**PROJECT NAME: MANGAUNG WILDLIFE SANCTUARY AND ZOO**

**PROJECT LOCATION: BLOEMFONTEIN, MANGAUNG METROPOLITAN MUNICIPALITY**

**PROJECT VALUE: R 350M**

**PROJECT SUMMARY:**

The Mangaung Wildlife Sanctuary and Zoo is intended to become a world-class facility; a destination of choice not only within the region, and in the country, but in the continent as a whole.

The current facilities are based on a classic Victorian design, which over years of research and responsible management; have been proven to significantly fall short of an ideal enclosure environment for animals, guests, and the forefront of wildlife research and rehabilitation.

The project will move away from the concept of simple “people see animals” enclosures; to developing integrated habitat settings that focus on complimentary species integration (faunal and floral) within the habitat biomes.

The opportunity to harness the facility and resources to educate and expose the next generations to leading research and conversation practices will not be missed. The facility will cater for edutainment tours, rather than simply focusing on the animals and vegetation; but incorporating the rich history of the area. The Boer and indigenous cultural history will be incorporated with the geological and possible palaeontological characteristics of the area.

**CONTINUE TO DETAILED PROJECT SUMMARY**

Water, energy, and waste management are key constraints in an already critically stressed region. An integrated, sustainable, and socially responsible methodology has been employed from the onset; when considering the future design features of the facilities. Multi-species enclosures, raised viewing walkways, presentation halls, commercial shopping facilities, veterinary services, and research facilities; will all be located in a modern, and aesthetically-pleasing, ecologically functional, and unique-to-South Africa facility.

Daryl Barnes, the current Director of the Mangaung Zoo; has ensured that the project takes the best of the country’s extensive ecological and wildlife management experience, and integrates into a unique and world-class development. One that will be known for its innovation and forward-thinking approach to ecological preservation and management.

**The project – a Leading Light in Animal Research and Wildlife Management**

LTE Consulting is entirely responsible for the consulting engineering, concept and detailed design and construction, and contract management of the Wildlife and Zoological sites.

LTE’s in-house architectural team has developed stand-out facilities. The Look & Feel is world-class and ultra-modern, and complies with the World Association of Zoos and Aquariums (WAZA), and the Pan-African Association of Zoos and Aquariums (PAAZA) guidelines.

The LTE Civil and Structural team has used modern conservation, efficiency, and design optimisation techniques; to best preserve the scarce water and optimise energy demands. Having noted that the region is a water scarce area, and with the current focus on community service delivery; the design team has considered the present and future needs of the neighbouring partner communities and social setting in its water and sewer design.

All water on site is preserved and treated using recycling and treatment facilities. Being an industry leader in grey water re-use; LTE is using its extensive experience to develop the best system, suited to the client’s needs. A combination of traditional technologies and Green Design (artificial wetland) solutions has provided a tailor-made solution. The investment in bulk infrastructure and future planned spare capacity of Waste Water Treatment Works (WWTW) will provide a scrubbing service to the existing Bainsvlei facility; thereby improving water quality to the community. Leading edge design and innovation has been used to develop a selfin series artificial wetland system. Final plans considered include natural systems such as Vetiver grass (chrysopogon zizanioides), and floating pontoon water management.

Water conservation and evaporative loss are always a concern in an area that has less than 600mm/an of rainfall with evaporation rates over 2,400/an1. In addition to these design constraints, the extreme temperature variations have been integrated into the final designs. Natural lighting and air-flow optimisation are incorporated into the final structural drawings and models.

The transfer of existing animal housing and operations permits is almost complete, with the full Environmental Impact Assessment (EIA), numerous specialist studies, and public engagement along with all water and waste permits underway. The social responsibility directive from the final operator ensures that the future staffing requirements will as far as possible be sourced from the local community.