



Country of Citizenship: Australia

Educational Qualifications: BE (Hons), UNSW, 1991
MEngSci, UNSW Aust Defence Force Academy, 1995

Professional Associations: IE Aust, CPEng

Publications: 2

Languages: English

FIELDS OF SPECIAL COMPETENCE:

- Design and safety assessment of water and tailings dam embankments
- Design and costing of tunnelling projects
- Supervising and monitoring civil engineering construction projects
- Design of road pavements, structural foundations, embankments, excavation support & retaining structures
- Interpretation and analysis of laboratory and field investigation data
- Preparation of technical specifications and reporting
- Preparation of Design drawings for construction
- Risk Assessments of soil and rock slopes including RTA and AGS approaches.

MAJOR PROJECTS HAVE INCLUDED:

2004 – 2006

- **Parramatta to Chatswood Rail Link**, detailed design, design drawing documentation and construction supervision of the soft ground tunnel at Chatswood.

2002 – 2003

- **Channel Tunnel Rail Link, UK**, construction supervision and temporary support for multiple adits in weak chalk; soil nail wall design along A2 Motorway, design & supervision of an 11m high reinforced earth embankment on deep soft sediments.

1995 – 2001

- **Burnley Tunnel, Melbourne**, supervision of installation of 5000, 100 tonne remedial anchors. Remediation of side wall failure.
- **Eastern Distribution**, senior site engineer responsible for implementation of temporary and permanent support and analysis of tunnel monitoring data.
- **Cadia Dam**, design and tender documentation for 60m high earth/rockfill dam.
- **Wambo Tailings Dam**, remedial designs for 40m high, non-engineered coal tailings dam to satisfy requirements of Dams Safety Committee.

EMPLOYMENT:

2003 - Present

Associate, Pells Sullivan Meynink Pty Ltd, Terrigal NSW

2001 - 2002

Principal Engineer, Faber Maunsell, London

1995 - 2001

Senior Geotechnical Engineer, Pells Sullivan Meynink Pty Ltd, Sydney

1992 - 1995

Geotechnical Engineer, Peter J Burgess & Associates Pty Ltd, Canberra

STRUCTURAL FOUNDATIONS

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413 George Street	Sydney City	Design and finite element modelling of new building foundations located within 3m of existing, rail tunnels constructed in the 1930's. Design of temporary site retention works. Design and implementation of real time monitoring of the rail tunnels during construction.
157 Liverpool Street	Sydney City	Investigation supervision, design of new foundations on rock, advice and design for 30m deep basement excavation retention systems and stability below.
Landmark Centre 363 George Street	Sydney City	Investigation supervision, design of new and existing foundations on rock, advice and design for retention systems and excavation stability below adjacent multistorey developments, stability of 17m deep hand excavated piers below existing buildings. Assessment of impact of excavations on stress field and adjacent developments.
Excelsior Hotel, Elizabeth Street	Sydney City	Investigation and design of foundations for soil and rock, advice and design for retention systems including walls and rockbolt support, on site excavation stability and support advice (shotcreting and rock bolting).
383 Kent Street	Sydney City	Investigation and design of foundations for soil and rock, advice and design for retention systems including walls and rockbolt support, on site excavation stability and support advice (shotcreting and rock bolting).
Aston Apartments	Sydney City	Investigation, design and site inspection and advice for footings of multistorey apartments on restricted site. Excavation support and advice on stability of cut faces and adjacent developments.
Lobana Development Cnr Pitt & Bathurst Streets	Sydney City	Investigation and design advice for multistorey development with deep basements. Advice for footing design and excavation support.
Observatory Tower	Sydney City	Investigation and design advice for cantilevered structures to existing development.
Pumphouse Hotel	Darling Harbour	Investigation and design advice for development in estuarine environment. Advice for footing systems, site construction and dewatering advice.
Transgrid Substation	Ultimo	Investigation and design advice for new electrical substation footings and excavation support. Advice for excavation vibrations in relation to adjacent TV studios.

STRUCTURAL FOUNDATIONS

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Queensland Gallery of Modern Art	Brisbane	Design and construction advice for site consolidation below foundations. Assessment of driven pile loads and bending moment capacity requirements.
Rail Station	Homebush Bay	Investigation and design for excavation support and foundations. Construction inspection and advice for rock bolt and shotcrete wall support. Footing stability of cantilevered station roof supports.
Canterbury Hospital	Campsie, Sydney	Investigation supervision, design of foundations for soil and rock, advice and design for retaining wall systems, excavation stability and support (soil nailing, shotcreting and rock bolting), and construction inspection advice. Pavement construction advice.
Numerous Commercial & Industrial Developments	Sydney CBD, suburbs and Blue Mountains	Commercial, warehouse and residential style developments to ten stories. Review of previous and/or supervision of new investigations. Design advice for foundations and excavation support. Site inspection and advice.
Presidential Place	Saigon, Vietnam	Analysis of deep pile foundations in soft sediments for bearing capacity and settlement.
Katherine Street Multilevel Basement Excavation	Chatswood	Excavation support advice and design for vertical excavations in highly fractured shale rock.
Multistorey residential developments	Gosford	Excavation support advice and inspection of deep cut batters in weak sedimentary deposits.
Urban development to four storeys	Central Coast, NSW	Investigation and design advice for urban developments to four storeys including foundations, site retention and pavement design.
Multi-storey Commercial, Industrial & Residential Developments	Canberra, ACT	Private and government developments investigation, design and inspection for structure foundations and excavation stability in variety of geotechnical conditions including alluvial soils, steep unstable soil sites, volcanic and sedimentary rock sites.
Nicholls & Conder Reservoirs	Canberra, ACT	Large Scale Water Reservoir Tank foundation investigation & design

TUNNELS & UNDERGROUND EXCAVATIONS

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City West Cable Tunnel – Energy Australia	Sydney	Development from concept to detailed design. Works comprised the evaluation of routes, construction methods and equipment, field investigations including boreholes and in-situ stress testing. Provision of factual and interpretative reports for detailed design. Provision of the first geotechnical baseline report (GBR) in Australia for the construction.
Parramatta to Chatswood Rail Link	Sydney	Design, documentation and construction supervision of soft ground tunnel works at Chatswood for twin 7m diameter tunnels in clays and weak shale rock below an active rail line.
Channel Tunnel Rail Link – Contract 342	Kent, UK	Construction monitoring and temporary support design for adit tunnels in Chalk.
Eastern Distributor	East Sydney	Double deck wide span tunnels to 24m, dual lane off ramps and ventilation tunnels; Investigation supervision, analysis and reporting for driven tunnels and cut and cover structures including Art Gallery Land Bridge in Hawkesbury sandstone. Construction supervision of tunnels and cut and cover structures, monitoring and advice. Investigation, design and advice for ancillary structures on alluvial sands and soft estuarine sediments.
City Link Tunnel (Burnley)	Melbourne	Assessment, design and onsite supervision and construction advice for remedial anchoring, remedial concrete, and grouting works to original tunnel structure.
Homebush Rail Link	Homebush Bay, Sydney	Investigation, feasibility and analysis for driven rail tunnel and cut & cover tunnels in shale.
Mandalong Coal Declines	Morriset, NSW	Construction inspection, decline mapping and decline support advice.
Liverpool Ranges	Murrarundi, NSW	Geological and geotechnical assessment of rail tunnel alignments through Liverpool ranges.
St Vincents Private Hospital	Sydney	Feasibility assessment of tunnelling works for new radio therapy bunkers below existing city street.
North Goonyella Coal Mine	Queensland	Review of primary support for main and tail gate excavations.

TUNNELS & UNDERGROUND EXCAVATIONS

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M5 Road Tunnel	Sydney	Monitoring of M5 East road tunnel excavation. Installation, operation, training and data collection and review during tunnelling works.
Transgrid Tunnel	Picnic Point to Ultimo, Sydney	Assessment of Tunnel options, support, excavation methods and costs.
Very High Speed Train	Southern Highlands, NSW	Mine Subsidence impact on proposed rail route
Cross City Tunnel	Sydney CBD	Geotechnical model development and tender phase advice
Rail and Electricity Crossing Sydney Harbour	Sydney	Advice and recommendations for directional drilling, submerged tube and tunnel crossings of the harbour for rail and electricity use.

DANGEROUS MATERIALS AND OTHER FLUID STORAGE

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Caustic Soda Storage Geotanks, Orica	Gladstone, QLD	Development of concept models, assessment of alternatives including steel storage tank on reclaimed land. Site investigations for adopted Geotank design. Detailed design, technical specifications and drawings for construction. Site supervision of earthworks.
Caustic Soda Storage Geotanks, Alcan	Gove, NT	Development of concept, detailed design and technical specifications for construction.
Caustic Soda Storage Geotanks, Rio Tinto	Gladstone, QLD	Construction monitoring

EMBANKMENT DAMS, RIVER DIVERSION WORKS AND WASTE DUMPS

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Snowy Mountains Scheme	Talbingo Dam, NSW	Safety Review, static and dynamic stability analysis.
Sediment Control dams, KPC	Indonesia	Safety Review, static and dynamic stability analysis.
Nakan Dam Stage II	Indonesia	Slope stability analyses, construction control/documentation.
Glennies Creek Colliery Saline Water Storage Dam	Singleton, NSW	Investigation, design, construction review and Regulatory Approvals.
Wambo Mining Tailings Embankment	Singleton, NSW	Review of existing embankment slope stability, remediation works, risk assessment and construction control.
Donaldson Coal Dirty Water Dams	Maitland, NSW	Review and construction/rehabilitation advice
Harcourt Hill Irrigation Dam	Harcourt Hill, ACT	Site investigations, earthworks construction requirements, slope stability analyses.
Bengalon Waste Rock Dump	Indonesia	Waste rock dump seepage analysis and assessment.
Mt Isa Waste Dumps at Tailings Dam No. 3	XStrata	Assessment of waste dump stability on existing tailings dam No. 3.
Cadiangullong Creek Diversion	Cadia Hill Gold Mine Orange NSW	Creek diversion embankment investigation, design, specification and tender documentation
Waste Rock Dump Encapsulation	Cadia Hill Gold Mine Orange NSW	Waste rock dump acid mine drainage measure design, construction and monitoring.
Curragh Creek Diversion	Blackwater, QLD	Creek diversion embankment investigation, design and cost estimate
Cadia Gold Mine Water/Sediment Control	Orange, NSW	Design for several clean water and sediment control embankments
Cadia Gold Mine Tailings Dam	Orange, NSW	Site construction monitoring and advice
Embankment Raising Designs, Kaltim Prima Coal	Indonesia	Design for raising and stabilising existing sediment control embankments
Stuart Shale Oil Mine Clean Water Dams	Gladstone, Qld	Design of new clean water supply dams.
Water Storage Dams	Bourke, NSW	Water supply/storage dams for cotton industry
Donaldson Coal Sediment Control Dam	Maitland, NSW	Design drawings and construction advice for embankment construction.
Mt Owen Coal Mine	Singleton, NSW	Investigation and design for two creek diversion channels and four embankment dams to 9m height.

INSTRUMENTATION

413 George Street	Sydney City	Design and implementation of real time crack and wall tilt monitoring of the rail tunnels during construction with remote access. Manual monitoring of tunnel convergence and cracks also undertaken.
Chatswood Soft Ground Tunnel, PRL	Sydney	Measurement and assessment of tunnel instrumentation during construction.
M5 East Tunnel	Sydney	Installation, monitoring and assessment of tunnel instrumentation during construction.
Waste Rock Dam	Nakan, Indonesia	Installation and monitoring of vibrating wire and hydraulic piezometers, extensometers
Yerrabei Pond	Gungahlin, ACT	Installation and monitoring of vibrating wire and hydraulic piezometers, extensometers
West Belconnen Infrastructure Pond 3	Belconnen, ACT	Installation and monitoring of vibrating wire and hydraulic piezometers, extensometers

LANDSLIDES & SLOPE STABILISATION

Channel Tunnel Rail Link, Contract 342	Kent, UK	Inspection, assessment and design of temporary and permanent works for stabilisation of chalk spine cut faces below rail and road infrastructure and public housing.
Soil Nail Reinforced Road Batter on A2 Motorway	Kent, UK	Design of steep cut slope utilising soil nail reinforcement for motorway widening.
Former CSR Quarry Assessment	Hornsby, NSW	Assessment of stability of existing quarry excavation faces up to 120m high and surrounding lands. Recommendations for remedial works, slope management, water management and associated cost estimates.
Coeur Golden Cross Tailings Dam Slide	New Zealand	Landslide monitoring, Stability analysis, Hydrogeological modelling, Remedial measure design, assessment of surface and subsurface monitoring.
Warragamba Dam Deep Storage Access	Warragamba NSW	Slope stabilisation works for steep slopes and cliff line areas during construction.

WHARVES

East Arm Wharf	Darwin Harbour, NT	Assessment of movement and stability of sheet pile wharf. Design and construction supervision of remedial works.
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SLOPE RISK ASSESSMENTS

Waterview Park Ettalong Head Pearl Beach Warragamba Dam	Central Coast Blue Mountains	Qualitative and quantitative risk assessments of rock slopes and cliff faces on pedestrians, vehicles, worksites and residential areas.
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ROADS AND PAVEMENTS

Subdivision Developments Lanyon Drive Reconstruction Comur Street Upgrade Road pavements surrounding station	Canberra, Goulbourn, Yass Queanbeyan NSW Yass, NSW Homebush Rail Loop	Materials investigations, mechanistic and computer pavement designs, earthworks compaction, materials requirements and specification. Inspection of road subgrade and pavement preparation works.
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OPEN PIT MINING

Mt Edon Jubilee Orlando	Leonora, WA Kalgoorlie, WA Tennant Creek, NT	Investigation, analysis and reporting of pit slope collapses, and remedial measure and ongoing monitoring Recommendations
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OPEN PIT INFRASTRUCTURE

Orange	Cadia Hill and Ridgeway Mines, NSW	Investigation supervision, design and site supervision works for multiple structures including ROM pad, haul road design, sediment and water ponds, tailings dam, major creek diversion around open pit, waste rock dump encapsulation to prevent acid mine drainage, pipe road crossings, water supply pipeline
Griffin	Muja, W.A.	Assessment of dump stability and improvement options for dump spreader operations.
Waihi	New Zealand	Analysis and design options for conveyor slot excavation and support.
Duralie	Stratford, NSW	Water storage embankments advice and haul road assessment
Wiepa	Wiepa, QLD	Assessment of retaining structures for conveyor slot construction.
Hamersley Iron	Dampier, W.A.	Assessment, inspection and advice of ore stockpile stability. Rock fall protection systems for open pit haul roads.
Hidden Valley	Highlands, PNG	Investigation and advice on stability and construction for water supply pipeline
Mt Isa	Xstrata Copper	Assessment of stability and settlement of new dump works on existing tailings dam deposits. Assessment of stability of existing tailings embankment above processing plant.
Northparkes	Parkes, NSW	Design advice and recommendations for tailings storage in existing quarry. Design of stockpile mixing pad pavement.

PUBLICATIONS

1. D. Anderson & P. Pells, *An Approach To The Support Of Vertical Cuts In Wianamatta Shales*, Excavation Retention Symposium, AGM (Sydney) 8 August 2001.
2. D. Anderson & R. Bertuzzi, *Monitoring in Tunnels – What's Useful*, 28th International Tunnelling Assoc Assembly, World Congress Sydney, 2-8 March 2002.