



# Mine Closure Plan (MCP)

Jindal Stainless Ltd, Chromite Mines Sukinda

# Table of Contents

|                                                                                                                                                                                                                                 |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. Introduction.....                                                                                                                                                                                                            | 5  |
| 2. Objectives of MCP .....                                                                                                                                                                                                      | 5  |
| 3. Scope & Coverage of MCP.....                                                                                                                                                                                                 | 6  |
| All mining operations of Jindal Stainless will adhere fully to the current Mine Closure Plan, which encompasses the entire lifecycle of operations—including exploration, planning, evaluation, active mining, and closure..... |    |
| 4. Seven Step MCP Framework .....                                                                                                                                                                                               | 6  |
| I. Closure Vision and Early Planning .....                                                                                                                                                                                      | 7  |
| II. Knowledge Management and Baseline Development.....                                                                                                                                                                          | 7  |
| III. Land Use and Closure Objectives .....                                                                                                                                                                                      | 8  |
| IV. Stakeholder Engagement and Social Inclusion.....                                                                                                                                                                            | 9  |
| V. Progressive and Final Closure Execution.....                                                                                                                                                                                 | 10 |
| VI. Financial Assurance and Cost Estimation.....                                                                                                                                                                                | 11 |
| VII. Execution Planning and Adaptive Management .....                                                                                                                                                                           | 11 |
| 5. Performance Targets .....                                                                                                                                                                                                    | 12 |
| 6. Roles and Responsibilities .....                                                                                                                                                                                             | 13 |
| 7. Review and Update of the Mine Closure Plan .....                                                                                                                                                                             | 13 |
| 8. MCP Document Details .....                                                                                                                                                                                                   | 13 |
| 9. References Documents .....                                                                                                                                                                                                   | 14 |

## List of Abbreviations

| Abbreviation       | Full Form                                                  |
|--------------------|------------------------------------------------------------|
| <b>MCP</b>         | Mine Closure Plan                                          |
| <b>JSL</b>         | Jindal Stainless Limited                                   |
| <b>ICMM</b>        | International Council on Mining and Metals                 |
| <b>IFC</b>         | International Finance Corporation                          |
| <b>ESG</b>         | Environmental, Social, and Governance                      |
| <b>LoM</b>         | Life of Mine                                               |
| <b>MoEF&amp;CC</b> | Ministry of Environment, Forest and Climate Change (India) |
| <b>SBS</b>         | Social Baseline Studies                                    |
| <b>SIA</b>         | Social Impact Assessment                                   |
| <b>PMLU</b>        | Post-Mining Land Use                                       |
| <b>CSR</b>         | Corporate Social Responsibility                            |
| <b>PAPs</b>        | Project-Affected Persons                                   |
| <b>NGOs</b>        | Non-Governmental Organizations                             |
| <b>OHS</b>         | Occupational Health and Safety                             |
| <b>CEP</b>         | Closure Execution Plan                                     |
| <b>EIA</b>         | Environmental Impact Assessment                            |
| <b>MSME</b>        | Micro, Small and Medium Enterprises                        |

## Key Definitions and Terms

| Term                                   | Definition                                                                                                                                                                                                                                                                                                                |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mine Closure Plan (MCP)</b>         | A strategic and operational document that outlines the processes, responsibilities, and actions required to close a mine in a safe, environmentally sound, and socially responsible manner. It includes progressive closure measures, post-closure land use, financial assurance, and stakeholder engagement. (ICMM, IFC) |
| <b>Closure Execution Plan (CEP)</b>    | A detailed, operational plan that guides the implementation of closure activities, including timelines, budgets, responsible teams, and measurable targets. It supports the practical execution of the overarching MCP. (ICMM)                                                                                            |
| <b>Life of Mine (LoM)</b>              | The anticipated duration of mining operations from exploration through closure and post-closure activities. Closure planning must be integrated throughout the entire LoM. (ICMM, IFC)                                                                                                                                    |
| <b>Progressive Rehabilitation</b>      | The ongoing implementation of rehabilitation measures during the operational phase of a mine to reduce closure liabilities, improve environmental outcomes, and support post-mining land use. (ICMM)                                                                                                                      |
| <b>Post-Mining Land Use (PMLU)</b>     | The intended, sustainable use of mine-disturbed land after closure, developed through stakeholder consultation and aligned with environmental and socio-economic priorities. (ICMM, IFC)                                                                                                                                  |
| <b>Social Impact Assessment (SIA)</b>  | A tool used to identify and evaluate the social consequences of planned mine activities, including closure, on individuals, communities, and social systems. It informs the design of mitigation and transition plans. (IFC PS1)                                                                                          |
| <b>Social Baseline Studies (SBS)</b>   | A systematic compilation of pre-project socio-economic data used as a benchmark for assessing impacts and tracking changes over time, including during closure. (IFC PS1, ICMM)                                                                                                                                           |
| <b>Financial Assurance</b>             | A financial mechanism (e.g., escrow account, bond, reserve fund) that ensures adequate resources are available to complete mine closure and meet post-closure obligations. (ICMM, IFC EHS Guidelines – Mining)                                                                                                            |
| <b>Stakeholder Engagement</b>          | An ongoing process of consultation and participation involving affected communities, governments, NGOs, and other parties in the planning and implementation of mine closure. It promotes transparency, trust, and inclusiveness. (ICMM, IFC PS1)                                                                         |
| <b>Project-Affected Persons (PAPs)</b> | Individuals or groups who may experience direct or indirect impacts from mining activities, including displacement, livelihood disruption, or environmental degradation. (IFC PS5)                                                                                                                                        |

## 1. Introduction

Jindal Stainless Ltd. is dedicated to responsible mining practices at the Kaliapani Chromite Mines, aiming to transform finite natural resources into lasting social, economic, and environmental value. This Mine Closure Plan (MCP) outlines a strategic and operational framework to ensure a responsible closure process—minimizing residual environmental and social impacts while enhancing opportunities for sustainable post-mining land use. The MCP aligns with international best practices, including: ICMM's Integrated Mine Closure Good Practice Guide (2019)<sup>1</sup>, IFC Performance Standards on Environmental and Social Sustainability (2012)<sup>2</sup> and relevant national regulations under Indian mining laws and MoEF&CC guidelines.

Although Sukinda remains an operational asset with no imminent closure, progressive and early-stage closure planning is an integral part of Jindal Stainless' lifecycle approach to mining. The MCP ensures that closure readiness is embedded in all mine phases, thereby supporting a positive legacy and resilient communities beyond the life of mine.

## 2. Objectives of MCP

The Mine Closure Plan has the following objectives. Closure considerations will be integrated from the project's feasibility stage through design and o

perations, ensuring that mine planning aligns with end-of-life and post-closure objectives

- Embed mine closure planning from the project's inception through the life of mine.
- Achieve safe, stable, and non-polluting post-closure landscapes.
- Promote beneficial post-mining land uses in consultation with stakeholders.
- Ensure regulatory compliance and financial provisioning for closure.
- Facilitate smooth socio-economic transition for affected communities.

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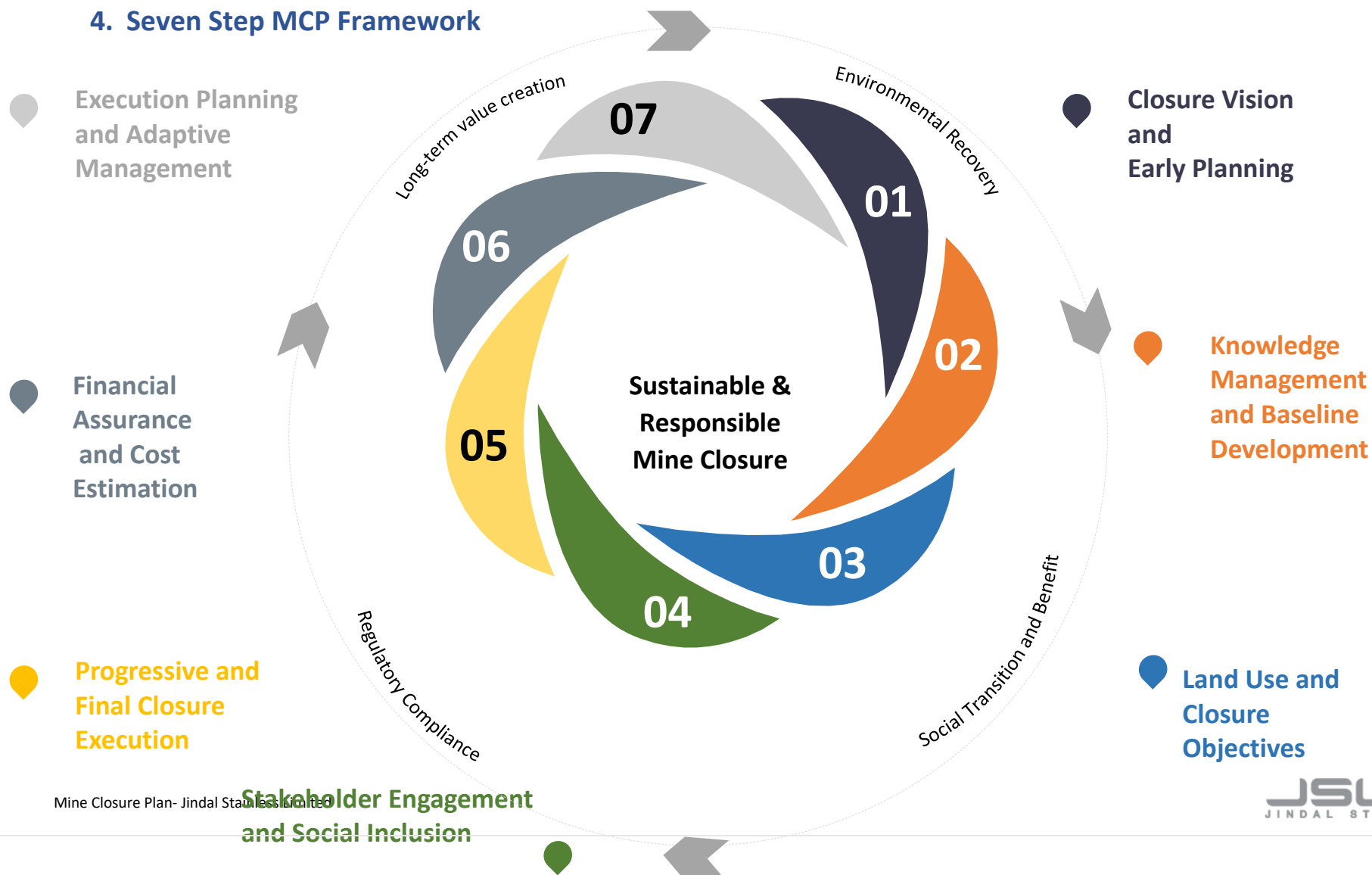
<sup>1</sup> [https://www.icmm.com/website/publications/pdfs/environmental-stewardship/2025/guidance\\_mine-closure\\_update.pdf?cb=95109](https://www.icmm.com/website/publications/pdfs/environmental-stewardship/2025/guidance_mine-closure_update.pdf?cb=95109)

<sup>2</sup> [Performance Standards on Environmental and Social Sustainability | International Finance Corporation \(IFC\)](#)

### 3. Scope & Coverage of MCP

All mining operations of Jindal Stainless will adhere fully to the current Mine Closure Plan, which encompasses the entire lifecycle of operations—including exploration, planning, evaluation, active mining, and closure.

### 4. Seven Step MCP Framework



## I. Closure Vision and Early Planning

- **Establish Closure Vision and Principles**

Defining aspirational goals for mine closure aligned with JSL's ESG strategy and stakeholder expectations. These principles will guide all closure decisions and outcomes.

- **Initiate Early Closure Planning**

Integrating closure into mine feasibility studies and Life of Mine (LoM) planning from the outset, ensuring operational design supports long-term closure objectives.

### Relevant ICMM Tools:

- **Tool 3: *Objective Setting*** – Helps define closure vision, principles, and site-specific objectives.
- **Tool 12: *Closure Plan Documentation*** – Supports structuring closure planning from early stages.
- **Tool 4: *Screening Alternatives for Repurposing*** – Useful in early planning to explore land use directions.

### Relevant IFC Guidance:

- **IFC Performance Standard 1** (Assessment and Management of Environmental and Social Risks and Impacts) – Encourages early integration of closure planning into E&S risk frameworks.

## II. Knowledge Management and Baseline Development

- **Develop a Knowledge Base**

Maintaining a baseline knowledgebase capturing environmental, social, regulatory, and technical information. Update regularly through site monitoring and evaluations. Social Baseline Studies (SBS) to be updated periodically to reflect changing socio-economic dynamic and Social Impact Assessments (SIAs) to guide closure-phase interventions

- **Conduct Risk and Opportunity Assessment**

Systematically identifying and prioritizing risks (e.g., acid mine drainage, social unrest) and opportunities for repurposing or legacy enhancement.

**Relevant ICMM Tools:**

- **Tool 1: *The Domain Model*** – Helps structure site-specific information into operational “domains.”
- **Tool 2: *Monitoring, Measurement and Inspections*** – Guides ongoing data collection and QA/QC.
- **Tool 8: *Risk/Opportunity Assessment and Management*** – Informs knowledge base through risk mapping.

**Relevant IFC Guidance:**

- **IFC PS1 and PS6** – Emphasize baseline data collection and ecosystem services inventory.

### III. Land Use and Closure Objectives

- **Define Post-Closure Land Use (PMLU)**

Identifying and assessing sustainable post-mining land use options in collaboration with communities and local authorities while aligning with regional development priorities. Collaboration with state agencies and CSR programs to align closure outcomes with district-level development goals

- **Set Closure Objectives and Success Criteria**

Developing site-specific closure objectives with clear indicators for success. These form the basis for relinquishment and long-

term performance evaluation. Areas of focus include workforce reskilling and entrepreneurship training, with equal focus on gender-sensitive livelihood planning (e.g., agriculture, handicrafts)

**Relevant ICMM Tools:**

- **Tool 3:** *Objective Setting* – Supports creation of measurable closure objectives.
- **Tool 4:** *Screening Alternatives for Repurposing* – Evaluates viable and sustainable post-closure land uses.
- **Tool 9 and Tool 10:** *Transversal and Domain-Specific Closure Activities* – Provide closure actions aligned with land use.

**Relevant IFC Guidance:**

- **IFC PS1 & PS6** – Promote sustainable land use planning, biodiversity conservation, and ecosystem restoration.

#### IV. Stakeholder Engagement and Social Inclusion

- **Engage Stakeholders**

Establishing inclusive engagement platforms involving Gram Panchayats, project-affected persons (PAPs), NGOs, and regulators. Maintain a grievance redressal system to address closure-related concerns transparently. Community participation in defining livelihood programs while ensuring Gender inclusion and vulnerable group consideration.

**Relevant ICMM Tools:**

- **Tool 5:** *Key Messages for Social Transition* – Tailors messaging to affected groups.
- **Tool 6:** *Social Transition Activities Checklist* – Provides step-by-step social transition planning.
- **Tool 11:** *Social Investment for Closure* – Supports long-term benefit strategies.

**Relevant IFC Guidance:**

- **IFC PS1** – Stakeholder engagement and disclosure requirements.
- **IFC PS7** – Indigenous Peoples considerations in closure planning

## V. Progressive and Final Closure Execution

- **Plan Progressive Closure Activities**

Implementing concurrent rehabilitation during operations (e.g., slope grading, reclamation & revegetation) to reduce end-of-life liabilities and promotes ecological recovery.

- **Implement Final Closure Works**

Executing infrastructure removal, landform stabilization, and full site rehabilitation post-mining to restore ecological and landscape integrity as per MOEFCC & regulatory norms.

### Relevant ICMM Tools:

- **Tool 9:** *Transversal Issues Closure Activities* – e.g., hydrology, access control, monitoring.
- **Tool 10:** *Domain-Specific Closure Activities* – e.g., pits, waste dumps, tailings, infrastructure.
- **Tool 2:** *Monitoring, Measurement and Inspections* – Essential during active closure works.

### Relevant IFC Guidance:

- **IFC PS3 and PS4** – Relating to pollution prevention, health, and safety during execution.

## VI. Financial Assurance and Cost Estimation

- **Estimate Closure Costs and Secure Financial Assurance**

Preparing comprehensive cost forecasts using regulatory norms and site condition and allocate financials to ensure closure funding is available.

### Relevant ICMM Tools:

- **Tool 12: Closure Plan Documentation** – Includes cost tracking and financial planning.
- **Embedded Framework Guidance** (Sections 12 & 13 of ICMM Guide) – On closure costs and financial assurance.

### Relevant IFC Guidance:

- **IFC EHS Guidelines – Mining** – Provide closure financial assurance requirements.

## VII. Execution Planning and Adaptive Management

- **Prepare and Maintain Closure Execution Plan (CEP)**

Developing and annually update of the CEP, outlining closure activities, responsibilities, schedules, and budgets. Adapt the plan based on operational changes, EIA outcomes and stakeholder inputs.

- **Monitor, Maintain, and Manage Post-Closure**

Conducting long-term monitoring (5-10 years) of environmental (ex: surface water quality, soil stability) and social parameters (employment, income). Applying adaptive management to address residual risks and unforeseen challenges.

**Relevant ICMM Tools:**

- **Tool 12:** *Closure Plan Documentation* – Structures the Closure Execution Plan (CEP).
- **Tool 8:** *Risk/Opportunity Management* – For revising CEP based on emerging risks.
- **Tool 7:** *Climate Change and Mine Closure Concerns* – Adds climate resilience into closure plans.

**Relevant IFC Guidance:**

- **IFC PS1** – Emphasizes adaptive management and ongoing stakeholder communication.
- **IFC PS6** – Adaptive approaches to biodiversity offsets and restoration

## 5. Performance Targets

| Aspects                                 | Performance Targets                                                          | Stages              |
|-----------------------------------------|------------------------------------------------------------------------------|---------------------|
| <b>Mine Design &amp; Engineering</b>    | Final slope stabilization; integrated closure design                         | Pre-Closure         |
| <b>Employee Relations</b>               | Workforce transition: upskilling, placement support, retrenchment packages   | Pre-Closure         |
| <b>Socio-Economic Development</b>       | Diversification programs (agriculture, MSMEs); infrastructure repurposing    | Pre- & post-closure |
| <b>Rehabilitation &amp; Remediation</b> | Topsoil preservation, native species planting, erosion control               | Progressive         |
| <b>Post-Mined Landscape</b>             | Safe, stable, productive land uses (e.g., agroforestry, aquaculture)         | Post Closure        |
| <b>Post-Mining Land Use</b>             | Stakeholder-approved land use strategy with ecological and economic benefits | Post Closure        |
| <b>Biodiversity</b>                     | Habitat enhancement and native species reintroduction                        | Progressive         |

## 6. Roles and Responsibilities

| Role                                    | Responsibilities                                                                                                        |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Mine Closure Steering Committee</b>  | Cross functional committee responsible for providing Strategic oversight, budget approvals, and risk management         |
| <b>Mine Operation Team</b>              | Day-to-day closure planning, stakeholder engagement, and implementation. Rehabilitation, community transition planning. |
| <b>Mine Government Liaison Officers</b> | Coordination with regulators and public agencies                                                                        |
| <b>Mine Community Representatives</b>   | Participatory stakeholder monitoring and evaluation                                                                     |

## 7. Review and Update of the Mine Closure Plan

Jindal Stainless Limited (JSL) recognizes the Mine Closure Plan (MCP) as a dynamic document, subject to regular review to ensure alignment with operational realities, stakeholder expectations, and regulatory requirements. The MCP will be reviewed and updated by Closure Steering Committee **at least every five years**, ensuring closure strategies, costs, and objectives remain current and effective. Updates will also be initiated in response to:

- Significant changes in mine operations or Life of Mine plans
- Regulatory amendments or permit modifications
- New EIA/SIA findings or stakeholder feedback
- Advances in closure technologies or methodologies

## 8. MCP Document Details

| Document Issue and Revision History |                 |                           |                                     |
|-------------------------------------|-----------------|---------------------------|-------------------------------------|
| Date                                | Revision Number | Change Summary & Remarks  | Reviewed & Approved By              |
| 07-10-2025                          | V.1             | Initial Document Prepared | Sub-committee of Board of Directors |

## 9. References Documents

- ICMM Integrated Mine Closure Good Practice Guide (2019)
- IFC Performance Standards on Environmental and Social Sustainability (2012)