

CURRICULUM VITAE

Name of Firm : Kubu Consultancy Pty Ltd **Name of Staff** : E Horak
Position : Managing Director/ Specialist
Profession : Civil Engineer **Year of Birth** : 1954
Years with Firm: 10 years **Nationality** : South African

Membership in Professional Societies : Registered Professional Civil Engineer, Fellow membership status SAICE SAT and SAAE, member and Quality Education Committee member of ECSA

EDUCATION:

- Management of Technology (MOT) Short Course, Graduate School of Business, (1994), University of Cape Town
- Advanced Executive Programme (AEP) Diploma (with distinction, 1990), SBL, UNISA, Pretoria
- Ph.D - Civil Engineering (1988), UP, Pretoria
- M Sc - Transp. Eng. (1984), Berkeley, California
- M Eng. -Civil Engineering (1983), UP, Pretoria
- B Eng (Hons) Civil Engineering (1980), UP, Pretoria
- B Eng Civil (1977), UP, Pretoria.

KEY QUALIFICATIONS:

- Pavement rehabilitation and recycling (roads and airfields)
- Asphalt technology and pavement materials engineering (roads and airfields)
- Pavement Maintenance and Management (roads and airfields)
- Planning and Design of Paved, Gravel Roads and streets
- Accelerated Pavement Testing (SA, and USA)
- Technology transfer and management
- Municipal engineering and service delivery
- Transportation Engineering

EXPERIENCE AND EMPLOYMENT RECORD:**Experience Record:****1. Teaching and Research Activities**

Emile Horak was head of the Department of Civil Engineering at UP for 10 years. In that capacity has been involved in undergraduate and post graduate course presentation as well as course material design. He has also been involved in numerous continued education presentation of courses. Emile spent 14 years working in the fields of research, development and technology transfer with Transportek, CSIR. He specialised in the field of pavement engineering and transportation engineering with international recognition in pavement performance, accelerated pavement testing and response analysis (materials, design, rehabilitation and behaviour). He acted as a specialist for various consulting engineering firms and for various clients on road rehabilitation and design projects. Lately his area of specialisation include road maintenance and management and airport design and management. Emile spent a sabbatical period as visiting professor with Built Environment, CSIR in 2007/2008. Emile published and presented more than 80 reports and papers at international conferences and in periodicals in various fields of expertise. He has been awarded a number of awards for some of his papers and for technology transfer.

2. Client representation

Emile was the city engineer roads and works, executive director, with the Johannesburg City Council from 1991 to 1994. Major work done under his guidance and coordination include various phases of the design and rehabilitation of the M1 and M2 motorway system, implementation of a suite of asset management systems in roads, stormwater drainage, footway and verge, railway siding and bridge management systems. A new state of the art asphalt plant was designed and built with various innovative technology transfer projects following such as the pilot implementation of hot-in situ recycling, porous asphalt, large aggregate mix bases in SA. He subsequently served as head of service delivery of the Greater Johannesburg Transitional Metropolitan Council during the transitional year 1995. Major projects coordinated under his guidance were the design and construction of the Johannesburg Athletic Stadium, the urban renewal of the Ellispark precinct for the 1995 Rugby World Cup. The successful R95million emergency service delivery project to previously disadvantaged areas in record time. Has subsequently also acted as consultant and facilitator for various groups in the Johannesburg Metropolitan Council in terms of transformation management and service delivery.

3. Contractor experience

Emile joined Murray and Roberts Roads and Earthworks as director in 1995 during which major road projects such as the Trans-Kalahari road was built. In 1996 he was made Executive Director Roads and Infrastructure with Murray and Roberts head office and developed toll road projects and strategies in Africa. He was board member of TOLCON.

4. Consultancy

Emile is a founding partner of a specialist consultancy firm, KUBU Consultancy (Pty) Ltd, and Emile Horak and Associates (Pty) Ltd. He is doing mainly specialist consultancy work for a variety of clients. A number of jobs are done as specialist consultant in joint venture or in a consortium with other consultancy firms. The most recent large projects Emile has been involved in are:

- Acting as specialist consultant to Ndodana Consulting Engineers (NCE) on **airports projects** such as:
 - * Rehabilitation and analysis of the Bloemfontein International Airport runways and taxiways for ACSA to be constructed in mid 2007
 - * Rehabilitation and analysis of the special maintenance of the Kimberley and Upington airports for ACSA. in 2003, 2004, 2007 and 2008 as specialist for NCE.
 - * New design of rapid exit taxiway and holding area and rehabilitation of the main runway for the Johannesburg International Airport (JIA). This work was done as specialist for the joint venture Steward Scott International (SSI) and NCE (2005/6)
 - * Specialist member of the joint venture Ninham Shand, NCE and Africon in the successful tender for the rehabilitation design and upgrade of the Waterkloof Airforce Base for the Department of Public Works. Tender amount budgeted for R 900million (2007 to date) and R700 million (2010 onwards) 2nd phase.

On **roads projects** with NCE

- * Specialist consultant in the successful tendering of NCE on the Johannesburg ring-road (N1,N3,N12) routine road maintenance contracts of SANRAL (2003 to date)
- * Specialist investigation on the R61 (Ramsgate to Port Edward) in KwaZulu Natal to determine the cause of the pre-mature cracking and stripping of the asphalt surfacing. Appointed jointly by the client, consultant JV and contractor JV (2004/5).
- * Appointed by the Johannesburg Roads Agency (JRA) as specialist with NCE and PHR consultants to write a design guideline and procedures document to upgrade gravel streets in urban areas (2003/4/5).
- * Act as specialist consultant for NCE on various street upgrade projects done in Joint Venture with contractors and the JRA construction unit (2004/5).

Other airports work as specialist

- Work as airports specialist with BPCE consultants of Windhoek, Namibia, to identify the cause and mechanism of premature asphalt delamination of the Hosea Kutako International Airport for Namibia Airports Company (NAC) (February to June 2007).
- Appointed by Namibia Airports Company (NAC) to do a technical audit on the obstruction analysis, geometric design and pavement designs with specific reference to the salt damage on the Walvis Bay International Airport (WBIA) (May to July 2007).
- Appointed by Namibia Construction to do an alternative design on Walvis Bay International Airport (WBIA) extension and upgrade in order to provide viable rehabilitations and alternatives for the aggressive salt damage due to the gypcrete source in the in situ material (July, August 2007).
- Appointed by Namibia Airports Company (NAC) to act as independent engineer on the emergency rehabilitation project on the Hosea Kutako International Airport as well as specialist advisor regarding maintenance strategies on the five smaller airports under their jurisdiction (September 2007 onwards).
- Specialist investigation for Roadmac Surfacing on the Port Elizabeth Airport vs consultants Khutele Projects (BKS) regarding water related shear and delamination problems.
- Pre-feasibility study for Equatol Investments for the Sao Tome International Airport estimated at R1.8 billion in joint venture with KUBU Australia, Greene Engineering and Aurecon Consulting. Project to proceed to Detail design phase soon.

Specialist Roads related work

- Specialist partner with Jeffares and Green in the rehabilitation of the N2 north toll plazas for SANRAL and to do technology transfer of the use of ultra thin continuously reinforced concrete pavement (2007 ongoing).
- Appointed by SABITA as specialist to coordinate the development and technology transfer of high modulus asphalt (HiMA) from French and German technology for airport runway and taxiway applications. (Underway)
- Specialist partner in the joint venture, Africon, NCE and KUBU (ANK) appointment for SANRAL on a R500 million rehabilitation of the N12-19, section 3. (2005 ongoing to date)
- Specialist partner in the joint venture DEC/KUBU appointment for SANRAL on the upgrade and rehabilitation of the N2-14. Currently in the preliminary design stage (2005 and ongoing).
- Successful completion of the R165 million rehabilitation design and supervision of the N2-4 for SANRAL in the joint venture MBS/NCE/KUBU (MNK) joint venture in 2004.
- Was appointed by Gautrans in 2002 to investigate the feasibility of privatisation of the Gautrans routine road maintenance unit in joint venture with DEC. Currently this is used as blue print for the actual implementation.
- Appointed as specialist with Jeffares & Green on a 10 year long term performance based road maintenance contractor, BEST roads for the client Main Roads Western Australia (MRWA) to develop operational plans and management plans to get the contract back on track. (Currently still underway until 2011).
- Appointed in 2005 to 2007 with Africon to monitor and develop Sand Treated with Emulsion to emulate the successful hot sand mixes on Mozambican roads constructed with labour intensive local contractors for the Mozambican national roads agency, ANE.
- Was originally appointed in 2000 by National DoT and later SANRAL to launch routine road maintenance by contract for the development of SMMEs on the national roads network. This system developed has now successfully been implemented and developed to the stage of multiple year appointments. (2009).
- Specialist investigation for Roadmac Surfacing Cape versus VelaVKE consultants on the subsurface water related problems on the N1 section near Paarl. (2009)
- Specialist investigator and audit function on the rehabilitation design of the N1-22&23 on the J&G designs for Bakwena Toll concessionaire. (2010)