



Mine Closure Planning

Mine closure is a whole of mine life process that should commence as early as possible so that the costs of closure can be covered to the maximum possible extent during the operational phase. The intent of a mine closure plan is to achieve a completed mine, where the condition of the land is suitable for a mining lease to be relinquished. Clients need to structure (or manage) mine closure to prevent or minimise adverse long-term environmental, physical, social and economic impacts and to create a stable landform which is suitable to the agreed final land use.

When poorly planned and implemented, mine closure activities, including rehabilitation, often require substantial rework, represent a long term maintenance liability and result in delayed relinquishment.

Landloch understands that rehabilitation and mine closure require a long term plan and program which sets out rehabilitation phases and management actions to ensure successful and cost effective closure and rehabilitation. To achieve this, it is essential to commence closure and rehabilitation planning in the initial mine planning stages. With the goal of mine closure and rehabilitation being relinquishment of the lease, it is imperative to establish attainable closure criteria based on a final land use that is suitable to the site characteristics and is acceptable to all stakeholders.

Landloch uses a risk management approach to mine closure planning and works with clients to develop closure and rehabilitation strategies which are specific to mine site conditions and the agreed final land use. The Landloch team can:

- Determine post mine land use(s) appropriate for site constraints, regional context and stakeholder expectations;
- Prepare mine closure and rehabilitation plans;
- Review Conceptual Closure Plans and develop strategies and apply sound science to create implementable Detailed Closure Plans;
- Develop rehabilitation / closure criteria;
- Outline rehabilitation monitoring programs;
- Undertake soil and waste erosion assessment and landform design;
- Develop rehabilitation design and implementation;
- Supervise and audit rehabilitation and closure works; and
- Monitor rehabilitation success, considering ecosystem and soil development, and soil erosion, landform stability and sediment movement.

Landloch staff have prepared mine closure and rehabilitation management plans for numerous sites across Australia. Landloch's extensive experience in landform design, rehabilitation, soil management and understanding of mine operations enables our team to work cohesively with clients to develop a comprehensive closure plan specific to mine conditions.

Landloch staff have also undertaken reviews of conceptual mine closure plans where there has been limited scientific rigour in the assessment of site constraints, modified rehabilitation design and closure criteria cognisant of those constraints and have developed practical rehabilitation methodologies that can be successfully implemented on site.