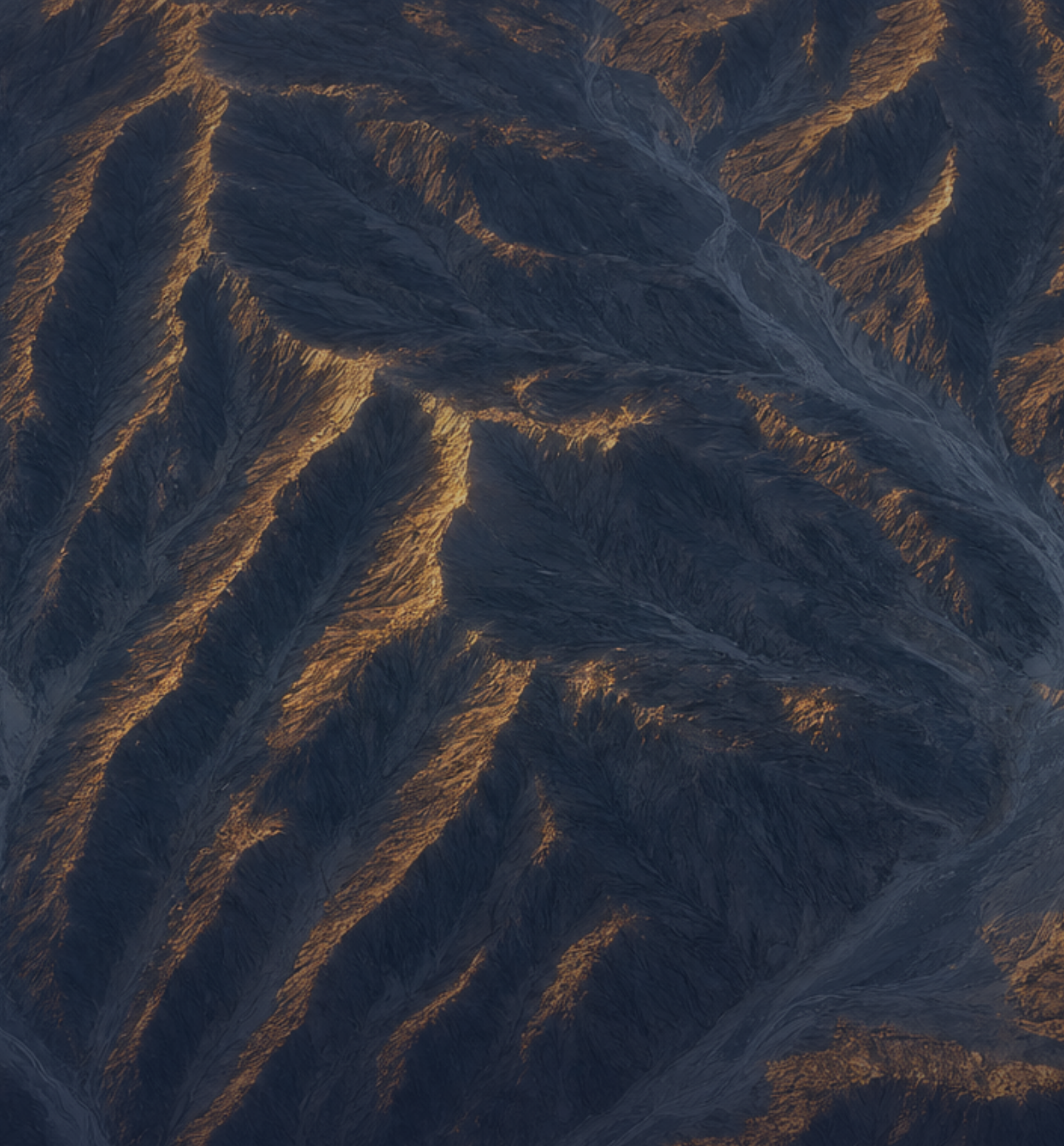


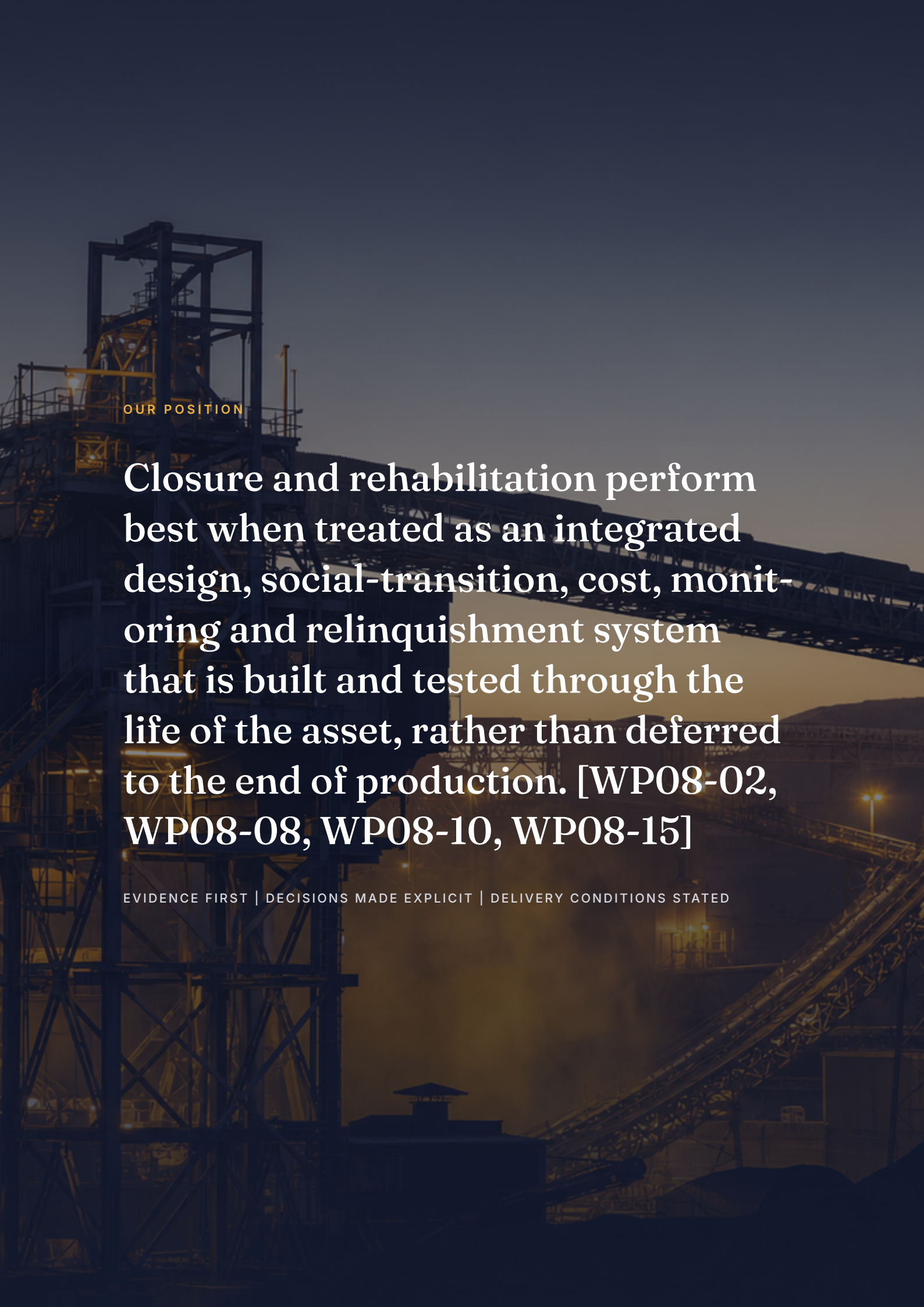
AURUS MINING

Designing the End State

Mine closure and rehabilitation from the first life-of-mine decision

WP08 | SUSTAIN

MINING | INFRASTRUCTURE | ENGINEERING | ENVIRONMENT



OUR POSITION

Closure and rehabilitation perform best when treated as an integrated design, social-transition, cost, monitoring and relinquishment system that is built and tested through the life of the asset, rather than deferred to the end of production. [WP08-02, WP08-08, WP08-10, WP08-15]

EVIDENCE FIRST | DECISIONS MADE EXPLICIT | DELIVERY CONDITIONS STATED

Contents

Executive summary

ICMM's Integrated Mine Closure Good Practice Guide (second edition, 2019) frames closure as part of life-of-mine planning, not a task reserved for the end of production. This framing changes how early decisions are made. Concept choices set the envelope for future closure land use, closure work packages, and the governance needed to keep closure planning current as the asset and its external setting change. An integrated approach also forces clarity on what "done" means, because success criteria must be testable and suitable for monitoring and eventual relinquishment decisions.

Sources: WP08-01, WP08-02, WP08-08, WP08-09

The guide positions the closure knowledge base as a managed asset. It must be developed and updated, with risks and opportunities read against changing site conditions and changing stakeholder expectations. This knowledge base then feeds a closure vision, principles, and objectives that are refined as evidence accumulates and engagement matures. Treating the knowledge base as a living system supports disciplined reviews, avoids closure planning as a one-off document exercise, and helps life-of-mine teams understand the closure consequences of operational change.

Sources: WP08-03, WP08-04

Integrated closure planning makes post-closure land use a design input, to be evaluated with the people and institutions that will live with the outcome. Engagement is not limited to broad consultation. The guide calls for identifying stakeholders and consulting on the closure vision, land use, and success criteria. In parallel, closure risks and opportunities should be identified, assessed, assigned, and reviewed through the asset lifecycle. This builds a closure plan that can explain trade-offs and can show how decisions respond to evidence.

Sources: WP08-05, WP08-06, WP08-07

Delivery relies on translation from objectives into work packages, credible cost estimation that is updated as the plan changes, and an execution plan that sequences and controls the work. Monitoring, maintenance, and management then continue through closure and post-closure until agreed criteria are demonstrated. Relinquishment follows as a pathway supported by evidence and agreement, not as a date assumed in the original schedule. The guide also distinguishes temporary or sudden closure readiness and calls for clear closure governance with accountable roles.

Sources: WP08-08, WP08-12, WP08-13, WP08-14

At a glance

Six evidence markers establish the scale, threshold or decision condition carried into the chapters that follow.

2019

PRIMARY SOURCE EDITION FOR THIS PAPER

Source: WP08-01

Scope

CLOSURE INTEGRATED INTO LIFE-OF-MINE PLANNING

Source: WP08-02

Trace

MAINTAIN AND UPDATE A CLOSURE KNOWLEDGE BASE

Source: WP08-03

Gate

SUCCESS CRITERIA MUST BE TESTABLE FOR MONITORING AND DECISIONS

Source: WP08-09

Workstreams

TRANSLATE OBJECTIVES INTO PHYSICAL, ENVIRONMENTAL, SOCIAL AND GOVERNANCE WORK

Source: WP08-08

Hold

RELINQUISHMENT IS EVIDENCE-LED AND AGREEMENT-BASED, NOT SCHEDULE-LED

Source: WP08-15

Method and boundaries

This paper is a bounded synthesis of registered public evidence. Source identifiers remain visible so that each quantitative or framework statement can be traced to its dossier row.

INTENDED READERS

- Asset presidents and general managers
- Closure and rehabilitation leads
- Life-of-mine planners and technical services managers

READING METHOD

- Read each chapter opener as a decision frame.
- Use the three section exhibits as working review instruments.
- Return to the evidence ledger before reusing any number or requirement.

BOUNDARIES

- This white paper is a practice synthesis based only on ICMM's Integrated Mine Closure Good Practice Guide, second edition (2019). [WP08-01]
- The source is guidance and is not a jurisdiction-specific legal instrument; readers must apply relevant local legal and regulatory requirements separately. [WP08-01]
- No Aurus delivery outcomes, site examples, or measured closure results are stated because they are not evidenced in the registered dossier. [WP08-01]
- All decision tools and exhibits are frameworks derived from the guide's described practices; they are not performance benchmarks or quantified forecasts. [WP08-01]

PUBLICATION DISCIPLINE

- No client identity or company-age claim is published.
- No Aurus delivery result is inferred from public guidance.
- Dated forecasts retain their institution and vintage.

01

FRONT-END DEFINITION

Closure begins at concept

Treat closure as a design constraint and governance commitment from the first life-of-mine framing decisions.

Gate

LIFE-OF-MINE INTEGRATION DECISION POINT | WP08-02

Accountable

CLOSURE GOVERNANCE AND READINESS ARE EXPLICIT ROLES AND SYSTEMS | WP08-16

Packages

OBJECTIVES TRANSLATE INTO WORK PACKAGES THAT CAN BE PLANNED AND CONTROLLED | WP08-08

1.1 1.1 Put closure inside life-of-mine planning

Integrated closure planning sits inside life-of-mine planning. The practical implication is that concept stage design decisions must be made with an explicit view of their closure consequences, rather than treating closure as a future compliance document. When closure is part of the plan, the asset team can state what the end state is intended to achieve, what information is still missing, and which decisions are being taken now that will narrow future options. This also supports greater uniformity of practice by creating a common set of closure planning expectations across assets and project phases.

WP08-01, WP08-02

A concept stage closure view should not pretend to be final. It should behave as an initial integrated frame that is refined as the asset changes and as knowledge improves. The guide's intent is disciplined approach rather than a fixed template. Teams can use this intent to embed closure checkpoints into business planning cycles, so that closure design inputs and constraints are revisited when mine plans, processing routes, tailings strategies, or operating assumptions shift. This approach reduces late surprises by making closure implications visible at the same time as production value is being assessed.

WP08-01, WP08-02

DECISION INSTRUMENT

Concept stage closure gate: decision prompts

Use early gates to force explicit statements on end state intent, knowledge gaps, and integration with life-of-mine planning.

TEST	EVIDENCE READING	DECISION RESPONSE
Integration check	Is closure planning explicitly included in life-of-mine planning deliverables and review cycles?	If not, add a closure planning gate to the life-of-mine calendar and assign accountable owners.
Uniformity check	Are closure planning expectations consistent with a disciplined, uniform approach across projects?	If not, adopt the guide structure as a minimum content standard for planning.
Work package framing	Have initial closure objectives been translated into candidate work packages for later definition?	If not, draft a first work package list linked to concept assumptions.
Readiness check	Is temporary or sudden closure readiness considered in early governance thinking?	If not, add readiness requirements to the concept risk and governance agenda.

Sources: WP08-01, WP08-02, WP08-08, WP08-16

1.2 1.2 Establish closure governance and readiness

Closure governance is a system, not a meeting. The guide calls for assigning company standards, committees, and accountable roles so that closure planning is managed through the asset lifecycle. This is particularly important where ownership of closure tasks can drift between functions such as environment, operations, and projects. Governance should make it clear who maintains the closure plan, who approves changes, and how closure risks and opportunities are escalated. With governance in place, closure planning becomes a controlled part of management rather than a late-stage technical report.

WP08-16, WP08-02

The guide also distinguishes temporary or sudden closure readiness. This is not a prediction of shutdown timing. It is an acknowledgement that closure can be forced by conditions outside the life-of-asset schedule, and that readiness needs its own planning attention. Readiness questions include whether the closure knowledge base is current, whether near-term actions are identified, and whether roles and decision rights are clear. Treat readiness as a design requirement for the management system, so that the asset can shift from operations to closure without losing control of commitments or evidence.

WP08-16, WP08-03

DECISION INSTRUMENT

Closure governance and readiness map

A simple instrument to confirm governance roles and sudden closure readiness are real, named, and maintained.

TEST	EVIDENCE READING	DECISION RESPONSE
Standards owner	Closure standards and minimum plan content are defined and owned.	Assign an owner and approval route for closure standards.
Accountable roles	Named roles exist for plan maintenance, risk review, engagement inputs, and evidence management.	Confirm role descriptions and decision rights across functions.
Readiness triggers	Temporary or sudden closure triggers and first-response actions are identified.	Create a readiness checklist and test it in management reviews.
Governance cadence	Closure is reviewed on a defined cadence aligned to life-of-mine planning.	Set review frequency and include closure change control rules.

Sources: WP08-16, WP08-02

1.3 1.3 Translate intent into closure work packages

Closure activities translate objectives into physical, environmental, social, and governance work packages. This translation step matters at concept because it forces specificity. It also creates a structure that later supports sequencing, resourcing, and control through an execution plan. Even when the work package scope is high level, the act of naming packages clarifies what will be built, monitored, maintained, and managed through closure and post-closure. It also helps identify interfaces between packages, such as where landform design links to monitoring requirements and where social transition commitments rely on governance and engagement arrangements.

WP08-08, WP08-14

A work package view should remain aligned to life-of-asset planning. As the closure plan changes, cost estimates and schedules must change with it. The guide's approach pushes teams away from "end of mine" thinking and towards continuous planning that can absorb operational change. This matters because design choices made for production can create long-lived closure obligations. By maintaining a work package register that is updated as knowledge improves, the asset team creates a stable basis for cost updates, risk reviews, and future execution planning, without pretending that package details are already fixed.

WP08-08, WP08-12, WP08-02

DECISION INSTRUMENT

Work package starter set: from objectives to deliverables

A decision tool to check that closure intent is expressed as controllable packages across the required domains.

TEST	EVIDENCE READING	DECISION RESPONSE
Physical	Packages exist for landform and infrastructure actions needed to meet the closure objectives.	If missing, define physical packages and link to objectives.
Environmental	Packages exist for rehabilitation, protection measures, and post-closure management tasks.	If missing, define environmental packages and expected monitoring links.
Social	A distinct social transition package is identified with planning and investment needs.	If missing, create a social transition package with accountable ownership.
Governance	Packages exist for governance tasks including engagement on success criteria and evidence management.	If missing, define governance packages and review cadence.

Sources: WP08-08, WP08-11, WP08-06

02

EVIDENCE AND CHANGE CONTROL

The closure knowledge base

Build and maintain a closure knowledge base that can absorb change, drive risk reviews, and support disciplined decisions.

Trace

DEVELOP AND UPDATE THE CLOSURE KNOWLEDGE BASE | WP08-03

Review

RISKS AND OPPORTUNITIES ARE RE-VIEWED AGAINST A CHANGING SETTING | WP08-03

Assign

RISKS AND OPPORTUNITIES ARE AS-SIGNED AND REVIEWED THROUGH THE LIFECYCLE | WP08-07

2.1 2.1 Define what the knowledge base must contain

The guide calls for a closure knowledge base that is developed and updated. The value of the concept is practical. Closure planning depends on a body of evidence, assumptions, and decisions that must remain legible over time as people change and as the asset evolves. A useful knowledge base captures the current closure vision and objectives, design assumptions, engagement outcomes, identified risks and opportunities, and the evolving set of success criteria. It also records what is not yet known and what work is required to reduce uncertainty. Without this, later closure planning becomes a series of disconnected updates that cannot show continuity or rationale.

WP08-03, WP08-04, WP08-09

Treat the knowledge base as controlled information rather than a folder of reports. The guide's emphasis on disciplined practice supports clear ownership and update rules. When closure planning is part of life-of-mine planning, the knowledge base must also connect to the life-of-asset schedule and to the closure plan itself. This does not require prediction of every closure activity at concept, but it does require a defined minimum set of records that are updated when design, operating modes, or external expectations change. This approach helps keep closure decisions aligned with current conditions and avoids reliance on outdated assumptions.

WP08-03, WP08-02

DECISION INSTRUMENT

Closure knowledge base minimum content: decision checklist

Confirm whether the closure knowledge base is sufficient to support planning, review, and evidence-based decisions.

TEST	EVIDENCE READING	DECISION RESPONSE
Vision and objectives	Current closure vision, principles, and objectives are recorded with version control.	If missing, document and publish a controlled baseline.
Risks and opportunities	Identified closure risks and opportunities are captured with ownership and review dates.	If missing, initiate a lifecycle risk and opportunity register.
Success criteria	Draft and agreed success criteria are recorded as testable statements.	If missing, begin criteria definition and note data needs.
Change log	Key closure-related decisions and assumption changes are traceable.	If missing, implement a change control log tied to reviews.

Sources: WP08-03, WP08-04, WP08-07, WP08-09

2.2 2.2 Update discipline: read change in asset and setting

The guide emphasises that the closure knowledge base must be updated, with risks and opportunities read against a changing asset and external setting. This is a technical and social requirement. Internally, mine plans, infrastructure layouts, and operating strategies evolve. Externally, stakeholder expectations and institutional capacity can shift. The closure plan remains credible only if it is refreshed in step with these changes. An update discipline is therefore a management practice: define triggers for review, define who leads the update, and ensure the outcomes feed back into life-of-mine planning rather than sitting beside it.

WP08-03, WP08-02

Update discipline should connect directly to closure risk and opportunity reviews. The guide's lifecycle approach requires that closure risks and opportunities are identified, assessed, assigned, and reviewed through the asset lifecycle. When a trigger event occurs, teams should ask what new risks appear, what existing risks change, and what opportunities become available. This keeps the closure plan adaptive without losing control. It also supports consistent engagement because changes to closure vision, land use intentions, and success criteria can be explained as evidence-led responses rather than ad hoc shifts. The knowledge base becomes the record that supports that explanation.

WP08-07, WP08-03, WP08-06

DECISION INSTRUMENT

Knowledge base update triggers and actions

A framework to decide when an update is required and what the update must produce.

TEST	EVIDENCE READING	DECISION RESPONSE
Trigger	Material change in life-of-mine plan or operating strategy.	Update closure assumptions and re-run risk and opportunity review.
Trigger	New information from progressive closure or monitoring.	Update methods, success criteria readiness, and evidence files.
Trigger	Shift in stakeholder expectations related to vision, land use, or criteria.	Update engagement inputs and revise objectives where justified.
Output	Controlled revision to closure plan components and registers.	Issue a versioned update and communicate changes through governance.

Sources: WP08-02, WP08-03, WP08-06, WP08-07, WP08-10

2.3 2.3 Use the knowledge base to support decisions

A closure knowledge base should shape decisions rather than archive them. When closure is integrated into life-of-mine planning, decision forums can require that proposals state their closure implications and reference the current closure plan and registers. This creates a disciplined approach and improves uniformity of practice because teams rely on a shared evidence base. It also supports early translation into work packages, because the knowledge base holds the objective-to-package links and the rationale for each package. Over time, the knowledge base becomes the place where progressive closure results and monitoring outcomes are interpreted against success criteria, rather than remaining as isolated technical results.

WP08-02, WP08-01, WP08-08, WP08-10

Decision use also requires traceability. The guide positions relinquishment as an evidence-supported pathway, not a date. That means teams must be able to show how the closure plan evolved, why success criteria were set, and how monitoring demonstrates criteria achievement. A managed knowledge base provides this trace. It also supports closure execution planning because the long-term strategy must be converted into sequenced, resourced delivery. Without traceable inputs, execution plans risk becoming schedule artifacts detached from the agreed closure intent and from stakeholder engagement outcomes. Traceability links governance, execution, and long-term evidence needs into one system.

WP08-15, WP08-09, WP08-13, WP08-03

DECISION INSTRUMENT

Decision record template: minimum closure fields

A simple structure to ensure that operational and project decisions remain linked to closure intent and evidence needs.

TEST	EVIDENCE READING	DECISION RESPONSE
Closure implication	Which closure objectives, work packages, or land use assumptions are affected?	If impacts are material, require closure review before approval.
Risk and opportunity update	Do risks or opportunities change, and who owns the update?	Update the lifecycle register and set review dates.
Success criteria impact	Does the decision change what will be monitored or demonstrated?	Revise success criteria pathway and monitoring plan as needed.
Evidence requirement	What evidence must be gathered through progressive closure or monitoring?	Add evidence tasks to work packages and execution planning.

Sources: WP08-03, WP08-07, WP08-09, WP08-10, WP08-13

03

INTENT AND OPTIONS

Vision and land use

Set a closure vision early, then refine it through engagement and evidence, with post-closure land use treated as a design input.

Vision

VISION, PRINCIPLES, AND OBJECTIVES ARE DEFINED AND REFINED | WP08-04

Land use

POST-CLOSURE LAND USE IS EVALUATED WITH AFFECTED PEOPLE AND INSTITUTIONS | WP08-05

Engage

CONSULT ON VISION, LAND USE, AND SUCCESS CRITERIA | WP08-06

3.1 3.1 Set the closure vision, principles, and objectives

Closure work begins with a vision, principles, and objectives. The guide frames these elements as the starting point for an integrated closure plan, with refinement expected as knowledge and stakeholder expectations develop. In practice, an early vision sets direction for design and planning choices, while principles describe how trade-offs will be handled and what constraints will be respected. Objectives then translate intent into statements that can later be expressed as work packages and success criteria. This structure creates a stable narrative that can be tested and updated, rather than relying on a static end-of-life document produced at shutdown.

WP08-04, WP08-02

Refinement is not a weakness. The guide explicitly expects the vision and objectives to evolve as knowledge improves and expectations change. The closure knowledge base provides the mechanism to manage that refinement and to keep it disciplined. When teams treat objectives as living commitments, they can use progressive closure actions to test methods and learn what works under site conditions. That learning can then be fed back into objectives and into the closure plan, ensuring that the vision remains achievable and that the work packages remain aligned to real performance, rather than to assumed performance.

WP08-04, WP08-03, WP08-10

DECISION INSTRUMENT

Vision to objectives: refinement loop

A decision instrument that keeps the closure vision stable while allowing evidence-led objective refinement.

TEST	EVIDENCE READING	DECISION RESPONSE
Baseline vision	Document the current vision and principles with version control.	Approve as a planning baseline and publish internally.
Objective test	For each objective, identify the evidence needed to confirm achievability.	If evidence is missing, add tasks to the knowledge base work plan.
Refinement trigger	Define what new knowledge or expectation change would require refinement.	If triggers are unclear, set review points aligned to lifecycle planning.
Feedback path	Link progressive closure learnings back to objectives and packages.	If links are weak, update package descriptions and learning logs.

Sources: WP08-04, WP08-03, WP08-10, WP08-08

3.2 3.2 Treat post-closure land use as a design input

Post-closure land use is a design input. The guide advises that it should be evaluated with the people and institutions that will live with the outcome. This shifts land use from a late-stage statement to an early constraint that informs physical closure design, rehabilitation approaches, and the type of monitoring evidence required. Land use options can carry different implications for long-term management needs and for what success criteria must demonstrate. Treating land use as a design input also reduces the risk of building closure works that later conflict with local expectations or institutional capacity.

WP08-05, WP08-09

Evaluating land use with affected parties should be connected to the closure vision and to engagement on success criteria. The guide's emphasis is not a single consultation event, but a planning practice that evolves as the asset evolves. As knowledge improves, land use options can be revisited and refined. That refinement should be recorded in the closure knowledge base so that the rationale and trade-offs remain clear. Land use evaluation also links back to progressive closure, because early rehabilitation and closure trials can provide site-specific evidence on whether proposed land use outcomes are feasible under the local conditions.

WP08-05, WP08-06, WP08-03, WP08-10

DECISION INSTRUMENT

Land use option screen: questions for decision forums

A framework to decide whether a land use option is ready to be adopted as a design input.

TEST	EVIDENCE READING	DECISION RESPONSE
Stakeholder and institution fit	Have relevant people and institutions been engaged to evaluate the option?	If not, pause adoption and schedule targeted engagement.
Design implications	Are physical and environmental work packages identified for the option?	If not, define required packages before committing to the option.
Testability	Can success criteria be expressed as testable statements for this option?	If not, refine the option or revise criteria approach.
Evidence plan	Is there a progressive closure or monitoring plan to build evidence under site conditions?	If not, create an evidence-building plan linked to packages.

Sources: WP08-05, WP08-06, WP08-08, WP08-09, WP08-10

3.3 3.3 Engagement: from stakeholders to agreed statements

Closure-plan engagement includes identification of stakeholders and consultation on the closure vision, land use, and success criteria. The guide's framing matters because it ties engagement to specific closure planning products, not to general communications. Identifying stakeholders is a technical step that should be documented, reviewed, and updated as the asset setting changes. Consultation then supports refinement of the vision and land use assumptions, and it improves the quality of success criteria by making them suitable for later agreement-based decisions. Done well, this makes closure planning more disciplined by linking engagement outputs to controlled plan versions.

WP08-06, WP08-04, WP08-09

Engagement also supports risk and opportunity management. Stakeholder expectations influence what risks matter and what opportunities are available for post-closure outcomes. The guide requires closure risks and opportunities to be identified, assessed, assigned, and reviewed through the lifecycle. Engagement outputs therefore need a defined path into the risk and opportunity register and into the closure knowledge base. This avoids a split where engagement is treated as narrative while risk management is treated as technical. The closure plan becomes stronger when engagement outcomes are translated into clear changes to objectives, work packages, or success criteria statements, with traceable reasons.

WP08-06, WP08-07, WP08-03, WP08-08

DECISION INSTRUMENT

Engagement to plan update: decision path

A simple control to ensure engagement outputs change the plan through defined mechanisms.

TEST	EVIDENCE READING	DECISION RESPONSE
Stakeholder register	Stakeholders are identified, and the list is reviewed as the setting changes.	If the register is static, schedule periodic review aligned to planning.
Consultation scope	Consultation covers vision, land use, and success criteria explicitly.	If scope is narrow, expand consultation topics to closure products.
Plan change control	Engagement outputs are assessed for impact on objectives, packages, and criteria.	If impacts exist, issue a controlled closure plan revision.
Risk integration	Engagement outcomes are reflected in risk and opportunity reviews.	If not, update the lifecycle register and assign owners.

Sources: WP08-06, WP08-04, WP08-05, WP08-07

04

ASSURANCE THROUGH TESTABILITY

Risk and success criteria

Manage closure risks and opportunities through the lifecycle and define success criteria that can be monitored and used for decisions.

Assign

IDENTIFY, ASSESS, ASSIGN, AND REVIEW CLOSURE RISKS AND OPPORTUNITIES | WP08-07

Testable

SUCCESS CRITERIA MAKE OUTCOMES MEASURABLE FOR MONITORING AND DECISIONS | WP08-09

Continue

MONITORING AND MANAGEMENT PERSIST UNTIL CRITERIA ARE DEMONSTRATED | WP08-14

4.1 4.1 Run closure risk and opportunity management through the lifecycle

The guide requires closure risks and opportunities to be identified, assessed, assigned, and reviewed through the asset lifecycle. This is a management discipline that complements technical design. It calls for clear ownership and a review rhythm that matches how the asset changes. A closure risk and opportunity register should not be treated as an annex. It should be a working control that is read in decision forums, updated when the plan changes, and used to prioritise knowledge base work. This lifecycle approach also provides continuity across phases, reducing the risk that closure planning resets with each project stage or leadership change.

WP08-07, WP08-02, WP08-03

Link the register to the closure vision and to work packages. Risks are not abstract. They relate to whether objectives can be achieved and to whether the future land use can be delivered. Opportunities also matter because they can shape post-closure outcomes and influence social transition planning. When risks and opportunities are expressed against objectives and packages, the team can see where design or operational choices either increase closure burden or create paths to earlier progressive closure. This supports clearer trade-offs and gives a basis for updating cost estimates and execution planning as conditions change.

WP08-07, WP08-04, WP08-08, WP08-12

DECISION INSTRUMENT

Lifecycle closure risk and opportunity workflow

A decision-oriented workflow that ensures assignment, review, and integration with planning products.

TEST	EVIDENCE READING	DECISION RESPONSE
Identify	Capture risks and opportunities linked to objectives, land use, and packages.	If items lack links, restate them against closure objectives and packages.
Assess	Assess in the context of the changing asset and external setting.	If assessment is stale, schedule review tied to knowledge base triggers.
Assign	Assign accountable owners and set review dates.	If ownership is unclear, assign roles through closure governance.
Review	Review during life-of-mine planning and closure plan revisions.	If reviews are ad hoc, align cadence to planning and change control.

Sources: WP08-07, WP08-03, WP08-02, WP08-16

4.2 4.2 Define success criteria as decision-ready statements

Success criteria make the desired outcome testable and form a basis for monitoring and relinquishment decisions. The key is not the number of criteria, but their decision usefulness. Criteria should express what will be demonstrated, by what evidence, and under what conditions. They should align to the closure vision, objectives, and intended land use. When criteria are testable, they allow monitoring to be planned as a pathway to decision, rather than as open-ended data collection. The guide also positions engagement as part of closure planning, including consultation on success criteria, which supports later agreement-based decisions.

WP08-09, WP08-04, WP08-05, WP08-06

Criteria also help structure work packages and execution planning. When objectives are translated into physical, environmental, social, and governance packages, each package can be tied to one or more success criteria that describe what "complete" looks like. This provides a direct link between strategy and delivery, and it supports cost estimation updates because scope and evidence tasks are clearer. Criteria should be revisited as knowledge improves and as progressive closure provides evidence on whether methods perform under site conditions. Refinement is expected, but it should be controlled and recorded in the knowledge base.

WP08-08, WP08-09, WP08-10, WP08-03

DECISION INSTRUMENT

Success criteria quality test: readiness for monitoring and decision

A framework to decide whether a criterion is fit for monitoring and eventual agreement-based decisions.

TEST	EVIDENCE READING	DECISION RESPONSE
Alignment	Criterion links to a specific objective and intended land use outcome.	If not aligned, revise the criterion or clarify the objective.
Testability	Criterion can be demonstrated with defined evidence.	If not testable, restate as an observable outcome.
Monitoring pathway	Monitoring, maintenance, and management actions required to demonstrate the criterion are identified.	If unclear, define the monitoring and management plan elements.
Engagement basis	Criterion is suitable for consultation and agreement processes.	If not suitable, refine wording and consultation plan.

Sources: WP08-09, WP08-14, WP08-06, WP08-05

4.3 4.3 Connect risk, criteria, and the relinquishment pathway

Relinquishment is a pathway supported by evidence and agreement, not a date assumed in the original schedule. Success criteria provide the decision basis, while lifecycle risk and opportunity management helps focus attention on what could prevent criteria from being demonstrated. This connection should be explicit. Each high-consequence closure risk should have a defined evidence plan, and each success criterion should have a clear ownership and review cycle. Monitoring, maintenance, and management then continue through closure and post-closure until the agreed criteria are demonstrated. This sequence helps teams avoid premature confidence and creates a structured basis for decision points.

WP08-15, WP08-09, WP08-07, WP08-14

This is where governance becomes decisive. The guide calls for closure governance that assigns accountable roles, and for engagement that includes consultation on success criteria. Agreement-based decisions depend on consistent records, controlled plan versions, and clear accountability. A managed closure knowledge base supports this by holding the criteria history, the risk and opportunity history, and the monitoring evidence. If the pathway is treated as schedule-led, teams can miss the point that evidence must be built and maintained over time. The guide's framing supports planning that stays credible when conditions change and when expectations evolve.

WP08-16, WP08-06, WP08-03, WP08-15

DECISION INSTRUMENT

Relinquishment pathway map: decision dependencies

A decision tool to make dependencies explicit between risks, criteria, monitoring, and agreement steps.

TEST	EVIDENCE READING	DECISION RESPONSE
Criteria set	Agreed success criteria exist for the intended land use and closure objectives.	If not, prioritise criteria definition and consultation.
Risk focus	Top closure risks and opportunities are assigned and linked to criteria evidence needs.	If not linked, update the register and define evidence tasks.
Monitoring and management	Monitoring, maintenance, and management plans exist until criteria are demonstrated.	If plans are incomplete, define the post-closure management pathway.
Agreement steps	A documented agreement process supports relinquishment as a pathway.	If unclear, define governance and engagement steps needed for agreement.

Sources: WP08-15, WP08-09, WP08-07, WP08-14, WP08-06

05

LEARNING BY DOING

Progressive closure

Use progressive closure to reduce end-loaded work and to build site-specific evidence that methods perform.

Reduce

PROGRESSIVE CLOSURE REDUCES WORK DEFERRED TO FINAL SHUTDOWN | WP08-10

Evidence

PROGRESSIVE CLOSURE SUPPLIES PERFORMANCE EVIDENCE UNDER SITE CONDITIONS | WP08-10

Packages

CLOSURE WORK IS ORGANISED AS DEFINED PACKAGES ACROSS DOMAINS | WP08-08

5.1 5.1 Use progressive closure to reduce end-loaded delivery risk

Progressive closure reduces the volume of work deferred to the final shutdown. This is a practical risk control. Deferring large volumes of closure work concentrates schedule pressure, cost uncertainty, and delivery constraints into a period when the workforce, contractor or market, and management attention may be disrupted by shutdown conditions. Progressive closure spreads delivery and enables earlier confirmation of methods, equipment, and sequencing needs. It also improves the closure knowledge base because completed works and their early performance can be recorded and used to refine objectives and success criteria. The guide's framing supports progressive closure as part of the life-of-mine system rather than as a late-stage program.

WP08-10, WP08-03, WP08-02

Progressive closure also improves governance because it forces repeated decisions. Each progressive closure activity should be tied to closure work packages and to the monitoring pathway that will demonstrate success criteria. This makes the closure plan active and testable. It can also strengthen engagement by giving stakeholders something concrete to review against the closure vision and land use intentions, rather than only future commitments. The guide's emphasis on consultation on vision, land use, and success criteria can therefore be supported by progressive closure evidence, provided that the results are documented and the plan is updated through controlled revisions.

WP08-10, WP08-08, WP08-06, WP08-04

DECISION INSTRUMENT

Progressive closure selection screen: where to start

A decision tool to select early progressive closure actions that reduce end-loaded risk and build evidence.

TEST	EVIDENCE READING	DECISION RESPONSE
Deferral reduction	Does the action materially reduce work that would otherwise sit at shutdown?	Prioritise actions with high deferral reduction value.
Evidence value	Will the action provide evidence that methods perform under site conditions?	Prioritise actions that reduce uncertainty in the knowledge base.
Criteria linkage	Is the action linked to one or more success criteria and monitoring needs?	If not linked, define criteria implications before approval.
Package control	Is the action defined as a work package with clear scope and ownership?	If not, create or update the relevant closure work package.

Sources: WP08-10, WP08-09, WP08-03, WP08-08

5.2 5.2 Build site-specific evidence and feed it back into planning

The guide states that progressive closure supplies evidence that methods perform under site conditions. This is the critical technical purpose beyond schedule relief. Site-specific performance evidence helps teams refine closure designs, adjust work methods, and improve the credibility of success criteria. Evidence should be captured in the closure knowledge base with clear links to the work package that produced it, the objective it supports, and the success criteria it will later be used to demonstrate. Without these links, progressive closure can become a set of activities that look productive but do not reduce uncertainty or support later decisions.

WP08-10, WP08-03, WP08-09

Evidence also needs a management pathway. Monitoring, maintenance, and management continue through closure and post-closure until agreed criteria are demonstrated. Progressive closure therefore should be planned with its future monitoring needs in mind, including what must be observed over time to support decisions. The guide's lifecycle approach to risk and opportunity management reinforces this point. Progressive closure can reduce risk when it targets uncertain areas and tests controls early. It can also reveal new risks or opportunities, which should be assigned and reviewed through the lifecycle register and reflected in closure plan updates.

WP08-14, WP08-10, WP08-07

DECISION INSTRUMENT

Progressive closure evidence loop: capture to decision

A framework to ensure progressive closure outputs become decision-grade evidence rather than isolated activities.

TEST	EVIDENCE READING	DECISION RESPONSE
Define	State what method is being tested and which uncertainties it addresses.	If undefined, pause and write a test purpose linked to risks and criteria.
Capture	Record results in the closure knowledge base with links to packages and objectives.	If records are incomplete, add structured evidence fields.
Review	Review results against success criteria readiness and monitoring needs.	If criteria are not supported, refine criteria or revise methods.
Update	Update risk and opportunity register based on findings.	Assign new items and set review dates through governance.

Sources: WP08-10, WP08-03, WP08-09, WP08-07

5.3 5.3 Integrate progressive closure into packages, schedule, and cost

Progressive closure should be planned as part of the closure work package system. Closure activities translate objectives into physical, environmental, social, and governance work packages, and progressive closure actions should sit within those packages, not alongside them. This supports execution planning because an execution plan converts the long-term strategy into sequenced, resourced, and controlled delivery. When progressive closure is embedded in packages, the team can schedule it with other life-of-mine activities, identify resource needs, and manage interfaces with operations. The guide's integrated framing helps avoid a situation where progressive works are done opportunistically without clear controls.

WP08-08, WP08-13, WP08-10

Integration also supports cost estimation discipline. The guide requires closure costs to be estimated, updated, and connected to the changing closure plan and life-of-asset schedule. Progressive closure changes both scope timing and evidence needs, which can influence cost profiles and resourcing. When progressive closure is planned and tracked through the closure plan, cost updates can reflect actual work completed and remaining scope, rather than relying on end-of-life assumptions. This also creates better decision support when trade-offs arise between operational priorities and closure delivery, because costs and schedules remain tied to controlled work packages and current plans.

WP08-12, WP08-10, WP08-02

DECISION INSTRUMENT

Progressive closure integration check: package, execution, cost

A decision tool to confirm progressive closure is controllable within planning systems.

TEST	EVIDENCE READING	DECISION RESPONSE
Package link	Each progressive closure action is assigned to a closure work package with ownership.	If not, update the work package register before field execution.
Execution plan link	Actions appear in the closure execution plan with sequencing and resources.	If not, add to execution planning and define controls.
Cost update link	Cost estimates reflect progressive closure scope changes and timing shifts.	If not, update cost estimates to match the current closure plan.
Schedule alignment	Actions are aligned to the life-of-asset schedule and review cadence.	If not, re-sequence and set review milestones.

Sources: WP08-08, WP08-10, WP08-12, WP08-13, WP08-02

06

PEOPLE AND INSTITUTIONS

Social transition

Plan social transition as a distinct closure workstream with investment, engagement, and accountable governance.

Workstream

SOCIAL TRANSITION IS A DISTINCT CLOSURE WORKSTREAM | WP08-11

Engage

CONSULTATION COVERS VISION, LAND USE, AND SUCCESS CRITERIA | WP08-06

Govern

CLOSURE GOVERNANCE ASSIGNS ACCOUNTABLE ROLES AND READINESS | WP08-16

6.1 6.1 Define social transition scope and accountabilities

The guide treats social transition as a distinct closure workstream that requires planning, investment, and accountable engagement. This distinction matters because social transition is often diluted across community relations, workforce planning, procurement, and government liaison without a single closure narrative. A distinct workstream allows the closure plan to state social transition objectives and to translate them into deliverable work packages, aligned with the closure vision and intended land use. It also enables risk and opportunity management to include social dimensions explicitly, with assigned ownership and review cycles through the asset lifecycle.

WP08-11, WP08-08, WP08-07, WP08-04

Accountability needs governance. The guide calls for closure governance that assigns company standards, committees, and accountable roles. Applying this to social transition means naming owners for social transition planning inputs, engagement activities, and evidence capture. It also means ensuring social transition remains active during temporary or sudden closure scenarios, where disruption can be greatest. When governance is clear, social transition commitments can be integrated into the closure execution plan and monitored as part of closure and post-closure management, rather than being treated as separate goodwill initiatives.

WP08-16, WP08-11, WP08-13, WP08-14

DECISION INSTRUMENT

Social transition workstream charter: minimum decisions

A decision template to confirm the social transition workstream is defined, owned, and integrated into closure planning.

TEST	EVIDENCE READING	DECISION RESPONSE
Scope statement	Social transition objectives are defined as closure planning products, not general intentions.	If unclear, define objectives aligned to the closure vision.
Work packages	Social transition is translated into deliverable work packages with owners.	If missing, create packages and link to execution planning.
Governance	Accountable roles, committee oversight, and review cadence are set.	If absent, assign roles through closure governance.
Readiness	Temporary or sudden closure implications for social transition are considered.	If not considered, add readiness actions to the governance agenda.

Sources: WP08-11, WP08-08, WP08-16

6.2 6.2 Plan and invest: link social transition to the closure plan

The guide explicitly states that social transition requires planning and investment. Planning should be connected to the evolving closure vision and to post-closure land use because the intended end state shapes what social outcomes are plausible and what institutional arrangements may be needed. A closure knowledge base helps maintain this connection by recording engagement outcomes and changes in expectations over time. This supports disciplined revisions to social transition objectives and work packages as conditions change. It also avoids treating social transition as a late-stage response to shutdown, which can compress decision time and reduce the quality of engagement.

WP08-11, WP08-04, WP08-05, WP08-03

Investment decisions should be integrated with closure cost estimation discipline. The guide requires closure costs to be estimated, updated, and connected to the changing closure plan and life-of-asset schedule. If social transition is treated as a distinct workstream, its planned actions can be costed, scheduled, and updated with the same controls applied to physical and environmental packages. This also improves accountability because the closure execution plan can then sequence social transition actions, assign resources, and track completion. The result is a social transition plan that is managed, not aspirational.

WP08-12, WP08-11, WP08-13, WP08-08

DECISION INSTRUMENT

Social transition planning integration: cost, schedule, and evidence

A decision tool to confirm social transition is integrated into the same planning controls as other closure work.

TEST	EVIDENCE READING	DECISION RESPONSE
Cost linkage	Social transition actions are included in closure cost estimates and update cycles.	If excluded, add social transition packages to cost models and refresh.
Schedule linkage	Actions are aligned to the life-of-asset schedule and closure execution plan.	If misaligned, re-sequence actions and set delivery controls.
Engagement linkage	Engagement covers social transition implications of vision, land use, and criteria.	If incomplete, broaden consultation scope and record outcomes.
Evidence linkage	Knowledge base records assumptions, decisions, and updates over time.	If weak, add social transition fields to the knowledge base structure.

Sources: WP08-11, WP08-12, WP08-13, WP08-06, WP08-03

6.3 6.3 Engagement as accountable closure work

The guide positions engagement as a closure planning activity, including identification of stakeholders and consultation on closure vision, land use, and success criteria. For social transition, this matters because transition outcomes depend on the expectations and capacities of people and institutions that will live with closure. Engagement should therefore be treated as accountable closure work, with clear scope, records, and follow-through into plan updates. When engagement is structured around specific closure planning products, it can inform social transition work packages and can clarify what evidence will later be needed to support agreement-based decisions on success criteria and relinquishment pathways.

WP08-06, WP08-11, WP08-15

Accountable engagement also interacts with governance and readiness. The guide's governance framing assigns roles and committees, and its readiness framing recognises temporary or sudden closure scenarios. In such scenarios, engagement needs to remain functional and decision-oriented, not improvised. The closure knowledge base provides continuity by capturing prior engagement positions and the rationale for commitments, enabling the asset to maintain consistency even when shutdown pressures rise. This supports a disciplined approach to closure that can demonstrate how social transition planning and delivery remain aligned to the evolving closure plan and to stakeholder consultation outcomes.

WP08-16, WP08-03, WP08-06, WP08-11

DECISION INSTRUMENT

Accountable engagement control: social transition focus

A framework to decide whether engagement is producing actionable inputs to the closure plan and work packages.

TEST	EVIDENCE READING	DECISION RESPONSE
Stakeholder identification	Stakeholders relevant to social transition are identified and reviewed over time.	If out of date, update the stakeholder register and engagement plan.
Consultation outputs	Consultation outputs are linked to vision, land use, and success criteria decisions.	If outputs are generic, reframe engagement around closure products.
Plan integration	Engagement outputs drive controlled updates to objectives and work packages.	If integration is weak, implement change control and ownership rules.
Readiness	Engagement remains viable in temporary or sudden closure conditions.	If not planned, add readiness steps through closure governance.

Sources: WP08-06, WP08-11, WP08-16, WP08-04, WP08-08

07

DELIVERY SYSTEM

Cost, execution and monitoring

Keep costs current, convert strategy into controlled execution, and maintain monitoring and management until success criteria are demonstrated.

Update

CLOSURE COSTS ARE ESTIMATED, UPDATED, AND TIED TO PLAN AND SCHEDULE | WP08-12

Sequence

EXECUTION PLANNING SEQUENCES AND CONTROLS DELIVERY | WP08-13

Continue

MONITORING, MAINTENANCE, AND MANAGEMENT CONTINUE UNTIL CRITERIA ARE DEMONSTRATED | WP08-14

7.1 7.1 Cost estimation that follows the plan

The guide requires closure costs to be estimated, updated, and connected to the changing closure plan and life-of-asset schedule. This is not a one-time estimate at project approval. A closure plan evolves as knowledge improves, as engagement shapes land use and success criteria, and as progressive closure changes what remains to be done. Cost estimation must therefore be a controlled process with triggers and clear data inputs from the closure knowledge base. When cost updates follow the plan, decision forums can see the financial implications of closure plan changes and can treat closure as an active part of life-of-mine trade-offs.

WP08-12, WP08-03, WP08-02

Cost discipline also supports readiness. Temporary or sudden closure scenarios can compress time and disrupt access to resources. If cost estimates are stale or disconnected from the closure plan, the asset may not understand what immediate actions and resources are required to maintain control. Linking cost estimation to the work package structure helps because packages provide a stable scope unit that can be priced, updated, and resourced. This linkage improves transparency and supports governance review, because committees and accountable roles can review cost changes alongside plan changes rather than treating closure cost as a fixed liability number.

WP08-16, WP08-12, WP08-08

DECISION INSTRUMENT

Closure cost update triggers: decision checklist

A framework to decide when closure costs must be refreshed and what inputs are required.

TEST	EVIDENCE READING	DECISION RESPONSE
Plan change	Closure plan assumptions, objectives, land use, or success criteria have changed.	Refresh cost estimates to match the updated closure plan.
Schedule change	Life-of-asset schedule changes affect closure timing or sequencing.	Update costs and timing profiles to reflect schedule changes.
Progressive closure	Progressive closure works completed or changed methods affect remaining scope.	Update remaining scope and re-estimate affected work packages.
Readiness event	Temporary or sudden closure readiness review identifies gaps.	Cost immediate control actions and integrate into execution planning.

Sources: WP08-12, WP08-02, WP08-10, WP08-16, WP08-09

7.2 7.2 Convert strategy into a closure execution plan

A closure execution plan converts the long-term strategy into sequenced, resourced, and controlled delivery. The guide's wording emphasises conversion, meaning the execution plan must be built from the closure plan, its work packages, and the current life-of-asset schedule. Sequencing must reflect dependencies between physical works, environmental actions, social transition activities, and governance tasks such as engagement on criteria. Resourcing must reflect who will deliver and who will maintain evidence. Control requires defined milestones, change control, and reporting. When execution planning is taken seriously, progressive closure becomes a managed program rather than a series of opportunistic actions.

WP08-13, WP08-08, WP08-10

Execution planning also needs governance support. The guide assigns closure governance roles and committees, which should oversee execution plan performance, approve major changes, and ensure alignment with the evolving closure knowledge base. Execution plans should remain linked to cost estimation updates so that delivery scope and budgets stay consistent with the closure plan as it changes. This link matters because the closure plan is expected to evolve with knowledge and expectations. A controlled execution plan provides the mechanism to keep delivery aligned with that evolution, and to keep monitoring and evidence needs visible throughout the delivery period.

WP08-16, WP08-13, WP08-12, WP08-03

DECISION INSTRUMENT

Closure execution plan quality test

A decision tool to confirm the execution plan is derived from strategy and is controllable.

TEST	EVIDENCE READING	DECISION RESPONSE
Derived from packages	Execution scope is structured by closure work packages across domains.	If not, restructure the plan around the work package register.
Sequenced	Dependencies and timing align to the life-of-asset schedule.	If sequencing is unclear, define dependencies and re-baseline.
Resourced	Roles, resources, and controls are assigned for delivery and evidence capture.	If resourcing is weak, assign accountable owners through governance.
Change control	Plan changes follow controlled updates linked to the knowledge base and costs.	If ad hoc, implement change control and cost update triggers.

Sources: WP08-13, WP08-08, WP08-02, WP08-16, WP08-12

7.3 7.3 Monitor, maintain, and manage through post-closure

Monitoring, maintenance, and management continue through closure and post-closure until the agreed criteria are demonstrated. This statement forces realism. Closure delivery does not end when earthworks or rehabilitation activities finish. The closure plan must include what will be monitored, how results will be interpreted against success criteria, and what maintenance or management actions will be taken if performance does not meet expectations. Monitoring therefore extends beyond a technical activity. It is part of the evidence pathway that supports decisions on whether criteria have been achieved and whether the relinquishment pathway is progressing as intended.

WP08-14, WP08-09, WP08-15

Monitoring and management should be integrated with work packages and execution planning. If monitoring is treated as an afterthought, evidence will be incomplete and decisions will be delayed. The guide's approach supports integrating monitoring tasks into closure work packages and sequencing them in the execution plan. Progressive closure can support this by providing early monitoring data and by testing monitoring methods under site conditions. Monitoring outcomes also need to feed back into the closure knowledge base and into lifecycle risk and opportunity reviews, so that the closure plan remains current and the pathway to agreement and relinquishment remains evidence-led.

WP08-08, WP08-13, WP08-10, WP08-03

DECISION INSTRUMENT

Monitoring pathway to decision: controls and outputs

A decision tool to confirm monitoring produces decision-grade evidence linked to success criteria and management actions.

TEST	EVIDENCE READING	DECISION RESPONSE
Criteria linkage	Each monitoring activity ties to specific success criteria and intended land use outcomes.	If links are missing, revise monitoring scope to match criteria.
Management actions	Maintenance and management responses to results are defined.	If undefined, add action rules and ownership to packages.
Evidence control	Results are stored and traceable in the closure knowledge base.	If trace is weak, implement evidence filing and version control.
Decision use	Monitoring outputs are used in governance reviews for criteria demonstration and relinquishment pathway steps.	If not used, add monitoring review to governance cadence.

Sources: WP08-14, WP08-09, WP08-03, WP08-15, WP08-16

08

AGREEMENT AND PROOF

The evidence for relinquishment

Prepare for relinquishment through controlled evidence building, monitored performance against criteria, and agreement-focused engagement.

Pathway

RELINQUISHMENT IS EVIDENCE AND AGREEMENT-BASED, NOT DATE-BASED | WP08-15

Demonstrate

MONITORING CONTINUES UNTIL SUCCESS CRITERIA ARE DEMONSTRATED | WP08-14

Testable

SUCCESS CRITERIA PROVIDE THE BASIS FOR MONITORING AND RELINQUISHMENT DECISIONS | WP08-09

8.1 8.1 Treat relinquishment as a managed pathway

The guide states that relinquishment is a pathway supported by evidence and agreement, not a date assumed in the original schedule. This statement should change how teams plan and communicate. It discourages false certainty and shifts focus onto what must be demonstrated and documented. The pathway begins early because success criteria must be defined as testable outcomes, and monitoring must be designed to demonstrate those outcomes. When teams treat relinquishment as a pathway, they also treat closure planning as iterative, with evidence building through progressive closure and post-closure monitoring forming the basis for later agreement steps.

WP08-15, WP08-09, WP08-14, WP08-10

A managed pathway depends on governance and knowledge management. Closure governance assigns accountable roles and readiness, and the closure knowledge base captures decisions, plan revisions, and evidence. Without these controls, teams can struggle to show continuity and rationale, which weakens agreement processes. A pathway approach also encourages regular review of risks and opportunities that could delay criteria demonstration, with ownership assigned and tracked through the lifecycle register. This keeps relinquishment discussions grounded in what is known, what is being measured, and what actions remain, rather than in assumed end dates.

WP08-16, WP08-03, WP08-07, WP08-15

DECISION INSTRUMENT

Relinquishment pathway readiness screen

A decision tool to assess whether the asset is managing relinquishment as an evidence-led pathway.

TEST	EVIDENCE READING	DECISION RESPONSE
Pathway defined	Relinquishment is described as a sequence of evidence and agreement steps.	If described as a date, rewrite as a pathway with dependencies.
Criteria and monitoring	Success criteria and monitoring plans exist to support decisions.	If incomplete, prioritise criteria definition and monitoring design.
Evidence control	Evidence is stored with traceability in the closure knowledge base.	If weak, implement evidence controls and versioned records.
Governance	Accountable roles oversee pathway progress and readiness.	If unclear, assign roles through closure governance.

Sources: WP08-15, WP08-09, WP08-14, WP08-03, WP08-16

8.2 8.2 Build an evidence pack that maps to criteria and agreements

Evidence must be structured. Success criteria make outcomes testable and form a basis for monitoring and relinquishment decisions. The evidence pack should therefore be organised by success criteria, with clear links to monitoring records, maintenance and management actions, and closure work package completion records. The guide's emphasis on continued monitoring and management until criteria are demonstrated means evidence must include both performance results and the management history that explains how outcomes were achieved and sustained. Progressive closure can contribute early evidence that methods perform under site conditions, which should be filed with traceability in the closure knowledge base.

WP08-09, WP08-14, WP08-10, WP08-03

Evidence building is also a governance and engagement activity. The guide calls for consultation on success criteria and links relinquishment to agreement, not to schedule. That implies that evidence needs to be legible to decision-makers and suitable for agreement discussions. Evidence should therefore include the history of criteria development and consultation outcomes recorded through controlled plan revisions. It should also reflect the lifecycle risk and opportunity management record, showing how key risks were identified, assigned, and addressed. When evidence is organised in this way, it supports orderly decision-making and reduces reliance on institutional memory.

WP08-06, WP08-15, WP08-07, WP08-03

DECISION INSTRUMENT

Relinquishment evidence pack index: criteria-based structure

A framework index to decide whether the evidence pack is complete and mapped to decision needs.

TEST	EVIDENCE READING	DECISION RESPONSE
Criteria mapping	Each success criterion has an evidence folder and a traceable demonstration narrative.	If gaps exist, define missing evidence tasks and owners.
Monitoring record	Monitoring data and interpretations are recorded until criteria are demonstrated.	If monitoring is incomplete, extend or revise monitoring plans.
Management history	Maintenance and management actions taken are documented with dates and outcomes.	If missing, reconstruct management logs and integrate into knowledge base.
Engagement and agreement record	Consultation outcomes on criteria and land use are recorded and versioned.	If unclear, consolidate engagement records and link to plan versions.

Sources: WP08-09, WP08-14, WP08-06, WP08-03, WP08-15

8.3 8.3 Use decision gates for agreement and demonstration

Because relinquishment is a pathway, teams should set decision gates that match evidence maturity. Monitoring, maintenance, and management continue until agreed criteria are demonstrated, so gates should focus on whether criteria can be demonstrated with current evidence and whether remaining risks are understood and managed. Gates should also test whether the closure plan, knowledge base, and execution records remain consistent, because inconsistencies can undermine agreement discussions. This is not an extra layer of process. It is a control that ensures that closure planning remains disciplined and that the asset can explain, with evidence, how it is progressing toward the intended end state.

WP08-14, WP08-09, WP08-15, WP08-03

Decision gates should also reflect engagement requirements. The guide states that engagement includes consultation on the closure vision, land use, and success criteria. Agreement-based decisions require that consultation outputs are integrated into controlled plan revisions and that changes to criteria are traceable. Closure governance assigns accountable roles and committees that can oversee these gates and ensure readiness, including in temporary or sudden closure conditions. If gates identify that evidence is insufficient or that criteria are not yet demonstrable, the response should be to adjust work packages, monitoring plans, or management actions, then re-enter the evidence building cycle.

WP08-06, WP08-16, WP08-08, WP08-15

DECISION INSTRUMENT

Relinquishment decision gates: evidence maturity test

A decision framework to determine whether the asset is ready to proceed to agreement steps based on evidence maturity.

TEST	EVIDENCE READING	DECISION RESPONSE
Gate 1: Criteria clarity	Success criteria are testable and suitable for monitoring and agreement.	If criteria are not decision-ready, refine criteria and consultation approach.
Gate 2: Demonstration	Monitoring shows criteria are demonstrated, with management history documented.	If not demonstrated, continue monitoring and management and update plans.
Gate 3: Traceability	Knowledge base provides traceable links from objectives to packages to evidence.	If trace is weak, fix records and change control before agreement steps.
Gate 4: Governance and readiness	Accountable roles confirm readiness, including contingencies for disruption.	If readiness is weak, strengthen governance and readiness controls.

Sources: WP08-09, WP08-14, WP08-03, WP08-16, WP08-15

Decision checklist

Use these questions before the next gate, assurance review or capital commitment.

01 Place closure planning inside life-of-mine planning and review cycles, not at end of production. [WP08-02]

02 Assign closure governance, accountable roles, and temporary or sudden closure readiness controls. [WP08-16]

03 Build and maintain a controlled closure knowledge base with clear update triggers. [WP08-03]

04 Set and refine closure vision, principles, and objectives through the asset life as knowledge and expectations change. [WP08-04]

05 Evaluate post-closure land use as a design input with affected people and institutions. [WP08-05]

06 Identify stakeholders and consult on vision, land use, and success criteria, then control plan revisions. [WP08-06]

07 Run closure risk and opportunity identification, assessment, assignment, and review through the lifecycle. [WP08-07]

08 Translate closure objectives into physical, environmental, social, and governance work packages. [WP08-08]

09 Define success criteria as testable statements that support monitoring and decisions. [WP08-09]

10 Plan progressive closure to reduce end-loaded work and build site evidence that methods perform. [WP08-10]

11 Treat social transition as a distinct workstream with planning, investment, and accountable engagement. [WP08-11]

12 Estimate and update closure costs in step with the changing closure plan and life-of-asset schedule. [WP08-12]

Evidence ledger 1 of 2

Only dossier rows used in this edition are listed. Concise excerpts identify each registered statement; the source audit retains the complete dossier reference.

ROW	REGISTERED EVIDENCE EXCERPT	REGISTERED SOURCE
WP08-01	ICMM published the second edition of the Integrated Mine Closure Good Practice Guide in 2019 to promote a disciplined approach and greater uniformity of closure practice.	ICMM, Integrated Mine Closure, 2nd ed., 2019
WP08-02	Integrated closure planning is part of life-of-mine planning, not an activity reserved for the end of production.	ICMM 2019, ch. 2
WP08-03	A closure knowledge base must be developed and updated, with risks and opportunities read against the changing asset and external setting.	ICMM 2019, ch. 3
WP08-04	Closure work begins with a vision, principles and objectives that are refined as knowledge and stakeholder expectations develop.	ICMM 2019, ch. 4
WP08-05	Post-closure land use is a design input and should be evaluated with the people and institutions that will live with the outcome.	ICMM 2019, ch. 5
WP08-06	Closure-plan engagement includes identification of stakeholders and consultation on the closure vision, land use and success criteria.	ICMM 2019, ch. 6
WP08-07	Closure risks and opportunities should be identified, assessed, assigned and reviewed through the asset lifecycle.	ICMM 2019, ch. 7
WP08-08	Closure activities translate objectives into physical, environmental, social and governance work packages.	ICMM 2019, ch. 8

Evidence ledger 2 of 2

Only dossier rows used in this edition are listed. Concise excerpts identify each registered statement; the source audit retains the complete dossier reference.

ROW	REGISTERED EVIDENCE EXCERPT	REGISTERED SOURCE
WP08-09	Success criteria make the desired outcome testable and form a basis for monitoring and relinquishment decisions.	ICMM 2019, ch. 9
WP08-10	Progressive closure reduces the volume of work deferred to the final shutdown and supplies evidence that methods perform under site conditions.	ICMM 2019, ch. 10
WP08-11	Social transition is a distinct closure workstream that requires planning, investment and accountable engagement.	ICMM 2019, ch. 11 and Tools 5 to 6
WP08-12	Closure costs should be estimated, updated and connected to the changing closure plan and life-of-asset schedule.	ICMM 2019, ch. 12
WP08-13	A closure execution plan converts the long-term strategy into sequenced, resourced and controlled delivery.	ICMM 2019, ch. 13
WP08-14	Monitoring, maintenance and management continue through closure and post-closure until the agreed criteria are demonstrated.	ICMM 2019, ch. 14
WP08-15	Relinquishment is a pathway supported by evidence and agreement, not a date assumed in the original schedule.	ICMM 2019, ch. 15
WP08-16	Temporary or sudden closure requires its own readiness, while closure governance assigns company standards, committees and accountable roles.	ICMM 2019, ch. 16 to 17

Glossary

Integrated closure planning

Closure planning that is part of life-of-mine planning and is maintained through the asset lifecycle rather than deferred to end of production.

Closure knowledge base

A maintained and updated body of closure information that records assumptions, evidence, decisions, risks, opportunities, and plan revisions against a changing asset and external setting.

Closure vision, principles, and objectives

The initial and evolving statements that set direction for closure planning and are refined as knowledge and stakeholder expectations develop.

Post-closure land use

The intended use of the site after closure, treated as a design input and evaluated with the people and institutions that will live with the outcome.

Success criteria

Testable statements that define desired closure outcomes and provide a basis for monitoring and relinquishment decisions.

Progressive closure

Closure work undertaken during operations to reduce shutdown-period workload and to build evidence that methods perform under site conditions.

Social transition

A distinct closure workstream focused on social aspects of closure that requires planning, investment, and accountable engagement.

Closure execution plan

A plan that converts long-term closure strategy into sequenced, resourced, and controlled delivery.

Relinquishment pathway

An evidence and agreement-based pathway toward handover or release, not a date assumed in the original schedule.

Monitoring, maintenance, and management

Activities that continue through closure and post-closure until agreed success criteria are demonstrated.

Closure work packages

Structured units of closure activity that translate objectives into physical, environmental, social, and governance deliverables.

Temporary or sudden closure readiness

Preparedness measures for unplanned or temporary closure conditions, supported by closure governance and current closure information.

Lifecycle risk and opportunity management

A process to identify, assess, assign, and review closure risks and opportunities across the asset lifecycle.

Stakeholder identification and consultation

The engagement practice of identifying relevant stakeholders and consulting on closure vision, land use, and success criteria as part of closure planning.

Uniformity of closure practice

The intent to apply a disciplined approach and greater consistency in closure planning and execution practice.

Second edition (2019)

The edition year of the ICMM Integrated Mine Closure Good Practice Guide used as the primary evidence source for this paper.

External setting

The social and institutional context around an asset that can change over time and should be considered when updating closure knowledge, risks, and plans.

Disciplined approach

A structured closure planning practice that uses defined planning products, controls, and reviews to support consistent decision-making.

References and limitations

International Council on Mining and Metals (ICMM) (2019)
Integrated Mine Closure: Good Practice Guide (Second edition). Practice guidance source used for all statements in this white paper.

International Council on Mining and Metals (ICMM) (2019)
Integrated Mine Closure: Good Practice Guide (Second edition), Chapter 2. Life-of-mine integration framing for closure planning.

International Council on Mining and Metals (ICMM) (2019)
Integrated Mine Closure: Good Practice Guide (Second edition), Chapters 3 to 4. Closure knowledge base and closure vision, principles, and objectives.

International Council on Mining and Metals (ICMM) (2019)
Integrated Mine Closure: Good Practice Guide (Second edition), Chapters 5 to 6. Post-closure land use and closure-plan engagement.

International Council on Mining and Metals (ICMM) (2019)
Integrated Mine Closure: Good Practice Guide (Second edition), Chapters 7 to 10. Lifecycle risk and opportunity management, work packages, success criteria, and progressive closure.

International Council on Mining and Metals (ICMM) (2019)
Integrated Mine Closure: Good Practice Guide (Second edition), Chapters 11 to 15. Social transition, cost estimation, execution planning, monitoring, and relinquishment pathway framing.

International Council on Mining and Metals (ICMM) (2019)
Integrated Mine Closure: Good Practice Guide (Second edition), Chapters 16 to 17. Temporary or sudden closure readiness and closure governance.

USE LIMITATIONS

- This white paper is a practice synthesis based only on ICMM's Integrated Mine Closure Good Practice Guide, second edition (2019). [WP08-01]
- The source is guidance and is not a jurisdiction-specific legal instrument; readers must apply relevant local legal and regulatory requirements separately. [WP08-01]
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- All decision tools and exhibits are frameworks derived from the guide's described practices; they are not performance benchmarks or quantified forecasts. [WP08-01]

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