

■ Roads to rural access

Gibb is involved in two access-road projects set to change lives in the rural communities of Mancu and Madakeni, near Port St Johns, in the Eastern Cape. "Both of these communities are extremely rural and isolated with only narrow tracks linking them up to the local district road," advises Eugene Cotterrell, project manager, engineer and senior associate for Gibb. "Previously, these roads would become completely impassable when it rained; sometimes even flooding and effectively trapping people in these communities with no access to the local district roads."

The tracks used by the residents of Mancu, approximately 45 km inland from Port St Johns, and Madakeni, located at the Mngazana River mouth closer to Port St Johns, are extremely eroded and the Mancu track is dangerously steep in certain sections.

Both tracks become completely impassable when it rains and the severely damaged low-level bridge at Madakeni floods under the slightest rainfall. The section of the existing Madakeni track that crosses the flood

plain will be relocated in order to provide safe and reliable access for local residents. Gibb was appointed as the engineering consultant, acting on behalf of the Port St Johns Local Municipality, and is responsible for the design, management of the tender phase and construction monitoring with AGES Engineering Services responsible for the environmental impact assessment. The design phase commenced in November 2008 and construction began in August 2009.

Completion of the projects is set for the first quarter of 2010.

Both projects entail the construction of approximately 5 km of gravel access road from the local district roads to the respective villages of Mancu and Madakeni. The Mancu road will have two-portal culvert structures where the road crosses a stream.

Suitable stormwater-erosion measures will be required given the steep nature of the terrain.

The bulk of the Madakeni road is an upgrade with a 2 km section following a new alignment with three-portal culvert

structures. One of these is a nine-portal structure, which will require diversion of the current river flow to allow the creation of a stable base for the bridge.

This work will have to be done in the dry season to minimise the risk of flooding the works.

"Because there are sections of the Madakeni road that cross the environmentally sensitive estuary and it's not possible to realign these sections, the road upgrade will be carefully monitored to minimise the possibility of damage to the environment," advises Cotterrell. "And, in order to ensure maximum longevity, the roads being built will need to be added to the maintenance programme of the local authorities."

Gibb is proud to be involved in the upliftment of these rural communities by providing the local people with safe and reliable methods of access, and is particularly pleased that the decision was taken to build the road with labour-intensive construction methods wherever feasible in order to maximise employment opportunities for workers in the local community.

