

# Increasing emphasis on environmental protection at all stages of engineering projects

Many companies have become aware of the need for early environmental input, often beginning in a meaningful way at the pre-feasibility stage and continuing throughout the construction process. This has been the experience of SRK Consulting who are becoming more and more involved in projects from the outset, at the request of the client, in assessing environmental risks and identifying fatal flaws as opposed to simply conducting Environmental Impact Assessments (EIAs) for the purposes of obtaining environmental authorization, often once the detailed design stage of the project has been completed. At times, this involvement then continues throughout the construction phase. Two specific examples of this involve the world's largest producer of cement, French-based Lafarge, and Petroline, a company planning the transportation of petroleum products from Matolo in Mozambique, to Kendal in Mpumalanga, with a view to connecting with an existing pipeline to Gauteng

THE ROUTE TAKEN by Lafarge in the selection of a site for the construction of a cement grinding plant on the West Rand, goes well beyond legislative requirements. Six sites were identified by Lafarge, and then SRK was called in much earlier than would normally be the case so that they could be involved in a site selection process. Criteria taken into account resulted in Lafarge being able to meet market demand without compromising environmental standards. Of the six sites originally identified, the screening process undertaken by SRK resulted in the identification of environmental fatal flaws for three, avoiding the possibility of these sites being found to be fatally flawed only after a full environmental process had been initiated, hence a saving to the client from both a cost and programme perspective. In a similar exercise Petroline, while proceeding directly to the scoping and EIA phase of its proposed Matolo-Kendal pipeline, included several different



1 Lafarge's Randfontein grinding plant under construction

routes in the study undertaken by SRK, with equal weight being given to environmental and engineering considerations in the site selection process.

This approach provides both an indication of the culture of the organisation adopting it and of the current trend in South Africa and globally, with industry becoming conscious of its obligations in relation to the protection of the environment and the business risks involved in ignoring these obligations.

### CRADLE TO GRAVE

The ideal of 'Cradle to Grave' management of the environment may now be a step closer as a result of this trend. Lafarge has taken this philosophy to the next level and SRK continues to be involved in the West Rand Grinding Plant Project by providing the services of an Environmental Control Officer, required as a condition of the environmental approval for the project and ensuring that decisions taken in the EIA are implemented in construction. The same philosophy can now be implemented by Petroline, secure in the knowledge that environmental measures contained in the Environmental Management Plan for the project are based on environmental optimisation of the route selection in the first place. This included full public consultation at which all routes were presented and Petroline can rest assured of credible responses to any criticism of the final route selection.

While these two examples serve as an indication of a shifting corporate mindset, there are numerous other indications of the same trend. SRK is finding that it is not uncommon to be called in to participate

in high level risk assessments prior to, or very early in, the development of an EIA. In this process environmental risks emerge, sometimes under different headings. For example water scarcity for mining operations may be identified by engineers as a risk, and even a potential fatal flaw, when the reason for the risk is environmental. It may be linked to the possible over-utilisation of an existing water source, an issue that would arise from an environmental study. Addressing this risk often becomes the responsibility of the environmental team, working in close association with the design engineers. Similarly, SRK has found that project developers are referring to the environmental team for the identification of sensitive landscapes and exclusion areas as part of their own site selection process.

It is clear that these trends reflect a rapidly increasing environmental awareness, but they do not negate the reality that sound environmental management, far from simply addressing an emotional and topical subject, also reflects good business sense. At least in the mining industry, SRK is finding that environmental management is increasingly being driven by the investment community in addition to the relevant environmental regulators. It is now a reality that, if you are serious about raising money for a project at an international scale, you also need to be serious about your environmental management. Several financial institutions, including Nedbank in South Africa, have become signatories to the Equator Principles, a set of guidelines introduced to establish an industry

benchmark for determining, measuring and managing environmental risk in

2 Locality map of the proposed Matolo-Kendal multi-product petroleum pipeline

project financing.

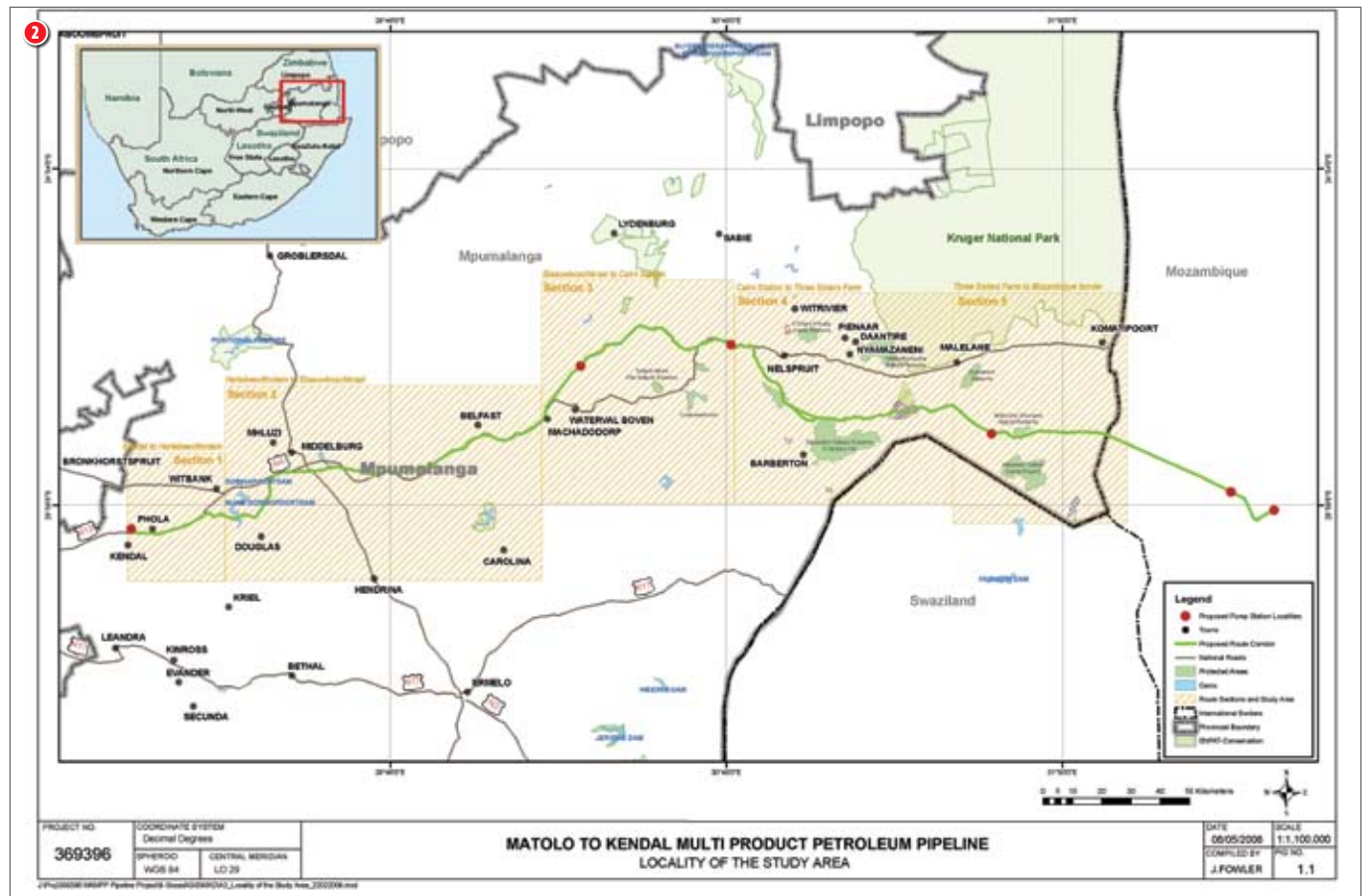
The trend is now well established and SRK is in a position to assist companies such as Lafarge and Petroline, to ensure that their projects are in a position to benefit.

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