

**Qualifications**

- BEng (Civil), University of Canterbury, New Zealand (1988)
- Chartered Engineer, UK (1994)

**Professional memberships and affiliations**

- Fellow, Institution of Civil Engineers (2006) - Member (1994), ICE Reviewer (2005 onwards)
- Fellow, Chartered Institution of Water and Environmental Management (2010) - Member (1997)
- Registered Professional Engineer, Hong Kong - Civil (2006)
- Registered Professional Engineer, Singapore (PE 4266) - Civil (2007)
- Member, Hong Kong Institution of Engineers (2003), Reviewer (2013 onwards)
- Member, the Association of Project Managers (2006)
- Member, Institute of Materials, Minerals and Mining (2008)
- Member, Institute of Quarrying, Hong Kong (2009)
- Tunnelling Society member - British, Singaporean, Hong Kong, and Australasian; Geological - Hong Kong and Malaysian

**Expertise**

- Multidiscipline engineering, Tunnelling, Underground works, Construction, Project Management, Claims, Expert Witness
- Asian Business Strategy, Planning, Management and Development

**Summary of competencies**

Tunnelling and Underground Planning, Design, Project Management, Construction, Claims, Disputes and Expert Witness. Specialist optioneering and co-ordination of multi-discipline engineering projects, including: railways, structures, sewage and water treatment, reservoirs, pipelines, pumping, cement works, maritime, drainage, bridges and highways. Specific design and planning experience of TBMs, tunnels, stations, shafts, caverns, cut and cover, pipe-jacking, and related structures in soft and hard ground. Detailed design of structures including, steel, concrete, water retaining structures, foundations, piles, frames, and bridges. Familiar with associated engineering codes, software and capabilities. Jim was the Design Director on 901-Admiralty Station responsible for the tunnelling and cavern Engineer's Design servicing 4No. new platforms in Hong Kong. Jim was also the Independent Checking Engineer on various Hong Kong MTR WIL, XRL, SIL, KTE packages, and DSD Lai Chi Kok and Stonecutters Island Tunnel projects in Hong Kong. Jim was the designated 'Designer' and led the successful Tender (based on an alternative tunnel design) and subsequent Detailed Designs for the Kowloon Southern Link (KDB200) and also the CLP - Castle Peak Cable tunnel. Jim was also the Tunnel Design Manager for 3.5km of rock and soft ground tunnels and stations on SDC100 – Tai Wai to Diamond Hill; and carried out the detailed design of the tunnel lining for the Route 8 (Previously Route 9) Nam Wan Tunnel at Tsing Yi in granite. Jim has been involved in the design and construction of 14No. Metro tunnelling projects and 13No. Stations in 4No. countries.

**Project experience**

**Benson Consultancy** - June 2014 to present

**Role: Managing Director – Consultancy, Detailed Designs & Drawings, Expert Witness & Arbitrations**

- Hong Kong – Dragages HK Ltd - Liantang Tunnel – Specialist temporary works designs and drawings for Crane foundations, TBM Segment conveyor slab and cradles, Material storage structures, Cable draw pits, Workshops, Batching Plant and Silo foundation. Conveyor foundations and tunnel portal doors. All designs resolved via optioneering.
- Hong Kong – Arbitration – HKSAR Government vs MHJV - Lai Chi Kok viaducts – Quantum reports.
- Mongolia – Expert witness – Lotte v MAK - MAK Tower / Hyatt Hotel – Foundation, Dewatering & Waterproofing reports.
- Philippines – Puyo HEP – Owner's Engineer – Geotechnical Baseline Report and Tunnelling/Geotechnical advice.

**Jacobs - Sinclair Knight Merz** - May 2012 to June 2014,

**Role: Group Manager – Tunnelling**

- China – Chevron – Li Yu Tang tunnel – Flooded Gas Main tunnel refurbishment
- Hong Kong – MTR-C1103-WSD steel lining design at tunnel interface
- United Kingdom – Nine Elms Station, London – Expert Witness – TFL vs Banham. Construction and tunnelling advice.
- Malaysia – Kuala Lumpur – Tun Razak Exchange – Tunnelling optioneering.
- Singapore-T213, T208, and T216 – Thomson Line – Caldecott Station & Siding Tunnels, Springleaf & Stevens Stations
- Australia – Sydney – F3 to M2 - Pennant Hills to Thornleigh Road tunnel
- New Zealand – Metro Cost Comparison study, Auckland City Rail Link and Waitemata Harbour Tunnel, Auckland
- New Zealand - Wellington - Mount Victoria Tunnel Duplication

**Snowy Mountains Engineering Corporation SMEC, ASIA Limited – 2008 to 2012**

**Role: Regional Manager** - SMEC International - North Asia (Hong Kong, Macau, China, Mongolia, Taiwan, South Korea, North Korea, and Japan) Started with 5No. Staff in Hong Kong in 2008 and developed AUD 10m/yr revenue business with 70 staff, in North Asia by 2011. Responsible for all operations, commercial and technical aspects including staff from 18No. different nationalities in Hong Kong, Mongolia and China. Staff included Technical Directors, Engineers, Country Managers, Office Managers, Accountants, translators, administrative and technical staff.

- Managing Director - SMEC Asia Ltd (Hong Kong and Macau)
- Executive Director – SMEC Mongolia LLC (Founding Director)
- Director – SMEC Beijing Ltd and SMEC Consulting Pte Ltd (Singapore)
- Chairman – Engineering Consultants Contracting Ltd

**Project Director – SMEC International - for the following:**

- Hong Kong MTR – ICE - C1002 Kwun Tong Ext. Yau Ma Tei to Whampoa Tunnels
- Hong Kong MTR – ICE - C823A - XRL – Tai Kong Po to Tse Uk Tsuen Tunnels
- Hong Kong MTR - ICE- 823B XRL – Shek Kong Stabling & Rescue Sidings
- Hong Kong MTR – ICE - C810A&B XRL – West Kowloon Terminus Stn.
- Hong Kong MTR – ICE - C902 – SIL – Nam Fung to Admiralty Tunnels
- Hong Kong MTR – ICE - C824 and C826 - Express Rail Link – Guangzhou to Hong Kong
- Hong Kong MTR - C821 – XRL – Shek Yam to Mei Lai Road Tunnels. Tender design.
- Hong Kong MTR – ICE - C803A and 803D - XRL – Terminus Station
- Hong Kong MTR- ICE - C705 WIL – Kennedy Town Station and Tunnels. Tender design.
- Hong Kong MTR – ICE - C703 West Island Line – Sheung Wan tunnels
- Hong Kong MTR- C901 South Island Line (East) - Admiralty Station & SCL. Detailed design.
- Hong Kong MTR - C1106-SCL - Hung Hom Station and Tunnels. Condition surveys.
- Hong Kong - DSD – ICE- Lai Chi Kok Drainage Tunnel
- Mongolia - Zamyn Uud Regional Logistics Centre
- Mongolia - 1500km Railway – Technical Advisor for 3000km railway development.
- Mongolia - Ukhaa Khudag – Gashuun Sukhait 225km Rail Project. Detailed design.
- Mongolia – International Finance Centre – Office Tower - 25 Floors - Ulaanbaatar.
- Mongolia - Edelweiss Hotel – 27 Floors – 3,000 sqm/floor.
- Singapore - LTA-C916 - Downtown Line - Beauty World Station & Tunnels
- India - Highway Tunnel 3km under Rohtang Pass near Manali.

**Mott Connell Ltd. (Hong Kong & Singapore) 2003-2008 – Associate**

- Hong Kong -Kowloon Southern Link, KDB200 - Austin Station and Tunnels. Detailed design.
- Singapore - Gambas to Novena/May School Cable Tunnel. Feasibility study, preliminary design.
- Hong Kong - Beacon Hill Tunnel refurbishment. Detailed design.
- Hong Kong - HKU Centennial Campus. Tender design.
- Hong Kong - CLP Castle Peak Cable Tunnel, Hong Kong. Detailed design.
- Australia, Melbourne - Mitcham to Frankston Freeway (EastLink). Design Management and Detailed design.
- Australia, Melbourne - Hobson's Bay Main Sewer Relocation. Preliminary design.
- Hong Kong - CLP Chi Ma Wan Cable Tunnel, Hong Kong. Detailed design.
- Hong Kong – KCRC-SDC100, Tai Wai to Diamond Hill, Shatin to Central. Scheme design.

**Charles Haswell & Partners Ltd (1992–2003)–Senior/Resident Engineer**

- Singapore - Link Sewers to the Deep Tunnel Sewerage Scheme. Detailed design.
- Singapore - Tanah Merah Link Sewer, and- NEWater Project specifications and detailed design.
- Hong Kong – Highways Department - Route 9 Nam Wan Tunnel
- UK - Channel Tunnel Rail Link Contract 361, London
- UK - Padeswood Cement Works, Wales. Detailed design.
- UK - Buxton Lime Industries Cement Works, Derbyshire. Detailed design.
- UK – Scotland, Clinker Cooler Works, Dunbar. Resident Engineer.
- Trinidad, West Indies - South Water Supply Project, Trinidad, West Indies. Design Co-ordinator.
- UK - Hampton Ozonation WRW, London. Winning conceptual design.
- UK - Ladybower and Ashopton Viaducts, Derbyshire. Detailed design.
- UK - Wombourne Sewage Treatment Works, Wolverhampton. Detailed design.
- UK - CrossRail redevelopment at Liverpool Street Station, London. Preliminary design.
- UK – LUL - Northern Line tunnels, London Bridge. Construction advisor.
- UK – LUL - Jubilee Line, & Heathrow Express Tunnels, London. Construction advisor.
- UK – West Midlands, Tipton GAC Plant, Grafham Carbons Limited. Engineer's Representative.

**Robert West and Partners, London – UK (1989 to 1992) – Graduate Engineer/Resident Engineer – Structures, Bridges, Highways and Maritime**

- UK – Bascule Bridge and Lock Gates, London Docklands. Detailed design.
- UK – Owlcotes Retail Development, Roads, Drainage, Leeds. Detailed design.
- UK – Beacons & Channel for Trident submarines, Barrow-in-Furness. Detailed design.
- UK – North York Moors, Footbridge, River Seven. Detailed design.

**Papers:**

- Design considerations for small diameter tunnels in Singapore. (Singapore 2003)
- Impact of changing geological conditions for foundation design and construction in Tung Chung (Hong Kong 2014)
- Cost comparisons for metro tunnelling in 4No. major world cities (Brazil 2014)