



Creating enduring value

### SGME VALUES

- Honest 
- Trust 
- Innovation 
- Safety 

### PROJECT CASE STUDY: Soil and Land Resources Assessment for the Development of an Open-Cut Coal Mine

**SGM Environmental Pty Limited (SGME) did a land resources assessment as part of the project's approval process.**

**Site description:** The project is an open-cut coal mine located approximately 195 kilometres southwest of Mackay in Queensland. The region in which the project is located is a regional landscape and rural production area which includes good quality agricultural land.

**The problem:** The project is at the concept and design phase and requires mining lease applications along with an environmental authority application over an existing mining development lease and exploration permits. A land resource assessment was done to characterise soils and landscapes and to assess potential impacts. The rehabilitation strategy is to return the land to cattle grazing pasture at the end of mining.

**What SGME did:** The project included a number of parts including a pre-soil and soil survey, pre-mining erosion assessment and post-soil survey assessments. The purpose of the pre-soil survey was to gather regional and local land resources information and to identify the main soil types. The soil survey was done over 830 hectares of land and assessed soil physical and chemical properties, erosion potential, stormwater runoff quality, the need for ameliorants and fertilisers (as part of rehabilitation) and future land suitability (ie cattle grazing). The post-soil survey assessments included analysis of land suitability, fertility, rehabilitation, soil stripping / amelioration and post-mining erosion.

The company is committed to successful rehabilitation by using leading practice mine closure. Our focus was creating enduring value by delivering our work safely, on time, on budget and of exceptionally high standard with early identification of potential risks and management options. Planning at the concept phase is imperative for strategic, regionally focussed land use outcomes.

