

AIRPORT ENGINEERING

YSTERPLAAT AIR FORCE BASE RECONSTRUCTION OF APRONS AND TAXIWAYS WESTERN CAPE SOUTH AFRICA

The approximately 100 000 m² of concrete apron at the Ysterplaat Air Force Base constructed in 1940-42 had deteriorated to a level of marginal serviceability. Cracking and settlement were widespread.

HHO Africa were appointed to investigate and report on alternative strategies for upgrading the aprons to handle all aircraft up to the C 130 Hercules aircraft. Extensions to the existing concrete refuelling aprons and a new refuelling area for light aircraft were also required. Budget constraints were severe.

HHO Africa made the following recommendations which were accepted by the Air Force:

- ◆ **All non-refuelling aprons and taxiways to be re-constructed in asphalt surfaced flexible pavements**
- ◆ **Dedicated taxiways to be constructed and suitably marked for the LCN/PCN appropriate to the C 130 Hercules. All other aprons designated for light vehicular traffic only**

- ◆ **All services e.g. communications, lighting, water, compressed air, fuel etc to be located, ducted as necessary and marked**
- ◆ **Material from the demolished aprons to be recovered, crushed and blended with 35% in-situ material to form a strong sub-base**
- ◆ **New concrete refuelling aprons to be constructed with high strength unreinforced concrete with undowelled joints while the light aircraft refuelling area to be given a proprietary bitumen treatment to overcome fuel spillage damage and reduce costs**
- ◆ **Construction was phased to ensure operational readiness of the base at all times**

HHO Africa were subsequently appointed to complete the detail design, all necessary contract documentation, call for tenders and provide all necessary staff to monitor and administer the contract.



The Completed Project