



**xenith**  
know the way

We service the industry sectors required for global growth



Mine Planning



Specialist Design



Geological Services



Studies and Assessments



Governance Reporting



Mine Closure

## Building on Xenith's Expertise

We leverage the depth and breadth of Xenith's technical core to deliver the best solution to our client's complex problems.



Technical Mining Consulting



Exploration & Generative Studies



Due Diligence



Advisory  
*(Operational/Technical/Corporate)*



Land Access and Cultural Heritage



Environment and Approvals



ESG Solutions

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## Environment and Planning

We proudly cover all phases of the asset lifecycle from initial project approvals through to environmentally conscious asset transformation post-closure.

Our team draw on their extensive experience to provide technical and advisory services for responsible and sustainable resource development across the mining, energy, transport and construction industries.



Xenith have expertise to assist you in the following areas:

### Impact Assessment and Environmental Approvals

- Pre-feasibility studies
- Environmental Impact Statement and referrals
- Review of Environmental Factors
- Planning approvals and development applications
- Social Impact Assessments
- Modification reports
- Public environment reports
- Licensing and other regulatory approvals

### Environmental Management and Reporting

- Management plans
- Site operating plans
- Extraction plans
- Annual reports
- Monitoring programs
- Rehabilitation and closure
- Waste and greenhouse gas management

### Environmental Reviews and Auditing

- Independent regulatory compliance audits
- Acquisition and divestment due diligence
- Risk assessment and Environmental Management System establishment and maintenance auditing

### Mine Closure

- Rehabilitation and decommissioning costing
- Rehabilitation auditing
- Final landform and land use evaluations
- Preparation and implementation of mine closure plans

### Environmental Services

- Strategic advice
- Regulatory and stakeholder consultation
- Environmental and sustainable development reporting

### Water Management

- Surface water drainage evaluation and assessment
- Erosion and sediment control plans
- Groundwater monitoring
- Water licensing

### Other Analysis

- GIS mapping and analysis
- Landscape analysis

# Our Expertise

Driving global excellence in sustainable resource management.

## Renewable Energy

We offered environmental support to a wind farm in NSW, including the provision of strategic advice, preparation of an Environmental Impact Statement (EIS) and lodgment of a State Significant Development (SSD) application to the NSW Government. We were engaged at all stages of the project:

- » Stage 1 – Risk Assessment and Scoping
- » Stage 2 – Preliminary Applications
- » Stage 3 – EIS preparation
- » Stage 4 – EIS Submission to Determination

Post the lodgment of the Project EIS, the client identified required changes for which approval was sought. The team systematically:

- » Reviewed the required changes to the project description
- » Prepared revised technical consultant scopes
- » Coordinated the work program required to assess the changes to the Project Description to prepare an Amendment Report for the SSD application.

Following the initial assessment, regulatory updates to the biodiversity assessment methods resulted in further work programs required throughout the Government assessment process. Our team worked closely with the regulatory authorities to identify the requirements and the changes, which were addressed along with the assessment of the project description changes.

## Mine Closure

We provided key elements in the development of a Mine Closure Plan for a mine in Central Queensland, which was incorporated into the Progressive Rehabilitation and Closure Plan (PRCP) and supporting Estimated Rehabilitation Cost (ERC).

Final landforms, including the treatment of final voids, design of Co-disposal Areas and erosion modelling were developed in a manner which enabled the practical construction of the landform and rehabilitation.

These elements were negotiated with the regulator (DESTI) for incorporation into the mine plan and PRCP for approval, ultimately leading to the requirement for an amendment of the Environmental Authority (EA).

Xenith has a range of skills that we use to assist with mine closure, including:

- » Progressive rehabilitation approach to mine planning
- » Generation of Life of Mine (LOM) final void and landform surfaces
- » Geomorphic final landform designs
- » Financial assessment of final landforms
- » Progressive Rehabilitation and Closure Plan (PRCP) development and delivery
- » Closure Cost estimation and auditing
- » Closure strategy assessment
- » Residual Risk assessment.

## Significant Impact Assessment

We were engaged by a Bowen Basin coal mine to assess potential significant impacts on Matters of National Environmental Significance (MNES) under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act). Xenith assessed an existing exploration program that was extending into potential areas of environmental significance.

The project required a comprehensive analysis of historical field survey data to establish baseline ecological conditions, along with the application of significant impact criteria to assess risks to MNES-listed species and ecological communities. It involved evaluating potential environmental impacts and mitigation strategies to minimise environmental risks, while ensuring compliance with EPBC Act guidelines.

A series of project recommendations were prepared to ensure thorough project planning. Through this process, Xenith provided guidance on the environmental impact assessment, biodiversity management, and regulatory compliance.

A challenge on this project was meeting the client's expectations while working with relatively dated technical information. To overcome this, we thoroughly reviewed all available data, performed a gap analysis, and continuously engaged with the client. This approach enabled us to meet our client's expectations on time, without compromising on quality.

## Pre-feasibility Studies

We were engaged to undertake a full pre-feasibility study for a greenfield Australian mine. We supported the project with a fully integrated team by:

- » Addressing all statutory requirements including land use, local roads and contaminated land
- » Surface water quality, hydrology and hydraulics (flooding and water management)
- » Waste management, ecology and air quality
- » Noise and vibration, traffic and transport
- » Assessment of impacts to all threatened species, habitats and communities
- » Identifying and assessing all relevant legislation including sustainability reporting
- » Assessment of all regulatory approvals and permitting requirements
- » Addressing lighting and visual amenity
- » Optimising project environmental factors and identifying opportunities to avoid or minimise impacts and implementation of offsets
- » Addressing mine closure, rehabilitation and environmental compliance requirements
- » Preparation of an approvals schedule to support project development
- » Identifying community and stakeholder engagement activities to ensure social licence
- » Addressing native title and cultural heritage.

The client progressed the project to an FID and was successful in obtaining all approvals and permits required for the initial phases of the project. The mine has since been developed and is in production.