



Thirkell

CONSULTING ENGINEERS
& BUILDING DESIGN

Thirkell Consulting Engineers & Building Design is a trading name of Redgate Building Solutions PL.
abn 35144589426
acn 144589426

Year established 2004

Main Contact:

Senior Engineer and Director:
George Thirkell

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Suite 6, 36-38 Grafton Street,
Cairns QLD 4870

Core services:

- Structural and civil engineering
- Building design
- Certification, forms 15 & 16
- Feasibility studies
- Inspections
- Tender management
- Contract administration
- Development applications
- Building applications
- Insurance reports
- Expert witness service

COMPANY PROFILE

Thirkell Consulting Engineers & Building Design provides professional structural, civil engineering and building design consultancy services. Based in Cairns, Australia, we service the tropical region of Queensland, Papua New Guinea and the South Pacific. We also work in partnership with other consultants where our skills add value to larger projects.



Bana Yirriji Arts and Cultural Centre for the Wujal Wujal Aboriginal Shire Council 2014 Regional BDAQ Award winner: Public Building. Finalist Australian Building Design Awards.

Our dedicated and experienced team delivers a broad range of engineering and design solutions for the following building and infrastructure types:

- Residential, Commercial and multi-use low & medium rise buildings
- Steel & tilt-up industrial buildings
- Temporary structures, transportable and pre-fabricated buildings
- Recreational sporting fields, stadiums, grandstands and club houses
- Swimming & diving pools
- Marine jetties & shelters
- Aerodrome & Commercial pavement design
- Soil & water retaining structures
- Rural & small urban land subdivisions
- Pedestrian bridges & cane train bridges
- Earthworks & stormwater design

Main clients are private developers, builders, other design and engineering firms and local Councils. Clients with difficult land sites, complicated structures, refurbishment that requires detailed engineering knowledge or using new building technology will benefit from our depth of experience.



Design & Engineer of Rio Tinto sqm Mess Hall, Evans Landing near Weipa. Includes commercial kitchen, dining space & gym with 24/7 access. Under construction in 2017.



Design & Engineer of new home at Harvey Road, Redlynch



Teece Residence, Earlville, 26m propped span over steep slope. 2011 HIA Australian Finalist



Cyclone Larry & Yasi recovery



West Cairns Bowls Club roof collapse, legal reporting and expert witness



Office building, Lae, PNG

Brief History:

George Thirkell founded the company in 2004 and in 2010 the company changed its name to Redgate Building Solutions PL trading as Thirkell Consulting Engineers. During this time the company has carried out over 1000 projects, remaining flexible enough to carry out small projects through to complex projects in the private and public sector.

Specialist Tropical Sustainable Building Expertise:

- Cyclone and storm damage reporting & restoration services.
- Custom engineering for special structures.
- Repairs and additions to heritage buildings using local and recycled materials.
- Specification of 'green' technology suitable for tropical climates.
- Design that limits disturbance of natural terrain and protects water quality.
- Design for maintenance and 'whole of life costs' consideration including remote buildings.

We own and operate www.tropicalbuild.com.au a resource for building sustainably in the tropics. Recently we have been instrumental in collaborating with James Cook University to compile a series of 45 Case Studies detailing regional projects. In 2015 we project managed over 200 energy audits on tropical buildings for Regional Development Australia FNQ&TS and the Commonwealth Government.

Recent Key Design and Engineering projects:

- Rio Tinto Mess Hall at Evans Landing near Weipa. Includes commercial kitchen, dining space & gym with 24/7 access. Design and construct contract with Dawsons Group of Companies.
- 'Bana Yirriji' Arts and Cultural Centre, Wujal Wujal for the Aboriginal Shire Council, including all architectural services.
- Extensive renovations and additions to IGA Innisfail.
- Cyclone Larry and Yasi recovery of over 200 structures. Extensive experience in assessment and reporting to Councils and insurance companies.
- New homes and extensive renovation of homes in the Cairns region.

Recent Key Engineering projects:

- Consultant to Cairns Regional Council for the Commonwealth Games artwork for the Cairns Esplanade.
- Feasibility and capacity studies for potential key regional projects.
- Mundoo Airport Master Plan: Cassowary Coast Regional Council. Subconsultants to Cummings Economics.
- Design and consulting for Polocrosse fields and clubhouse at Gordonvale.
- Structural inspection & reporting for Daintree Discovery Centre
- Legal reporting and expert witness for residential and commercial building projects.
- Tagai State College, Torres Strait

Key recent International projects:

- PNG office building designed for earthquake loading.
- Hotel in Somoa designed for earthquake and cyclonic wind loadings.
- PNG Legal reporting and expert witness services



Social housing Thursday Island, construction inspection and certification.



Portal frame de-construction and re-location



Reece Plumbing Centre, Jimboomba



Warrina Lakes bridge re-construction



Russell River pontoons, regulation compliance inspection



Evans Landing, wharf extension, Weipa

Body Corporate inspection, repairs & additions

- Panama on Spence
- Oceanview Trinity Beach.
- Drift Palm Cove
- Ocean Sands Trinity Beach
- Westcourt Units

Commercial design and engineering of renovations:

- Historic White Horse Hotel building, Innisfail.
- Highlander Hotel, Julatten.
- Goondi Hill Hotel, Innisfail.
- Kewarra Beach Resort and Double Island Resort.
- Dunk, Bedarra and Fitzroy Island Resorts.
- Casa Fotea mixed use building, Innisfail
- Woodward Street Bakery, Whitfield
- GreenAnt Cantina, Bunda Street, Cairns

Industrial projects:

- Reece Plumbing Centre, Jimboomba (Brisbane), an engineered 1,425 m² steel portal frame and tilt up wall construction.
- Bundaberg Foundry Engineers Ltd South Johnston Mill foundations of a 5,100 m² Effet Evaporator Vessel of 1200 tons in weight.
- Weipa: Rio Tinto: Mining trommel platform.
- Groote Eylandt for BHP Billiton Gemco: structural inspection and remedial works report for storage building and facilities.
- Extensions for Rio Tinto shed, Weipa.
- Wash down slabs and Bulk Waste Depots for Torres Strait Islands: Boigu, Dauan, Saibai, Darnley (Erub), Yorke (Masig), Moa (St Pauls), Saibai, Stephen (Ugar), Coconut (Poruma), Sue (Warraber). Subcontracted by PDR Engineers
- Goodline Weipa Stack Racking
- MSF Sugar Structural Inspections, Arriga, Mareeba
- New Craiglea Service Station structural inspections

Civil works:

Includes land subdivisions, bridges, stormwater design, culverts and open channels, bulk earthworks, flexible and rigid pavements. Some projects are as follows:

- Land Subdivision, Atherton. 26 lot rural subdivision constructed over 3 stages with a site based management plan (SBMP) including water quality and quantity management.
- New polocrosse fields at Gordonvale
- Steel footbridge for the Weipa Town Authority
- Warrina Lakes bridge re-construction including abutments to reinforced concrete bridge.
- Cane train bridge strengthening of timber and composite steel girder and reinforced deck bridges for Bundaberg Sugar.
- Reinforced concrete ramp/bridge to 15m span for BBC hardware building in Newcastle. Design for earthquake loadings.
- Assessment and review of remote Far North Qld existing prestressed bridge girders and decks.
- Wet crossing at Cardwell quarry
- Contaminated land remediation works at Port Douglas with sheet piling and underpinning of adjoining buildings.

Marine infrastructure projects:

- New boat shed for VMR, Weipa.
- Evans Landing wharf extension, Weipa.
- Russell River pontoon regulation compliance checks.
- Shelter at Marlin Wharf for Fitzroy Island Ferry.
- Cooktown port structural inspection & reporting
- Aurukun Barge Landing Upgrade



Mundoo Aerodrome Master Plan, Cassowary Coast Regional Council

Our Approach:

Our service is personal, dependable and targeted to outcomes that contribute towards projects we can be proud of. We have developed strong working relationships with allied professionals and collaborate easily with industry peers.

Meet the Team:

We have a base team although expand project by project for additional engineering, design and drafting technician services as well as specialist consultancies as required. Our team is dynamic. We can evaluate problems, understand the technical abilities required to solve them and communicate the problem solving methods and solutions to team members, clients and other professionals in order to get the job done.



George Thirkell

Managing Director and Senior Engineer

- RPEQ Registered Professional Engineer QLD 7279
- MIEAust Engineers Australia (Civil & Structural)
- Bachelor of Engineering (Civil) University of Queensland, graduated 1993
- Degree Building Design CQU
- QBSA Design Licence 1211127 (medium rise)
- Building Designers Association of Queensland
- BEDI Endorsed Sustainable Building Designer

Since 1993, George Thirkell has had Australian and international design and engineering experience in the Cairns region, Torres Strait Islands, Somoa, Papua New Guinea, Virgin Islands, Mauritius, New Zealand and London and other parts of the United Kingdom. He has technically applied a range of codes and standards including Australian, New Zealand, British, European and Papua New Guinean. His depth of experience underpins innovation and excellent engineering judgement that can value-add to projects.

Past employers are Colefax Clayton Smith of Cairns, now known as Cardno CCS; WSP, Carter Clack, Alan Connisbee & Assoc. and other London based engineering practices.



Jack Robinson

Building Designer

Degree Building Design CQU

Jack is passionate about good design and has strong Autodesk Revit drawing skills that easily communicates design detail.



Caio Galvao

Engineering Draftperson

Since 2001, Caio has had experience in civil, structural mechanical and electrical drafting. Previously from Brasil, Caio speaks Portuguese, Spanish and some Japanese.



Emma Thirkell

Administration

- Bachelor of Business (property development, valuation & land economics), University of QLD
- Chartered Surveyor: Royal Institution Chartered Surveyors MRICS 1114355

Since 1989, Emma has over 25 years of experience in the property industry and is a qualified valuer. She applies her knowledge of property development processes, planning, finance and law. She carries out development and building approval processes and assists in insurance and expert witness reporting services. Emma operates the company's quality management system along with administration duties.

Computer Software:

- Engineering software
- SPACE GAS
- Drafting software
- Solidworks
- Corel Photo-paint
- Paint Shop Pro
- Adobe Pro, Reader, Photo Shop, InDesign, Dreamweaver, Flash
- MS Word, MS Excel, MS Project, MS Powerpoint
- Various cloud shares i.e.dropbox, sky drive, google drive
- NBN
- Skype
- Accounts: Xero & Harvest

Computer Hardware:

- Multiple PC's
- Laptops
- Tablets
- Multiple terrabyte servers in-house & off location for document back ups.

Equipment & Technology:

- Laser measures
- Moisture metres
- Generator backup

Pre-Qualifications

Local Government, Local Buy: Register of Pre-Qualified Suppliers RPQS) Engineering Consultancy Services Contract: BUS 226-0317



Building and Asset Services & Department of Housing and Public Works PQC 3 Reg.No.4395A Pre-qualified Engineering Consultant PTD 0003-14



Cairns Regional Council Registered and pre-qualified supplier: ROP 2655 Project Consultants



Torres Strait Island Regional Council Engineering 2016-90 & Architectural & Lead Consultant Services TSIRC2018-112.03



Cassowary Coast Regional Council Pre-qualified Contractor



Community Select – Strata Managers & Body Corporates



Insurance

INSURANCE COVERS	INSURER	POLICY NUMBER	EXPIRY DATE	VALUE OF COVER
WORKERS COMPENSATION	WORK COVER QLD	WPA 100949909	30-09-19	STANDARD
PROFESSIONAL INDEMNITY	Caitlin XL	TKSCC1803141118	18-04-19	\$5,000,000 or agreed project by project
PUBLIC LIABILITY & RISK	AAMI	SMD 011063030	28-11-18	\$20,000,000

Capacity

We service projects with construction values up to \$5M and by agreement with our Insurance provider can increase this amount to \$20M project by project. Key-man insurance is provided by income protection and business overhead insurance.

Our Integrated Quality, Safety and Environmental Management Systems ISO 9001:2008 is compliant verified by 2nd party auditor. An audit report available on request.

Thirkell Consulting Engineers recognises its moral and legal responsibility to provide a well managed **safe and healthy work environment** for workers, contractors and employees of contractors, clients and visitors that **places a high value on our environment**. This commitment extends to ensuring that operations do not place the local community at risk of injury, illness or property damage.

Our objective is to actively work towards elimination of risk. Our target is to maintain our record on NO injuries and incidents.

We seek the co-operation of our business partners in ensuring our organisational practices are conducted with minimal environmental and social impact.