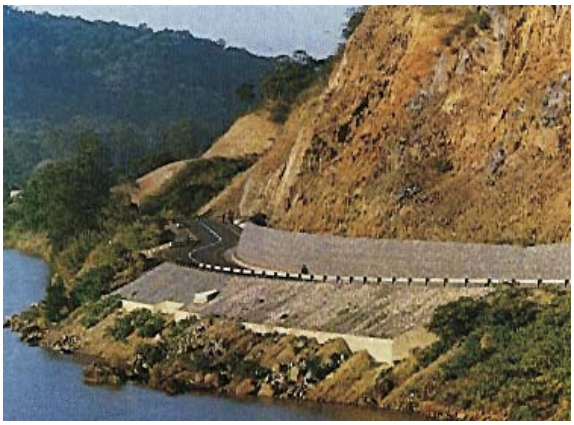
ROUTE R61 - TOMBO TO PORT ST JOHNS
EASTERN CAPE SOUTH AFRICA

The project comprised the reconstruction and realignment of 22 km of the road to an all weather surfaced standard. The first section traversed the steep eastern escarpment. The next section traversed the wide flood plain of the Mngazi river while the last section traversed the indigenous Dwalana forest and then the steep right bank of the Umzimvubu river. Some of the more notable geotechnical features of the project were :

- ***Extensive geotechnical investigations of the unstable slopes of the escarpment***
- ***Investigation of embankment settlement potential on the flood plain***
- ***Design of the containment of high fills with "Reinforced Earth", gabion and concrete retaining walls and provision of extensive drainage systems***
- ***Design of large cut slopes and rock fall protection measures***
- ***Erosion protection measures along the banks of the Umzimvubu river***
- ***Wick drain stabilization of the flood plain embankment foundations and early construction to induce settlement***
- ***Environmental protection measures through the Dwalana forest***

Construction Of The Large Reinforced Earth Retaining Wall On Tutor Ndamase Pass



Alignment Along The Umzimvubu River
(note the rock traps & scour protection)

HHO Africa were responsible for the following geotechnical consulting services :

- ***Geotechnical investigations for the stability of the proposed road cuts and fills***
- ***Bridge foundation investigations***
- ***Location of borrow pits and testing of proposed construction materials***
- ***Materials utilization plans***
- ***Monitoring of cut and fill construction***
- ***Co-ordination of environmental scoping***