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Giving closure management plans a day job: developing effective closure management plans

Brendan May [a,*], **Kim Ferguson** [b]

[a] *BHP, USA*

[b] *WSP, Canada*

Abstract

Building on lessons from BHP's Legacy Assets, being a portfolio of 23 non-operating sites across North America, we present a closure planning approach that starts with the 'end in mind'. This does not mean the 'closure' event in general but rather the company's last transition point, the closure outcome: relinquishment, responsible divestment or long-term stewardship. This approach supports the development of integrated and impactful closure management plans (CMPs) that drive operational decisions, activities and investments instead of plans that simply align with regulatory requirements, industry good practice and/or internal company requirements and only collect dust on bookshelves. This paper will explore aspects including:

- *Realistic and risk informed closure outcomes: these provide foundational anchors for all operational and closure planning and design activities.*
- *Documentation of the closure planning process and the results: this provides the 'why' as well as the 'what'. This combats constant reassessment of closure options and instead supports progression in closure planning and execution.*
- *Concise targeted documentation: this is written for end users (from executives to site teams to support functions), not bookshelves, and is distilled into a standalone, 'live' activity plan. While the documents are comprehensive, summary information is included and clearly linked to closure implications. Decision records are included to avoid future duplication, and source data are clearly referenced for those requiring additional detail.*
- *Mapping closure knowledge to closure execution activities (progressive and final): this includes prioritisation of knowledge gaps, the activities required to address those gaps, and how these activities link to the closure objectives and outcomes and translate into studies, projects, operating work plans, budgets, and life of asset plans. Additionally, activities are assigned a flexibility rating that allows movement in and out of annual budgets as required without losing sight of timebound requirements.*

This approach results in CMPs that have been integrated into business-as-usual processes, driving a common suite of prioritised activities, studies and projects. Given the robust nature of their development and their focus on progressing implementation, these CMPs are less likely to be reworked and more likely to efficiently guide each site and the asset overall to achieve aligned closure outcomes.

Keywords: *closure, closure management plans, implementation, BHP, Legacy Assets, closure planning, knowledge base, life of asset, post-mining land use, PMLU*

* Corresponding author. Email address: brendan.may@bhp.com

1 Introduction

Framing mine closure planning around the intended outcome supports closure management plans (CMPs) that move beyond static compliance documents and instead become integrated, decision-driving tools that actively guide operational priorities, investments and trade-offs. Building on lessons from BHP's Legacy Assets portfolio of 23 non-operating sites across North America, this paper presents a closure planning approach that starts with the 'end in mind'. This does not mean the 'closure' end in general but rather the company's final transition point for each site, whether that is relinquishment, responsible divestment or long-term stewardship.

This outcome-centric approach emphasises:

- realistic, risk-informed closure outcomes
- clear documentation of both the 'why' and the 'what' of closure decisions
- concise, user-focused CMPs written for execution and adoption rather than collecting dust on bookshelves
- explicit linkage between closure knowledge, information gaps, studies and projects, operational and capital expenditure prioritisation, and progressive works.

This approach results in CMPs embedded in business-as-usual processes, aligning activities across sites and, where applicable, at an asset level, materially improving the efficiency and credibility of closure delivery. Our process ensures CMPs are valued, respected and treated as a single source of truth within the asset, not merely compliance documents.

While the majority of sites within the BHP Legacy Assets portfolio have completed primary civil closure works, final closure outcomes and true endpoints are often still evolving. Residual risks, long-term liabilities, land tenure constraints, and changing regulatory, social, and/or climatic conditions mean that outcomes such as relinquishment, responsible divestment, repurposing or ongoing stewardship frequently require reassessment and refinement over time. In this context, CMPs remain essential to provide a structured, outcome-driven framework for managing what remains, guiding residual investment decisions and ensuring long-term obligations are addressed in a deliberate, defensible and value-focused manner.

2 Defining outcomes: What is the end game?

2.1 'Start with the end in mind': What does this mean to us?

Start with the end in mind. We hear it all the time in closure planning, but what does it actually mean? The end in mind for us is the site's final transition point for the company. This thinking truly anchors our decision-making and is central to our overall planning. Defining this outcome early provides a realistic and risk-informed base for all operational decisions, technical studies and, where applicable, closure design activities.

To translate this thinking into practice, Legacy Assets applies a hierarchy of preferred closure outcomes where they may be composed of one or a combination of responsible divestment, relinquishment and long-term stewardship, each of which, with the right planning and stakeholder support, can be coupled with repurposed land uses. These outcomes are supported by the following five foundational guiding principles:

- Uncover latent asset potential with an aim to create a net positive value for the asset.
- Challenge the assumptions underpinning closure pathways for our sites, recognising these pathways may require long-term planning and execution periods.
- Collaborate and partner with our stakeholders to identify, evaluate and realise value-generating opportunities.

- Implement innovative ways to create value that, while being responsible environmental stewards and community members, align with our company values.
- Deliver optimised operational and closure outcomes that manage risk and are safe, stable, protective of human health and the environment, and consistent with our asset and company strategies.

These principles collectively aim to support technical realism, regulatory credibility and long-term risk durability, while maximising value (economic or non-economic) to the company, asset, local communities, neighbouring stakeholders and partners.

By explicitly testing and defining preferred closure outcomes at the outset, closure planning shifts from an abstract future exercise to a practical decision-making framework. This clarity enables studies, investments, and operational plans to be targeted toward outcomes that are achievable, defensible and aligned with the company's long-term role at each site.

2.2 Long-term stewardship

Legacy Assets strategic thinking is anchored by a deliberately simple but challenging question: 'If you knew you were going to own and manage this site forever, what would you do differently?' This framing is particularly important in the context of mine closure, where full relinquishment remains rare, divestment is not always feasible and many sites retain long-term liabilities and residual risks for timescales well beyond active operations.

Adopting this mindset forces early and explicit recognition of residual risk, long-term cost drivers and enduring management dependencies that are often deferred, discounted or obscured under assumptions of eventual relinquishment, third-party transfer or reliance on elevated upfront capital expenditure to 'solve' closure challenges. In practice, experience shows that regulatory, technical, financial or social constraints frequently limit the ability to fully walk away from a site, particularly where perpetual water treatment, geotechnical controls and/or long-term environmental monitoring are required.

By assuming long-term stewardship as the default rather than the exception, closure strategies are stress-tested against the realities of long-term ownership and accountability. This shifts decision-making away from short-term optimisation toward solutions that minimise perpetual obligations, reduce reliance on active management and improve resilience and adaptability to future uncertainty, including regulatory change, climatic variability and institutional turnover. As a result, closure solutions are designed to perform over multiple decades, not just to reach a nominal end state, which provides a more robust and defensible basis for managing sites with enduring risk profiles. This mindset also challenges stakeholders to consider how we might do something differently now to achieve a more beneficial, value-accretive outcome in the future.

2.3 Developing the outcome: the closure opportunity assessment process

As outlined by Ayres (2023), closure options assessments (OAs) are a central mechanism used by BHP Legacy Assets for determining credible and defensible closure outcomes for each of the sites across the portfolio. OAs are conducted as a structured, iterative decision-support process used to identify, compare, rank and refine closure pathways. The assessment process is collaborative and multi-disciplinary, drawing on expertise from technical, environmental, social, regulatory and commercial disciplines. This breadth of input is essential to ensure that closure outcomes are not inadvertently influenced by a single discipline at the expense of broader risk exposure, long-term manageability and/or stakeholder acceptance considerations. Rather than relying on open discussion alone, the approach emphasises structured evaluation supported by explicit metrics to increase transparency and repeatability in decision-making.

OAs can be, and are, conducted at multiple levels; for example, on different closure methods and on different closure outcomes across the site. A site can also be subject to multiple outcomes depending on its size and the different risks and opportunities associated with discrete spatial areas.

Focusing on closure outcomes, the potential options are developed in advance of the formal assessment workshop by a small working group, informed by available prior studies and site information and understanding. These candidate options are then reviewed and refined with subject matter experts at the outset of the workshop, allowing additional alternatives, modifications or previously unidentified concepts to be introduced before formal evaluation begins. For each outcome option, anticipated risks, benefits, dependencies and uncertainties are documented to provide a common baseline for comparison and to provide participants with at least a high-level understanding of site considerations prior to commencing the scoring process.

Evaluation is undertaken using a defined set of qualitative and semi-quantitative criteria designed to capture both feasibility and strategic value (both economic and non-economic). These criteria typically address the readiness of each option for implementation at the identified spatial area of the site, the effort and time required to progress to execution, and the anticipated duration of works. Outcome options are also assessed against broader measures of desirability, including monetary considerations, potential social and environmental value and non-financial benefits such as risk reduction, reputational outcomes and alignment with long-term stewardship objectives.

To mitigate common biases associated with group decision-making, independent scoring by individual experts is used in parallel with facilitated discussion. Individual scores are recorded and summarised in real time, allowing areas of strong alignment and divergence to be readily identified. Where opinions differ materially, targeted discussion is used to explore the underlying assumptions or evidence driving those differences, which supports informed recalibration where appropriate. This approach encourages balanced participation, reduces the influence of dominant voices and improves the traceability of decisions.

The output of the assessment is not a single deterministic solution, but a prioritised set of closure outcomes that may be mutually exclusive or capable of being pursued in parallel. Additionally, the process is fully documented so it can be efficiently reviewed and updated as site conditions change without needing a complete rewrite. It is also summarised in the CMP to provide the rationale for the preferred closure outcome(s). The result is a clear direction for subsequent studies, investment decisions and engagement activities, while maintaining flexibility to respond to evolving site conditions or external constraints. Overall, this structured OA framework supports outcome-driven closure planning by explicitly linking technical performance, long-term risk and strategic objectives within a transparent and defensible decision process.

3 Writing documentation: operationalising the plan

3.1 Closure management plan overview

Once the preferred and base case closure outcomes have been clearly defined, tested for realism and agreed with key stakeholders, the CMP can be developed explicitly around those outcomes. In this approach, the CMP is not a parallel or downstream compliance exercise, but the primary mechanism through which the selected closure outcome(s) are operationalised, governed and progressed over time.

Consistent with International Council on Mining and Metals (ICMM) good practice (ICMM 2025), the CMP establishes a line of sight from the agreed closure vision through to execution, decision-making and monitoring. The CMP documents the closure context, objectives, risks, and implementation pathways and is periodically reviewed and updated as knowledge improves and site conditions evolve in accordance with ICMM guidance. Importantly, outcome-led planning ensures these updates build on prior decisions rather than repeatedly revisiting fundamental closure direction.

The CMP captures the key elements required to support effective closure delivery, including identification of material closure risks, opportunities and residual liabilities. Critical to this is the thorough identification of closure knowledge gaps, either technical, environmental, social, regulatory, and /or economic, and their relative importance to achieving the intended outcome(s).

In our Legacy Asset CMPs, these knowledge gaps are not presented as static risks; they are explicitly linked to targeted studies, trials, monitoring programs, stakeholder engagement or design work required to reduce uncertainty over time. Each gap is also assigned a relative importance rating. Where a gap is not material to achieving the defined closure outcome(s) and is not required for regulatory compliance, it is captured in an appendix rather than the main body of the CMP. This reduces 'noise' and refocuses the CMP on the items that directly influence closure outcomes.

By documenting not only what is planned but also why specific decisions have been made (for example, see the closure opportunity assessment process in Section 2.3), the CMP provides decision traceability and continuity across personnel changes, ownership transitions and planning cycles. This aligns with ICMM expectations for transparency, accountability and adaptive management and reduces the likelihood of repeated reassessment, ongoing changes in strategic closure direction leading to inaction or inefficiencies, or misalignment between closure planning and operational priorities. To be clear, however, the CMP is not an operational and maintenance standard and is not designed to incorporate the day-to-day operational requirements of actively managing a non-operating site. These requirements are compiled within a parallel document managed by operational teams.

In practice, an outcome-focused CMP becomes a control document that actively informs annual operating plans, budgets and life of asset planning. By anchoring all closure-related work to the agreed end state, the CMP provides for near-term activities that are purposeful, prioritised and defensible, while maintaining flexibility to respond to changing conditions without losing sight of the ultimate closure outcome(s).

The plans are designed for multi-stakeholder use, from senior executive level leadership to front-line operational personnel. Each has their own 'lens' and requirements when reviewing or sourcing information from a CMP. For example, the site manager should understand the high-level information and how the closure outcome for the site was determined. The newly employed hydrogeologist needs a reference document for an overview of the key aspects of their discipline at the site. With detailed referencing within the CMP, users are able to source input documents for greater detail while also understanding the fundamental closure implications from the CMP. Non-technical users, such as risk and corporate affairs teams, need to be aligned to the planned closure outcome for the site so that when they are engaging with stakeholders, both internal and external, they are delivering a consistent message. The CMP provides users the closure outcome and pathway to achievement as well as the rationale for that pathway.

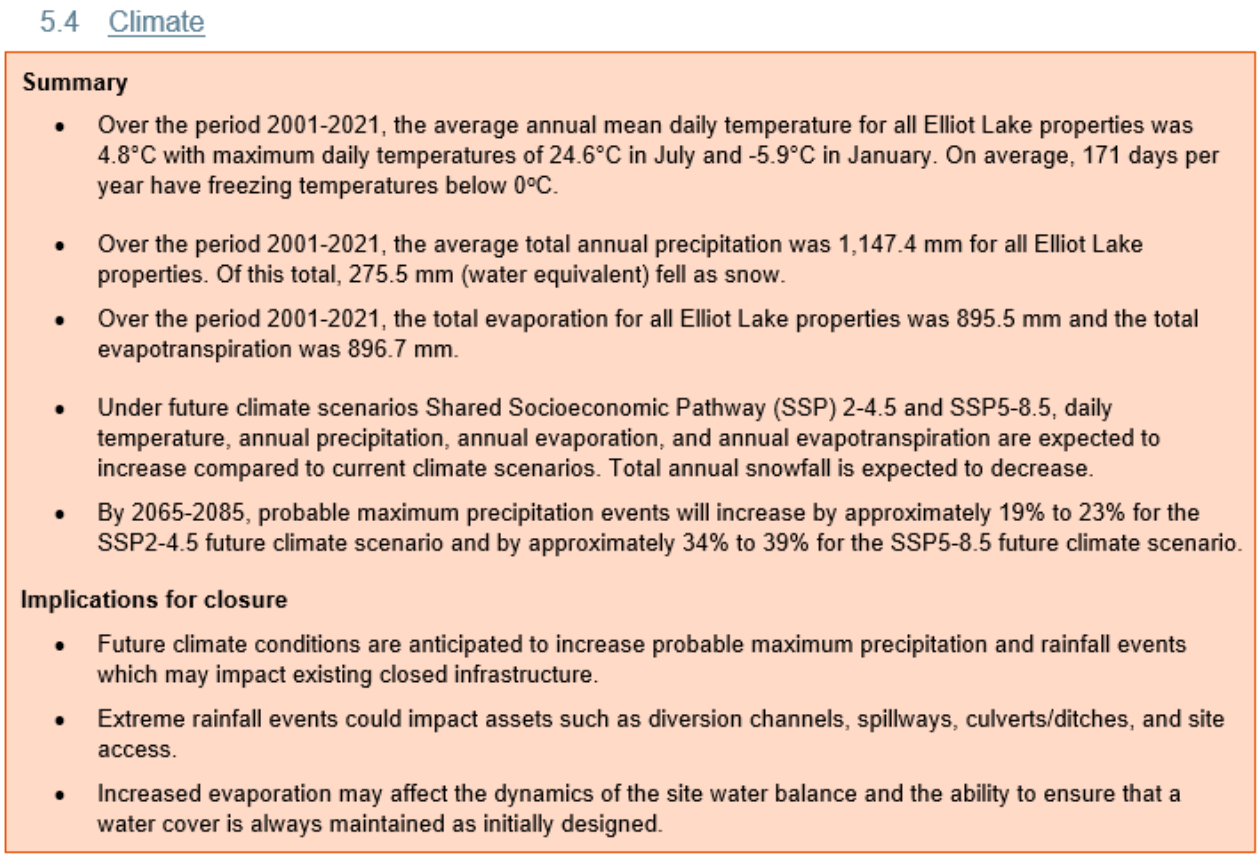
The CMP thereby acts as a summary of sorts for the closure knowledge base of the site, which can be extensive given the age of and historical operations at some sites.

3.2 Key closure management plan inclusions

Each stakeholder has different experience with technical understanding of and use for the CMP. Therefore, being able to tell the story and clearly articulate why achieving the outcome is important is a critical component to the CMP. To aid in achieving this, several techniques are utilised during CMP preparation, some of which are described below.

3.2.1 Summary boxes

Each site characterisation section within the knowledge base is introduced with a summary box (see Figure 1 for an example) that provides a brief, high-level overview of the key points and their implications for closure. These summaries are intended to orient the reader, highlight material considerations and signal implications before the detailed technical discussion that follows. This consistent structure supports clarity, accessibility and efficient navigation across topics while maintaining clear linkage to the underlying supporting information.



5.4 Climate

Summary

- Over the period 2001-2021, the average annual mean daily temperature for all Elliot Lake properties was 4.8°C with maximum daily temperatures of 24.6°C in July and -5.9°C in January. On average, 171 days per year have freezing temperatures below 0°C.
- Over the period 2001-2021, the average total annual precipitation was 1,147.4 mm for all Elliot Lake properties. Of this total, 275.5 mm (water equivalent) fell as snow.
- Over the period 2001-2021, the total evaporation for all Elliot Lake properties was 895.5 mm and the total evapotranspiration was 896.7 mm.
- Under future climate scenarios Shared Socioeconomic Pathway (SSP) 2-4.5 and SSP5-8.5, daily temperature, annual precipitation, annual evaporation, and annual evapotranspiration are expected to increase compared to current climate scenarios. Total annual snowfall is expected to decrease.
- By 2065-2085, probable maximum precipitation events will increase by approximately 19% to 23% for the SSP2-4.5 future climate scenario and by approximately 34% to 39% for the SSP5-8.5 future climate scenario.

Implications for closure

- Future climate conditions are anticipated to increase probable maximum precipitation and rainfall events which may impact existing closed infrastructure.
- Extreme rainfall events could impact assets such as diversion channels, spillways, culverts/ditches, and site access.
- Increased evaporation may affect the dynamics of the site water balance and the ability to ensure that a water cover is always maintained as initially designed.

5.4.1 Site-Specific Climate

Figure 1 An example summary box from a closure management plan

3.2.2 Executive summary

The executive summary provides a concise, high-level synthesis of the material findings, key risks and overarching implications presented in the CMP. It is intended to orient the reader early, highlight the most important messages and provide a coherent overview before the more detailed sections that follow. This structure allows readers with differing levels of technical interest or available time to quickly understand the preferred outcome(s) for the site including scope, context and relevance while maintaining clear linkage to the supporting detail within the body of the document. This section of the CMP is primarily written for senior asset level personnel who require a key high-level understanding of the site. It also forms an excellent communication tool for site visits of internal stakeholders who require an overview of the closure strategy for any given site. This summary is typically 3 to 4 pages in length and covers the following items:

- Summary of the site: commodity, operational and closure periods, site location and current site status.
- Closure outcomes and summary: the preferred closure outcome(s) for the site and a brief rationale as applicable.
- Priority closure activities, schedule and decision points: key pieces of current or planned work at the site and when they are planned to occur. This section also includes information about the key decision points that are expected at the site in the next five years. The intent is to provide senior leadership early notification of when decisions and/or support may be required from them to achieve a specific outcome or execute a specific activity.
- Key site characteristics: key details about the site location and/or physical attributes of the site.

- Current operational status and ongoing operational activities at the site: includes details about the current works being undertaken by operational personnel at the site.
- Primary obligations: key site regulatory, legal, corporate and community obligations and commitments.
- Stakeholder engagement: overview of the status of stakeholder engagement at the site that leadership should be aware of, especially regarding how these engagements may impact achievement of the chosen outcome.
- Key risks (threats) and opportunities: overview of the material risks (threats) that exist at the site and those opportunities that are present to extract value from the site.
- Key closure data/knowledge gaps: this section clearly articulates the key information that is missing from the site knowledge base that could influence or impact the achievement of the closure outcome. This information is critically important to the executive summary section as it provides justification for the proposed work program and explains what work is proposed and when that work is scheduled. These scopes of work are tied to the closure outcome.

3.2.3 Executive briefing

The executive briefing includes the site closure strategy in a format that can be easily lifted and shifted into presentations, briefs or pre-read material for senior leaders and is presented in a one page format. The executive briefing is the first page of the CMP and is a simple table including:

- a site summary
- the outcome(s) and rationale
- the priority closure activities
- a schedule and decision points
- key risks (threats) and opportunities.

The content in this table is sourced from the executive summary (Section 3.2.2).

3.2.4 Decision records

Decision records are structured documents used to formally capture significant closure-related decisions. Information within the decision record typically includes the context of the decision/opportunity, options considered, supporting rationale, identified risks (threats) and opportunities, and the resulting recommendation and approval. They provide a transparent and auditable link between technical assessments, risk evaluation and management judgement at a specific point in time.

Decision records are used to clearly document closure decisions, which facilitates internal alignment and provides a defensible record to future reviewers as site conditions, personnel or external expectations change. By recording not only what decision was made but why it was made and which alternatives were consciously rejected, decision records support consistency, accountability and continuity in long-term closure stewardship. Decision records aim to avoid duplication in future work by clearly articulating why decisions were made and by ‘storing’ them in the CMP, they are prevented from getting ‘lost’. The decision records also clearly articulate what needs to be true for a decision to change. For example, a decision to not re-mine at a particular site may have been made due to uneconomical resources at the site; however, a significant rise in commodity prices or the availability of new technology may make the remaining mineral inventory a worthwhile consideration in the future. This information would all be articulated within the decision record.

3.2.5 Closure strategy pathway flowcharts

The closure strategy pathway flowcharts consolidate CMP information into a single, easy-to-follow graphic. They show the current base case closure outcome (often long-term management), the preferred closure outcome(s) and the key activities and decision points required to progress along that pathway.

The act of developing these flowcharts helps distinguish knowledge gaps that are material to progressing the pathway from those that are not. The flowcharts also make clear the required decisions and subsequent activities in the event of a positive or negative decision at that point, which may include reversion to the base case closure outcome(s). The flowcharts also focus solely on closure-related activities and deliberately exclude routine operational, compliance or monitoring tasks for increased clarity. An example flow chart is presented in Figure 2.

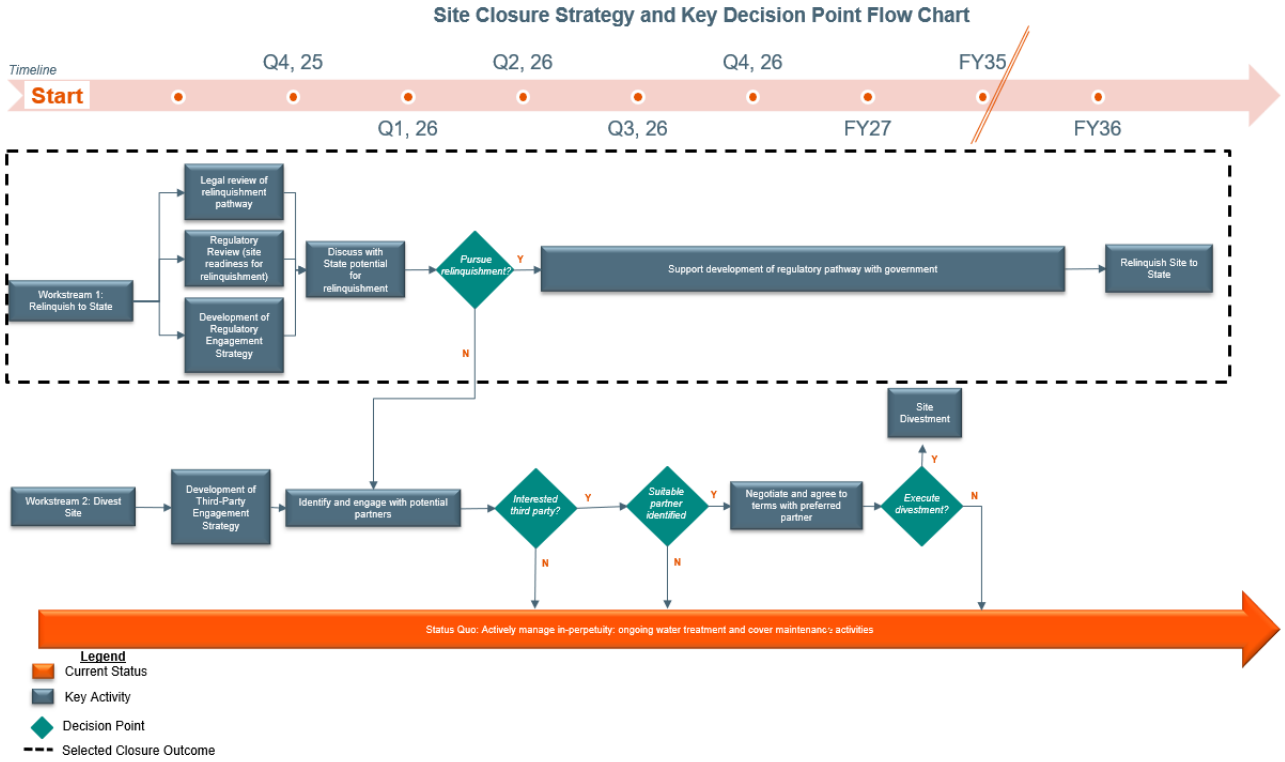


Figure 2 An example flow chart (provided for illustrative purposes only)

This simplicity supports alignment of the work required and how it progresses the site towards the preferred outcome(s), improving the efficiency of resource allocation. The flowcharts also indicate when a pathway is no longer achievable and work should cease or be deferred until conditions change. A nominal timeline, developed through activity table development and the associated 'bottlenecking' exercise (Section 5) is also included. As such, the flowcharts are an effective communication tool for management, executives and decision makers.

The flowcharts are most efficiently compiled in conjunction with the activity tables (Section 5).

4 Repurposing: choosing a post-mining land use

While responsible divestment and relinquishment will typically deliver a greater benefit to most stakeholders at a site through potential for increased economic development, site-specific characteristics may not always lend themselves to support such an outcome. Where repurposing or post-mining land use is considered, options are assessed for our Legacy Asset sites on their intrinsic suitability rather than aspiration. This includes consideration of land capability and physical condition, environmental and cultural considerations, and the local and regional economic context. Proposed land uses must be compatible with surrounding land

uses and regional development planning and must be consistent with the selected closure outcome, particularly where land tenure transition through responsible divestment or relinquishment is being pursued.

The alternate value stream (AVS) process provides a structured, repeatable methodology for identifying, evaluating and progressing value-accretive opportunities on our sites, such as repurposing. An AVS is defined as an opportunity that extracts economic and/or non-economic value from residual landholdings following mining, either at a single site or across multiple sites. Economic, social, environmental and risk considerations are all explicitly assessed to ensure alignment with closure outcomes, objectives and broader corporate standards.

The process is aligned with BHP's internal standards and requirements to ensure that AVS opportunities are evaluated within a closure-consistent and risk-aware framework. Importantly, the AVS process is not limited to late-stage closure but can be applied at any point where alternative land uses may influence long-term outcomes, liabilities or value.

4.1 Alternate value stream methodology

The AVS methodology follows 5 core steps: identify, evaluate, decide, execute, and monitor and learn (Figure 3).

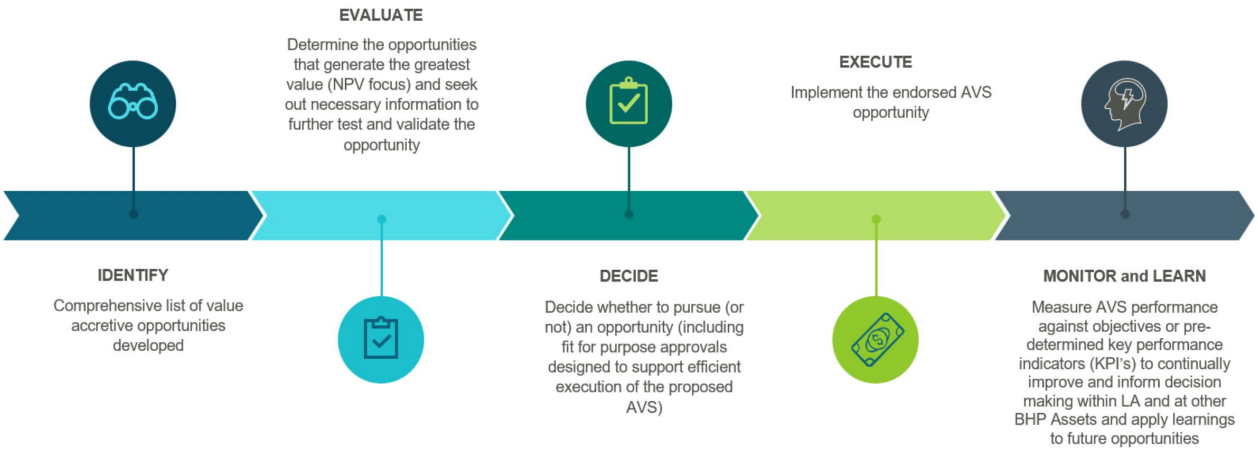


Figure 3 BHP alternate value stream process summary

The identify step is intentionally broad and unconstrained. A comprehensive long-list of potential post-mining land use options is developed using a standardised fatal flaw screening tool, supplemented by structured brainstorming sessions with regional managers, site personnel, and technical specialists. The objective is to capture the full range of realistic opportunities that may be present at the site, with identification of opportunities informed by site or domain level characteristics, regional context and practitioner insight, without prematurely filtering opportunities based on perceived feasibility or value.

The evaluate step narrows this long-list through a staged assessment. Options are first screened using the fatal flaw tool to remove alternatives that are incompatible with fundamental site attributes (e.g. a site with limited sunshine would not be suitable for a solar farm development), regulatory constraints and/or BHP values. Surviving options are then evaluated using a simplified economic model to estimate net present value on a consistent basis, typically over a 25-year horizon, with assumptions clearly documented. In parallel, a multi-criteria analysis is undertaken to assess non-economic factors such as risk, social alignment, closure compatibility and long-term liability implications. The outputs are a ranked shortlist of AVS opportunities supported by both quantitative and qualitative evidence. Figure 4 is an illustrative example of how the non-economic and economic assessment outcomes were presented and utilised for determining what opportunities were worth further pursuit.

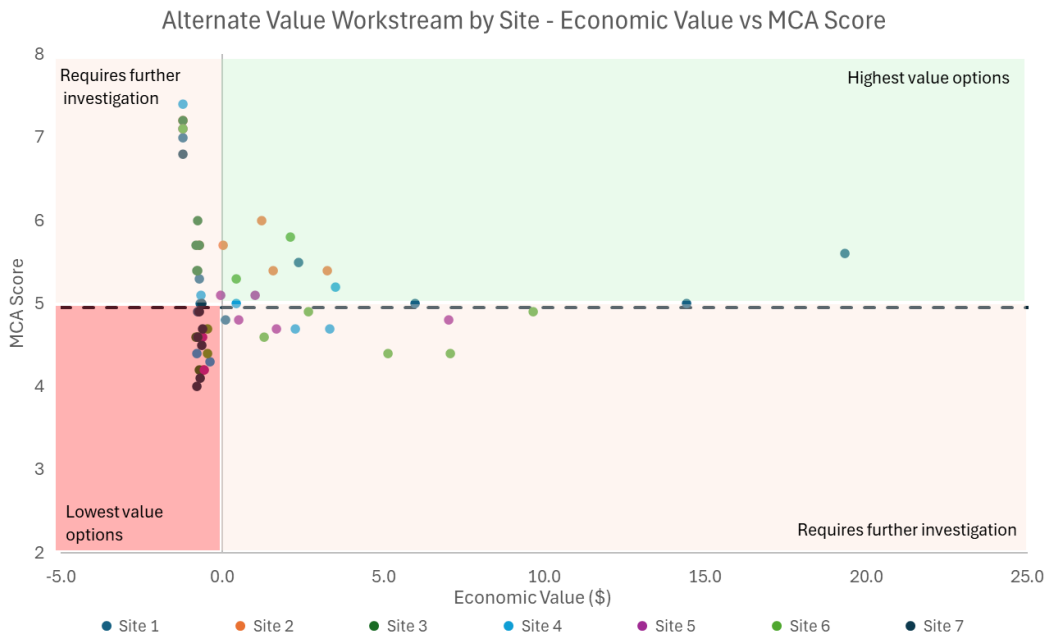


Figure 4 An example of a post-mining land uses alternate value stream assessment output

The decide step embeds governance and transparency. Shortlisted opportunities are assessed against other asset activities and closure priorities, and formal decision records are prepared to document whether opportunities will proceed, be deferred or not be pursued. These records are incorporated into the site's CMP, ensuring traceability of decisions and reducing the likelihood of repeated reassessment.

Where an opportunity is endorsed, it moves to execute using fit-for-purpose BHP project governance mechanisms proportional to the scale and risk of the opportunity. Approval thresholds are clearly defined to ensure appropriate oversight, particularly where investments are material, cross-jurisdictional or may alter closure outcomes or risk profiles.

Finally, Monitor and Learn ensures continuous improvement. Implemented opportunities are tracked against expected outcomes, with lessons learned captured and fed back into future AVS assessments. This step reinforces portfolio learning and supports refinement of assumptions, screening tools and evaluation criteria over time.

Overall, the AVS process provides a disciplined pathway to unlock residual value while maintaining closure integrity, regulatory defensibility and long-term risk management across the Legacy Assets portfolio.

5 Creating closure activity tables: giving the closure management plan a 'day job'

5.1 Closure activity tables

The closure activity tables (CATs), combined with the strategy pathway flowcharts (Section 3.2.5), are where the closure strategy and planning effort is translated into tangible, executable work in the short to medium term, for example, across a 5 year timeframe.

The CATs, along with the closure strategy pathway flowcharts, form the operational core of the CMP. These sections are deliberately designed to connect historical information, technical knowledge and identified risks directly to the closure strategy and the activities required to achieve the agreed closure outcome(s) for each site. In practical terms, the CATs support the treatment of the closure strategy as an achievable and clear pathway of actively managed activities that inform near-term decision-making, rather than an abstract future state.

Each activity captured within the CATs is explicitly linked to closing an identified knowledge gap, addressing a risk, pursuing an opportunity or to directly progress the site toward its defined closure outcome(s). As with the flowcharts, the CATs focus solely on closure-related activities and deliberately exclude routine operational, compliance or monitoring tasks, thereby providing clarity on what work is necessary for achieving closure outcome(s) versus what is required to simply maintain the site. This distinction enables critical challenge of ongoing or proposed work that does not clearly align with the closure strategy, which strengthens discipline and prevents dilution of effort and spend.

The CATs also play a central role in annual planning and budgeting processes. By clearly articulating the objective, rationale and risk linkage for each activity, the tables support justification for financial and personnel resources and provide transparency around why specific work is proposed (and equally, why some work has been de-prioritised).

Each activity is assigned a category and priority rating, which feeds directly into BHP Legacy Assets' annual bottlenecking exercise. This portfolio-wide process balances funding and personnel capacity to direct resources toward the sites and activities that deliver the greatest value from a risk-reduction, opportunity-enhancement and financial perspective or that have a clear timing imperative, while avoiding unrealistic expectations of delivery under constrained resourcing. The CAT table headers are presented in Figure 5.

CMP FYs	Closure Outcome and Strategy	Closure Activity	Activity Description / Objective	Activity Rationale (Regulatory Requirement / Data Gap / Risk (Threat or Opportunity))	Closure Risk (Strategic, Interconnected or Opportunity)	CMP Activity #	Category Rating
Fiscal year of planned execution.	*Include a single line related to how this activity supports the specific outcome and/or strategy. (example Baseplan -*	*Name of activity (ensure consistency with study/project names for clarity).*	*Include a description of what is being done and the expected outcome from the activity.*	*Describe why the activity is required Does it close a knolwedge gap, reduce risk, realize an opportunity?*	*Use drop down menu to populate*	*Each activity should be numbered, once as YY-# (ex. 25-1). For multi year activities this number should not change but carried through completion.*	*Use drop down menu to populate. A through D as per Activity Table Work Instruction Appendix 3/Priority Table Tab.*

Figure 5 Header from an example closure activity table showing that the status and owner of each activity is also tracked

Importantly, the CATs are designed to accommodate flexibility without compromising closure integrity. While the results of the bottlenecking exercise may alter the timing or sequencing of individual site activities, such changes do not undermine the overall closure strategy, pathway or outcome(s) for a site. Instead, the CATs retain clear line-of-sight between closure outcomes and required actions, acknowledging that reprioritisation reflects resource availability rather than a loss of strategic intent. In this way, the CATs function as a live closure delivery tool, embedding closure planning into business-as-usual processes while maintaining focus on long-term outcomes.

5.2 Site integration teams

Site integration team (SIT) meetings provide a governance and coordination mechanism that ensures CATs remain active, current and effective. These meetings focus on tracking progress against agreed closure activities, reviewing upcoming work and confirming alignment between planned actions and the site's closure outcomes. In doing so, SIT meetings provide regular visibility of delivery status and act as the primary forum for assessing whether activities are progressing as intended.

SIT meetings are deliberately structured to include key personnel from the site, relevant support functions, and leadership, supporting the effective integration of closure planning and delivery into broader site and asset decision-making processes. This structure enables timely identification of changes that may affect closure activities, including emerging risks or opportunities, potential shifts in closure outcomes, evolving asset strategy, or changing resourcing implications. By providing a formal mechanism for discussing and documenting these changes, SIT meetings help maintain alignment between closure objectives, execution plans and resource allocation, while ensuring that closure remains integrated into business-as-usual governance rather than managed as a parallel or isolated process.

As identified in Section 3.1, an important part of this process is recognising that some knowledge gaps do not need to be closed to achieve the preferred closure outcome(s). For example, limited information about the regional economic context may not be material for a small, fully closed site with no viable responsible divestment or repurposing options where the agreed outcome is long-term stewardship. If the outcome were to shift to responsible divestment or re-mining, however, this information could become highly relevant and would be incorporated into the CATs and pathway flowcharts. To reduce future rework, known non-material gaps are captured in an appendix as a reference for CMP users and site stakeholders should the closure outcome(s) change.

6 Illustrating outcomes in practice: it works

Defining and documenting closure outcomes early is only valuable if those outcomes meaningfully influence decisions, priorities and stakeholder engagement. Across the Legacy Assets portfolio, outcome-led closure planning has supported a range of tangible pathways, from responsible divestment to long-term stewardship combined with repurposing opportunities. The examples below illustrate how clearly articulated outcomes allow CMPs to move beyond theory and actively guide value-aligned execution.

6.1 Responsible divestment: San Manuel, Arizona (illustrative example)

The proposed divestment of the San Manuel site in Arizona provides a clear example of a closure outcome being deliberately pursued and supported through structured planning and engagement. In February 2026, Faraday Copper Corp. announced a non-binding letter of intent to acquire BHP's San Manuel property, located adjacent to Faraday's Copper Creek project, with consideration to BHP in the form of equity rather than a traditional cash sale. Under the proposed transaction structure, Faraday would acquire 100% of the San Manuel property, including historical plant infrastructure, tailings facilities and mineral rights and would assume environmental and closure liabilities, while BHP would retain an equity interest in Faraday as a strategic investor. This structure illustrates an outcome-based approach to closure planning: the preferred outcome for San Manuel is responsible divestment to a party capable of extracting value from the site as well as assuming all liability, while aligning with regional land use, infrastructure re-use and critical mineral supply objectives while generating significant economic development in the region. The terms of the agreement were informed by consideration of the long-term stewardship framing (Section 2.2).

Rather than framing San Manuel solely as a long-term liability requiring ongoing stewardship, application of outcomes driven closure planning mindset identified the site's residual value, existing infrastructure and regional development drivers as a divestment opportunity to be pursued. A strategic closure pathway was subsequently developed, followed by definition of specific closure activities relevant to stakeholder engagement, commercial strategy and prioritised technical studies, each with a responsible party and timeframe (Section 5.1). The execution of these activities has supported tangible progression along a credible divestment pathway rather than defaulting to perpetual management assumptions and activities.

While non-binding and subject to due diligence and approvals at the time of writing, the San Manuel example demonstrates how clearly defined closure outcomes can enable flexible, value-aligned pathways that transfer both opportunity and responsibility in a defensible, transparent manner.

6.2 Repurposing and green energy opportunities across the portfolio

In parallel with responsible divestment pathways, outcome-led closure planning has supported assessment and progression of repurposing opportunities across the Legacy Assets portfolio, particularly in relation to green energy and renewable power generation opportunities.

Many legacy sites possess characteristics that may be well suited to renewable energy development, including large landholdings, existing access, proximity to transmission corridors and limited competing land uses. In this context, green energy opportunities (such as solar, wind and/or geothermal projects) are assessed as potential AVS opportunities where they align with the defined closure outcome, reduce long-term liabilities or create economic and social value for local communities.

Importantly, these opportunities are not pursued in isolation. Instead, they are explicitly tested through the AVS methodology (Section 4) and embedded within outcome-led closure planning. For sites where long-term stewardship is the base case outcome, repurposing for renewable energy may provide a pathway to reduce net carrying costs, improve land use compatibility or support eventual responsible divestment. For sites targeting responsible divestment, early consideration of renewable energy potential can improve land value, stakeholder interest and transaction readiness.

The outcome-focused framework ensures that green energy projects are progressed only where they are intrinsically compatible with site conditions and closure obligations. This avoids aspirational post-mining land use concepts that introduce new risks or undermine regulatory credibility. Where conditions are unsuitable, the CMP and included decision records (Section 3.2.4) document the rationale for not pursuing such options, preserving decision traceability and preventing repeated reassessment.

7 Conclusion

This paper demonstrates that CMPs are most effective for driving internal decision-making and action when they are developed and applied as outcome-led, decision-driving tools rather than static compliance documents. By explicitly anchoring closure planning to the site's final transition point (relinquishment, responsible divestment, long-term stewardship or a combination, all of which can be combined with repurposing), closure planning shifts from an abstract future state to a practical, operational framework that informs day-to-day decisions and investment priorities.

The approach presented, developed through experience across BHP's Legacy Assets portfolio, emphasises realistic and risk-informed closure outcomes, structured and collaborative opportunity assessment, and disciplined documentation of decisions. Together, these elements provide clarity, traceability and governance, reducing repeated reassessment while improving alignment across technical, operational and leadership teams. Embedding summary views, executive-focused content, decision records and simple graphic flowcharts of the pathway to the preferred outcome(s) within CMPs ensures that both the rationale and the implications of closure decisions remain visible and durable over time.

Critically, translating closure planning into executable activities through CATs and integrating these into routine planning, budgeting and governance processes gives CMPs a day job. This supports closure strategy being actively managed, prioritised and resourced alongside other asset activities, while retaining flexibility to respond to changing conditions without losing sight of the agreed outcome.

The examples presented in the paper reinforce that defining closure outcomes is not about locking sites into a single, inflexible end state. Rather, it provides a structured lens through which opportunities such as responsible divestment, repurposing or continued stewardship can be assessed, progressed or consciously set aside. By anchoring CMPs to realistic outcomes and documenting how those outcomes are being actively pursued (or why they are not), closure planning becomes an enabling function that supports value creation, risk reduction and credible long-term stewardship.

Overall, this outcome-centric, execution-focused approach positions CMPs as a single source of truth that supports long-term stewardship, regulatory credibility, clear communication, efficient resource application and value-driven decision-making. By embedding closure planning into business-as-usual processes, CMPs become living instruments that guide sites efficiently and defensibly toward their intended end states.

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