

CAPABILITY STATEMENT

SUBJECT

Mine Rehabilitation Monitoring

MARKETS

Feasibility and Mine Planning | Mine Operations | Mine and Quarry Closure
Rehabilitation, Monitoring and Research

ISO

9001:2015 | 14001:2015 | 45001:2018





Mine Rehabilitation Monitoring

Rehabilitation monitoring is a comprehensive restoration process of measuring and monitoring effectiveness of mine rehabilitation. It involves assessing various rehabilitation aspects over time to evaluate environmental impacts, and it promotes a sustainable future post-mining for current and future land users.

A critical aspect of rehabilitation monitoring is assessing long-term stability of covers and landforms. This includes factors such as erosion rates, health of growth media and establishment of sustainable post-mining land uses. Understanding chemical and physical stability of covers and landforms over time is essential for the durability and effectiveness of rehabilitation.

Another crucial component of rehabilitation monitoring is conducting an environmental impact assessment. This involves monitoring water quality, growth media health and resilience of ecosystems to limit adverse environmental effects. By carefully assessing environmental impacts, rehabilitation efforts can be tailored to minimise negative consequences and enhance sustainability to support current and future land uses, community economic prospects and public safety.

Additionally, rehabilitation monitoring includes evaluating how well rehabilitated land supports a sustainable land use after mining ends. Factors such as land productivity, stability, and compatibility with future land uses are considered. Certainty that rehabilitation can transition to a sustainable land use is imperative for economic activities, conservation and diverse community uses.

Rehabilitation monitoring is an adaptive process that enables continuous improvement. Regular reviews of monitoring data, identification of areas for improvement and implementation of corrective actions are essential to enhancing rehabilitation effectiveness and sustainability over time.

Key considerations

1. **Long-term stability assessment:** Durability and effectiveness of covers and landforms by evaluating erosion rates, growth media health and establishment of a sustainable post-mining land use.
2. **Environmental impact assessment:** Monitoring water quality, growth media health and ecosystem resilience to minimise adverse effects on the environment.
3. **Sustainable land use practices:** Assessing how well rehabilitation supports sustainable post-mining land uses including productivity, stability and future land use compatibility.
4. **Transition to sustainable land use:** Ensuring a smooth transition of rehabilitation to sustainable practices after mining which is crucial for sustainability.
5. **Adaptive monitoring and continuous improvement:** Implementing an adaptive monitoring process that allows regular data review, identification of improvement areas and implementation of corrective actions to enhance sustainability.



SGMEs approach

We apply a proactive rehabilitation strategy, and our approach and innovative methods are focused on achieving long-term success through industry best-practices and standards. Having clear objectives and selecting relevant metrics such as erosion rates, water quality, vegetation health, and community feedback are pillars to our approach. Baseline data is established prior to rehabilitation to enable a measurable benchmark. We implement monitoring protocols using advanced technologies, GIS and drones for efficient and accurate data collection and analysis. Best practice rehabilitation also implicates stakeholder engagement by liaising with local communities, regulatory agencies and industry experts. Our adaptive management approach facilitates adjustments based on monitoring results to ensure effectiveness, and transparency is maintained through regular reporting and communication. Continuous evaluation and learning help us refine monitoring strategies for sustainable outcomes.

Outcomes

Engaging SGME for rehabilitation monitoring will enable a safe and stable mine site. As an emergent priority in the mining industry, our approach is ensuring that capital investment is aligned to your environmental, social and governance considerations. Our detailed monitoring plan will be tailored to project objectives and will integrate advanced technologies such as GIS, drones and remote sensing to efficiently collect, analyse and report data. Our professional team of scientists and engineers will assess baseline data to establish benchmarks for monitoring progress and evaluate effectiveness of rehabilitation. Our proactive stakeholder engagement, including local communities and regulatory agencies, enables transparency and provides opportunities to address concerns efficiently. Our adaptive management approach facilitates timely adjustments based on monitoring results, ensuring effective implementation of responsible closure practices.

Working with SGME

Engaging SGME as a collaborative partner delivers numerous benefits:

- **Improved return on investment (ROI):** Our expertise maximises ROI to satisfy investor expectations.
- **Reduced mine closure risks and disruptions:** Our strategies minimise complex closure risks to ensure a smooth future land use transition.
- **Addressing environmental, social, and governance (ESG) risks:** We focus on ESG criteria to mitigate environmental impacts and meet regulatory standards.
- **Enhanced strategic insight:** Collaboration boosts your performance through strategic planning.
- **Industry collaboration:** We foster partnerships with mining experts, staying abreast of technology and regulatory advancements.
- **Future risk vigilance:** Our proactive approach anticipates future risks to aid informed decision-making.
- **Innovative solutions for safe execution:** Our expertise delivers innovative solutions to ensure safe execution.

Our proactive and ethical approach ensures adaptability, sustainability and responsible development to safeguard the mining industry and create enduring value.

CONTACT

HEAD OFFICE

3/37 McDonald Road
Windsor, Qld, Australia, 4030

info@sgme.au

RESEARCH AND DEVELOPMENT

20/37 McDonald Road
Windsor, Qld, 4030

research@sgme.au

t: (+61) 7 3148 6288

sgme.au