

Gravel road training course for Aveng-Grinaker-LTA in Mthatha

A two day in-house course on the design, construction and maintenance of unpaved roads was held for Aveng-Grinaker-LTA at their site offices on the R61 between Mthatha and Ngcobo on 21 and 22 November 2016.

Twelve Aveng engineers attended the course, from both the local site as well as from Lusikisiki. Several of the attendees are currently involved in preparing access and haul roads for the bridges on the new N2 coastal road through the Transkei.

On the first day, aspects such as the performance criteria and design principles of unpaved roads, concentrating on structural design, were covered initially. This was followed by an intensive discussion on material selection, testing, and performance.

A short site visit to two typical unpaved roads in the vicinity was carried out. The first road was in a poor condition due to lack of maintenance, with excessive oversize material, exposures of subgrade, as well as poor surface and side drainage. The material used for the wearing course was potentially good, but was severely affected by the large percentage of oversize particles, which should, under proper circumstances, be removed or broken down.

Heavy rain and hail prevented a proper inspection of the second road. The shale wearing course was generally good, although slightly slippery in places, but the rainwater on the road surface clearly showed the deficiencies in surface drainage, with channels of water flowing both longitudinally and transversely across the road.

The second day of the course involved several exercises in computing the properties and behaviour of potential wearing course materials from laboratory test results and determining blending ratios to improve marginal materials.

Presentations were given on the construction and maintenance of unpaved roads. The importance of good maintenance was emphasised, with innovative construction and maintenance techniques being introduced to the group.

A decision process to select the appropriate maintenance requirements was discussed. An introduction to the process and benefits of a maintenance management system was also presented. The final part of the course included discussions regarding the upgrading of unpaved roads and the testing, uses, and potential benefits of proprietary soil stabilisers.

Photo 1: Course presenter Dr Phil Paige-Green

Photo 2: Course delegates

