Publication: Resource
Date: Wednesday, August 01, 2018
Page: 16

Holistic solutions for modern waste management

There is a growing move in South Africa towards the beneficial use of solid waste, as a means of diverting waste from landfills.

As these waste management practices of diverting waste from landfills become more prevalent, it is clear that the successful development of these projects is dependent on partnerships with specialist companies that have the skills and capabilities to provide an integrated solution. Project developers are looking for a single supplier of a multitude of engineering skills. These are supported by experienced and knowledgeable in-house environmental scientists who work within the framework of onerous environmental legal requirements to ensure the smooth implementation of projects.

Richard Emery, an executive associate and specialist in integrated waste management at JG Afrika, says the company's involvement in a host of complex integrated waste management projects has established it as a leader in this field in South Africa and neighbouring countries.

> **"Projects are best developed when they're based on a thorough understanding of the characteristics of the waste streams involved."**

"We have developed extensive capabilities over the years that have become extremely sought-after, as projects continue to evolve to the point where even traditional landfill engineering skills now also need to be complemented by an integrated engineering unit," he says.

Expertise in action

A recent example of a project along these lines was one JG Afrika worked on alongside RWA, a UK-based specialist waste consultancy, to complete a pilot project that would help six selected South African municipalities adopt strategies geared towards diverting organic waste from their landfill sites, making a noticeable impact on emission reduction.

The project was spearheaded by the Department of Environmental Affairs (DEA) in conjunction with the Deutsche Gesellschaft für Internationale Zusammenarbeit. Not only does it serve as a sound example of the extent of the capability and depth of understanding the firm brings to project developers and the professional teams working on related projects, but also its approach that starts at the waste source.

Understanding characteristics

As Emery points out, "Projects are best developed when they are based on a thorough understanding of the characteristics and consistencies of the waste streams involved, before moving on to 'best-fit' solutions. This, alone, highlights the need for expert opinion and solutions from an objective engineering and environmental consultancy," he says. It was only once JG Afrika and RWA had a thorough understanding of the characteristics of the various waste streams and their consistencies that they could then commence with the second phase of the DEA project. This involved the selection of the best-suited scenarios and the drafting of practical and feasible business and implementation plans for the various municipalities.

During the actual implementation cycles, JG Afrika's extensive engineering and design capabilities meet the onerous requirements of the developers and teams involved in these modern projects.

The company's offering spans civil and structural engineering and design through to the important transport and traffic expertise that is essential to ensure cost-effective, optimal and safe transport of waste streams to where they will be beneficiated.

In addition, the JG Afrika team features in-house expertise that includes geotechnical engineers, geohydrologists and wastewater treatment engineers who provide the essential services required to help develop these projects, especially those based upon the increasingly popular anaerobic digester technology that produces biogas for the generation of electricity.

Emery concludes that the company's impressive portfolio bodes well for the future projects and integrated waste management strategies in the country, and notes that JG Afrika has proved that there is a ready source of technical capability on hand to facilitate their implementation.