

**Company position:** Director

**Name of Firm:** PBA International (SA)

**Name of Staff:** Stuart James Dunsmore

**Profession:** Environmental Management, Water Resources, River & Drainage Management

**Date of birth:** 7 March 1962

**Nationality:** British / South African

**Membership in Professional societies:**

International Association of Impact Assessment (South African Chapter),  
Member of the Chartered Institute of Water and Environmental Management (UK)

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**KEY QUALIFICATIONS AND RELEVANT PROJECT EXPERIENCE**

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18 Years experience including:

- Hydraulic modelling (ISIS) of the River Kennet for the Environment Agency (UK) for the purposes of floodplain management, flood risk assessment and development control.
- Environmental Impact Assessments for Eskom power lines – 88kV up to 765kV lines, including 700km of 765kV covering four provinces in South Africa (study area of 450km x 300km). Also Environmental Control Officer for the construction of the Pegasus-Athene 400kV line.
- EIA project manager for R1.2 billion PFG float glass plant expansion in Springs. Air quality modelling studies, noise impact assessments, groundwater quality were the key issues included in the study.
- Hydrological modelling of stormwater and process water movement on mine tailings dams (Vaal Reefs, North West Province).
- Urban drainage modelling (hydrodynamic PCSWMM) and hydrology for clients in Cape Town (ACSA, Cape Town City Council) and Johannesburg (Jo'burg Roads Agency).
- Water Resources Situation Assessment for the Mvoti-Mzimkhulu WMA, KwaZulu Natal, part of an Integrated Water Resources Management Plan for the area (DWAF/DANCED)
- Environmental impact assessments, including inner city developments in environmentally sensitive areas, road schemes and water transfer schemes. Development and assessment of mitigation options, including drainage, land use, landscaping and visual impacts. (South Africa)
- Project Co-ordinator for detail design of a RDP water supply scheme in North West Province (Value R4m). (South Africa)
- Hydraulic modelling (ISIS) and impact assessment (sediment, ecology, flooding) of a steep river system in KwaZulu – Natal for Umgeni Water. (South Africa)
- Hydraulic analysis of major bridge crossing of the Limpopo River (Mozambique)
- Integrated Network Management (water supply) for Johannesburg SMLC. The system is set up to manage supply water demand, and to programme maintenance work and upgrade to meet set levels of service, covering both the formal and informal areas of the MLC. (South Africa)
- Development of national policy on air quality at airports. (South Africa)
- Environmental impact studies of development on catchment areas, rivers and sensitive ecological habitats. (UK)
- Development master planning with particular reference to water resources – amount and quantity. Application of source control techniques and pollution prevention measures which form an integral part of urban drainage systems. (UK & South Africa)

- Hydraulic design and modelling of drainage networks of existing and proposed developments, including development testing of design which includes landscaping and environmental features. (UK & SA)
- River engineering projects and flood alleviation schemes. (UK)
- Distributed catchment hydrological modelling for development control and urban planning. Full flood hydrograph analysis of the River Thames.
- Hydrological modeling experience – SCS method (SA & US), ACRU (SA), Wallingford Procedure (UK), WinDes (UK), Ribaman (UK), Flood Studies Report (UK), PCSWMM (SA), WSAM (SA)
- Hydraulic modeling experience – Slope-Area method (SA), MicroDrainage (urban drainage - UK), ISIS hydrodynamic model (UK & SA), HEC-RAS (SA), PCSWMM (urban systems – SA).

#### Other involvement

- Quality Assurance: Developing and auditing Quality Assurance Systems (ISO 9001 and ISO 9002) in both South Africa and the U.K.

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## EDUCATION

<b>Professional Qualifications:</b>		CEng. (Chartered Engineer, Engineering Council UK) CEnv (Chartered Environmentalist, M.C.I.W.E.M. (UK))
<b>1986</b>	:	University of Natal, RSA: M.Sc. Eng
<b>1984</b>	:	University of Natal, RSA: B.Sc. Eng
<b>1978</b>	:	Matriculated: Alexandra High School, Pietermaritzburg, South Africa

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## EMPLOYMENT

<b>1999 - Present</b>	:	<b>Director, PBA International (SA)</b> (South Africa) Environmental and Water Resources Consultant.
<b>1997 - 1999</b>	:	<b>Principal Engineer: PBA International</b> , (UK & South Africa) Environmental and Water Engineering Consultant
<b>1990 - 1997</b>	:	<b>Principal Engineer: Peter Brett Associates</b> (United Kingdom) Water resources engineering, river engineering, hydraulic modelling, flood relief schemes, development planning and management, drainage design.
<b>1990</b>	:	<b>Contract Research Engineer: Dept. Agricultural Engineering, Univ. of Natal</b> (South Africa) Water resources planning research, catchment management, hydrological model development
<b>1988 - 1990</b>	:	<b>Engineer: Dept Water Affairs &amp; Forestry (SA).</b> Flood Studies – flood measurement and documentation; risk assessment, dam safety analysis
<b>1986 - 1987</b>	:	<b>National Service: SA National Defence Force</b> Responsible for environmental management of defence force training and testing grounds, including game counts, vegetation management, operational procedures, erosion control.
<b>1984 - 1985</b>	:	<b>Research Engineer: University of Natal</b> (South Africa) Research into design hydrology for small catchments

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**LANGUAGE SKILLS**

Language	Reading	Speaking	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Good	Good	Good