrate and collaborate towards a shared vision of what the legacy we leave will be, we can make it a smouldering fuse.

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