

Planning for Closure

This fact sheet provides information for planning operations and current operators. Planning for closure should commence during the development application phase of an operation. The regulator in Tasmania now expects a closure plan as part of a new development and requires it to be updated every five years.

This fact sheet covers:

- Final landform planning (stakeholder consultations);
- Designing for closure;
- Setting closure 'success criteria'; and
- Planning for relinquishment.

A new mining operation can create a buzz, both for the company and the community. At this stage of an operation, closure is generally not an immediate priority. Often the plan for a closure landform is something similar to what exists in the surrounding environment. Setting closure 'success criteria' and working towards these during operations usually leads to better closure outcomes, particularly when the operations department are aware of these and their rationale.

Final landform planning (stakeholder consultations)

Mining is a temporary land use, and once the minerals of value are extracted, the company is expected to restore the former land use. In many instances, restoration of the pre-mining land use isn't achievable. Large-scale alterations to the landform cause changes to the water table, ecology, and vegetation structure. Mines with a long life often have permanent impacts on the environment, even when they are managed well. Many mining companies are finding it difficult to relinquish their sites because they can't achieve their planned closure objectives.

The Tasmanian landscape is highly variable and in many places the vegetation communities are many millions of years old. Wilderness areas aren't able to be replaced by simple landform restoration and revegetation. In these instances, companies need to liaise with local communities and the regulator to determine a final landform which is both achievable and acceptable to the affected stakeholders. Final landforms still need to provide an environmentally responsible solution, however the landform may include additional recreation facilities for the local community, as an example.

Designing for closure

Planning for closure should be undertaken through all stages of the mining life cycle, it should be integrated into the company's normal business planning and practice (DFAT, 2016a). A closure plan is now an expectation from the regulator for larger operations, requiring an update at least five yearly.

The relationship between the various mine stages and how they integrate into mine closure planning and practice are shown in Figure 18. The level of detail required at each stage differs, however the earlier in the mine life that closure is planned, the more options are available. Where AMD is present in the landscape, the AMD Management Plan and Closure Plans should work side by side with each other. Both documents need to be integrated into the day-to-day operations of a site.

Early consultation with the regulator and stakeholders usually results in the best closure outcome, including the best long-term management of AMD issues on and off the site (DFAT, 2016a). AMD can have a long lag time before it becomes an issue, so the regulator may request monitoring of the site for many years after closure.

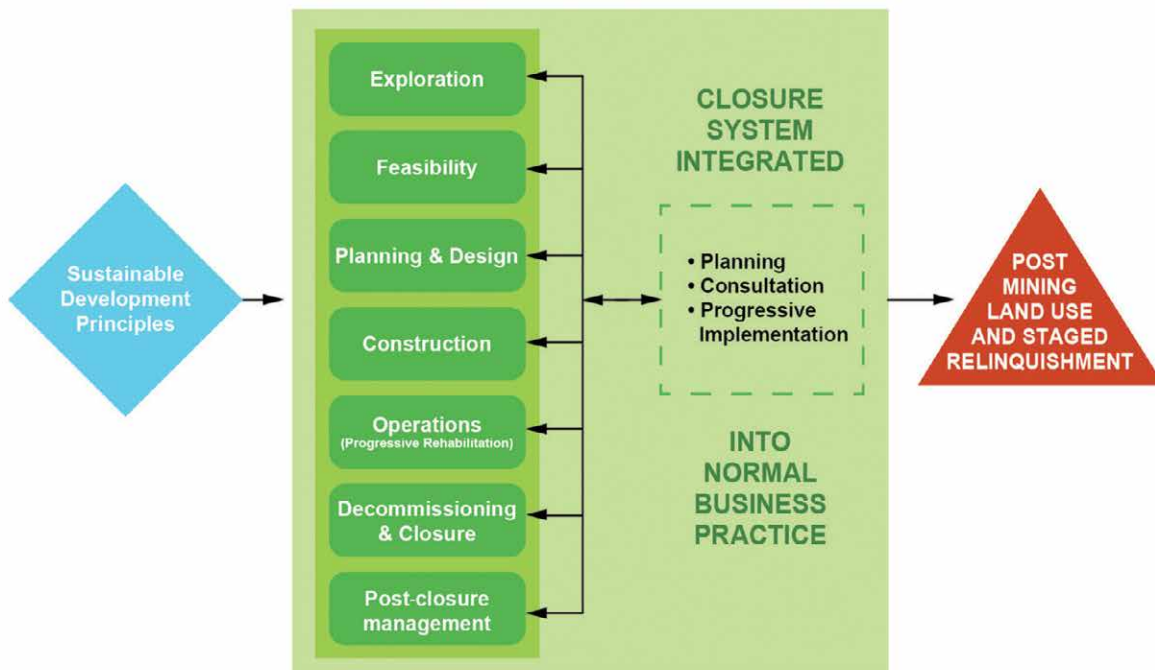


Figure 18 – Phases of a mining project integrated into a closure system (source: (DFAT, 2016a)).

Setting closure ‘success criteria’

The mine closure plan should include detailed objectives and criteria, including how AMD is going to be managed as the mine closes and in the post-closure phase (DFAT, 2016a). It is unlikely that the site will be able to be relinquished if there are still soil and water quality problems likely to contaminate the downstream environment. Closure objectives and criteria give the company and regulator items to measure the closure process against.

Closure criteria must grow more detailed as the operation progresses through its life. *The Leading Practice Series: Mine Closure* provides an excellent resource and step-by-step guide on how to develop a closure plan which should meet the requirements of the regulator. The Tasmanian regulator is more than happy to discuss the closure planning requirements with proponents, and encourages early dialogue on closure and AMD management during the development application process.

Planning for relinquishment

Relinquishment is a relatively new term in the mining industry. It is defined as the process to transferring custodial responsibility, including risk, from the mine operator to the landowner. Typically this causes issues, as landowner and managers are typically not willing to accept any additional risk. The final mining landform has inherent risk, and this is currently causing an issue in the industry where older operations are struggling to relinquish sites. These difficulties often arise because the management of the site in earlier years wasn't focussed on later environmental outcomes. Where AMD is concerned, Tasmania has many sites that current operators will have to work very hard to relinquish. New operations have the opportunity to set closure criteria at an early stage, which will allow the site to be relinquished if it is managed well throughout the mine life.