
Simon Shaw—

Executive Director



Experience Overview—

Has over 35 years' experience as a civil engineer and has been directly responsible for BG&E's civil engineering from 1985 to 2017. BG&E's capacity in civil engineering now includes works up to and including major urban freeways and Simon has a hands-on involvement in technical matters relating to the delivery of these projects. Simon has a technical and contractual background for projects as both a project leader and as a sub-consultant. Has specialist expertise in drainage, road design, utility service and multimodal transport facilities.

Civil Engineering

- Great Northern Highway Realignment, Port Hedland
- Wheatstone / Macedon Gas Plant Access Road, Onslow WA – Project Team Leader
- Ashburton North Strategic Industrial Area Master Planning - Project Team Leader
- Great Eastern Highway / Roe Highway Interchange – BG&E Project Director
- Reid Highway – West Swan Road to GNH – BG&E Project Technical Director
- Northbridge Hub – Member of Technical Steering Committee for the planning of the sinking of the Perth – Fremantle railway through Perth
- Mitchell Freeway Extension – Hodges Drive to Burns Beach Road
- Great Eastern Highway – Tammin to Walgoolan.
- Leach Highway – Orrong Road Interchange – Independent Verifier
- South West Metropolitan Rail Package A – Independent verification of civil works and drainage.
- Geraldton Southern Transport Corridor – lead civil designer for road and rail works.
- Graham Farmer Freeway Stage 2 - Project Design Coordinator for all civil work for 4 km of urban freeway.
- Kwinana Freeway Interchanges & Extension - service relocations.
- Roe Highway Stages 4 & 5 - technical review of civil works for MRWA.
- Roe Highway Stage 6 - independent verification of civil works.
- Tonkin Highway Extension - tender bid and independent verification of civil works.
- Earthworks, roadworks, drainage and sewer design for 1200 lot subdivision for Port Kennedy Resort.
- Civil engineering for over 40 rural road projects under 3 year period contract with Main Roads Western Australia.
- Hydrology and culvert design for 25 km Brockman Rail Spur.
- Concept design of southern section of 200 km of road between Karratha and Tom Price.

Project Management

- ALine East Alliance – Tammin to Walgoolan (Design Manager /Alliance Management Team member)
- Claisebrook Station Upgrade.
- Graham Farmer Freeway Stage 2
- Port Kennedy Resort Development

Position—

Executive Director, BG&E Pty Limited

Qualifications—

- BEng
Bachelor of Engineering
- CPEng
Chartered Professional Engineer
- FIEAust
Fellow, Institute of Engineers
Australia
- RPEQ
Registered Professional Engineer
Queensland

Career Milestones—

- 2016 / Appointed Executive
Director of BG&E Pty Ltd
- 2009 / Appointed Director of
BG&E Pty Ltd
- 2001 / Appointed Technical
Director - Civil of BG&E Pty Ltd
- 2001 / Appointed Associate of
BG&E Pty Ltd
- 1985 / Joined BG&E
- 1977-1985 / Kinhill Engineers
- 1976 / Bachelor of Engineering,
UWA

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- Main Roads Term Consultancy Contract

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Detailed Project Experience—

1985 – present

BG&E Pty Limited – Director

Civil Engineering

Responsible for design, documentation and contract administration of all civil engineering projects undertaken by BG&E. Projects include roadworks (including those associated with bridgeworks), railway track works, drainage and waterways analyses, carparking facilities for public and commercial projects, hardstanding for industrial projects and utility service design, installation and relocations. An indication of some projects is given below:

Roadworks

Involvement and responsibility for a wide range of roadworks projects. These include:

- Great Northern Highway Realignment, Port Hedland - BG&E Project Director
- Wheatstone / Macedon Gas Plant Access Road, Onslow WA - Project Team Leader
- Ashburton North Strategic Industrial Area Master Planning - Project Team Leader
- Great Eastern Highway / Roe Highway Interchange - BG&E Project Director
- Reid Highway – West Swan Road to GNH - BG&E Project Technical Director
- Mitchell Freeway Extension – Hodges Drive to Burns Beach Road - Technical Manager - road, rail and structures
- Great Eastern Highway – Tammin to Walgoolan - ALine East Design Manager.
- Leach Highway – Orrong Road Interchange - Independent Verifier
- *South West Metropolitan Rail Package A* - Independent verification of civil works and drainage.
- *Geraldton Southern Transport Corridor Stage 1* - Lead civil designer for road, rail works and utility services.
- *Graham Farmer Freeway Stage 2* - Design coordinator for a major six lane urban Freeway
- *Karratha – Tom Price Road* - BG&E's Project Leader for the feasibility study for a new 273 km highway. Preliminary design of the first 10km from Karratha.
- Roe Highway Stages 4, 5 & 6 and Tonkin Highway - Mills Road to Thomas Road - Design leader for the D&C Tender design
- *Roe Highway Stages 4 and 5 roadworks* - Design leader for the D&C Tender design for Independent review for Main Roads WA
- Roe Highway Stage 6 roadworks and Tonkin Highway Extension - Verification
- *Beeliar Drive, Spearwood* - Design of 2.7km of new urban distributor road.

Railway

Simon's background with Transport related projects is now substantial. It includes Warwick, Whitfords and Glendalough transit stations on the Northern Suburbs Transit System and recent redevelopment of Maylands, Clarkson and Claisebrook railway stations, and bus stations at Curtin University, Oats Street and South Street. In addition, he has had a major role in Design and Construct Projects with Thies Contractors on the Graham Farmer Freeway, Kwinana Freeway and many other similar bids.

Design and documentation of track alignment and formation works, and stations, including:

- Mitchell Freeway Extension – Track and civil works for rail realignment, including tunnel
- SWMR Package A – Independent Verification of track and civil.
- Geraldton Southern Transport Corridor – 13 km of single line freight track and rail yards.
- Claisebrook Station Upgrade - Design, documentation and Superintendence of the upgrade of the Claisebrook Railway Station on operating lines, including implementation of Railway Safety Management Plans.
- Goongoongup Rail Bridge Approaches - Rail formation for the approaches to this major rail bridge.

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- Roe Street Tunnel -Rail alignment geometry.
- Belmont Park Rail Realignment -Realignment of 2km of rail track across Burswood Peninsula for the Graham Farmer Freeway Stage 2.
- Glen Iris and Anketell Tunnels - Design and documentation for track alignment and drainage for two rail tunnels associated with the Kwinana Freeway Extension and South West Metropolitan Railway.

Carparks, Hardstanding and Similar Facilities

Design and documentation of carparks and similar facilities associated with public and commercial projects carried out by BG&E, including:

- Leach Highway, South Street, Canning Bridge, Glendalough, Warwick, Whitfords and Thornlie Stations. Design of commuter carparking, bus access roads and Kiss & Ride facilities at these bus / rail transfer stations.
- Curtin University - Design and documentation of numerous carparks on the Curtin University campus.
- School Carparking Areas - Design and documentation of parking areas at schools, including John XXIII, Currambine Primary, MLC.
- Spearwood Wool Store Development - Access roads, hardstanding areas and carparking for large woolstore development.

Bridgeworks

Involvement in most BG&E bridgeworks projects from concept and alignment to deck hardware and services. Examples include:

- Port Bouvard Bridge, Dawesville Cut - Geometric design to allow incremental launching. On-bridge utility services. Abutment structural design.
- Goongoongup Rail Bridge, East Perth - Design for incremental launching, deck hardware (guardrails etc), on and off bridge utility services.
- Windan Bridge, East Perth - Design for incremental launching, deck hardware (guardrails etc), on and off bridge utility services.

Drainage and Waterways

Design and documentation of piped drainage networks, sumps and outfalls. Analysis of waterways hydraulics and design of bank and bridge protection measures, including:

- Mitchell Freeway Extension
- Geraldton Southern Transport Corridor – drainage of highway, side roads and railway.
- Graham Farmer Freeway Stage 2 -Design and documentation of piped drainage network, sumps and outfalls for major urban freeway.
- Carpark and Hardstanding Drainage - Piped and overland flow design for carpark and hardstanding area drainage for public, commercial and industrial projects.
- Nanson Bridge Waterways Analysis - Analysis of serviceability and ultimate flow effects on a new road bridge and design of protection.
- Koonung Creek Undergrounding, Melbourne - Design of multi-cell culverts for the undergrounding of 500m of Koonung Creek for the Eastern Freeway with strict backwater limitations.
- Irwin River Bridge, Dongara - Waterways analysis for a floodway and protection of an existing road bridge.

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Bulk Earthworks

Design, documentation and specification for bulk earthworks projects. These include:

- Swanbank Paper Mill – Ipswich, Queensland
- Spearwood Wool Store - Bulk earthworks site preparation for major woolstore development.
- Port Kennedy Golf Course Lake - Design and documentation of lined irrigation lake for new links golf course

Utility Services

Design and documentation of new utility services and service relocations. Familiarity with the design rules and procedures of all Western Australian service providers. Examples include:

- Mitchell Freeway Extension - Diversion of DN 700 and DN600 water mains, gas and electrical utility services
- ALine East – Tammin to Walgoolan - Design and documentation of the realignment of 680m of the Goldfields Water Supply pipeline through the Kellerberrin Townsite
- Geraldton Southern Transport Corridor - Relocation of utility services associated with highway side roads and railway.
- Urban and Industrial Subdivisions - Design and documentation of all water, sewer and drainage reticulation services associated with urban and industrial subdivisional projects. Alignments for electrical and telecommunications services only.
- Port Kennedy Resort Development - Design and documentation of all water, sewer and drainage reticulation services, including a vacuum sewerage system for this resort development. Coordination of all other servicing requirements.
- Graham Farmer Freeway Stage 2 - Design and documentation of the relocation of all sewer, water, electrical, gas and telecommunications services to make way for this urban freeway project.
- Kwinana Freeway Interchanges and Extension - Design and documentation of sewer, water, electrical, gas and telecommunications services to make way for this new freeway project, including the realignment and undergrounding in purpose built tunnels of 1200mm diameter steel water mains.

Project Management

Contract documentation, administration and project management associated with major projects. Examples include:

- Steering Committee member for the ALERT JV for client-side reviews for Forrestfield Airport Link project
- ALine East Alliance – Member of the Alliance Management Team (AMT) in capacity of Design Manager
- Claisebrook Station Upgrade - Superintendence of the construction contract, including Tender assessment, assessment of the Contractor's Railway Safety Management Plan and OS&H Plan and Contract administration.
- Graham Farmer Freeway Stage 2 - Design coordinator of BG&E's bridge and civil design and documentation teams. First point of contact with the D&C Contractor, Main Roads WA and Westrail and other stakeholders.
- Port Kennedy Resort Development - Contract documentation and administration of bulk earthworks, roadworks and servicing contracts for this resort development. Liaison with client group, EPA, local authorities and service authorities.
- Main Roads Term Consultancy Contract - Project Leader for design and documentation of projects under the MRWA Term Consultancy Contract 17/99

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Previous Project Experience—

1977 – 1985

Kinhill Engineers, Perth and Adelaide

Design, documentation and site supervision of subdivision works and design of structures associated with the mining and processing industries

1973 – 1976

University of Western Australia

Bachelor of Engineering (Civil)