



ZAIT

Engineering Solutions Pty Ltd



CAPABILITY STATEMENT

Structural,
Civil and Facade

About ZAIT

Based in Parramatta NSW, ZAIT Engineering Solutions is a design consulting firm specialising in the delivery of innovative Structural, Civil and Facade services to projects. We are licensed for all states and territories across Australia, bringing renowned efficiency and industry expertise to every sector we support.

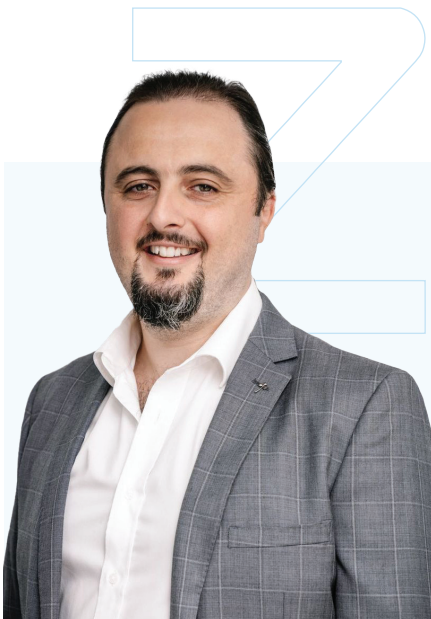
In our service, we are committed to providing our clients with the highest quality of outcomes. We devote ourselves entirely to answering all client needs, ensuring that we develop targeted solutions at every stage of our partnership. From initial design concepts to the completion of the last certification, ZAIT guarantees complete customer satisfaction.

We prioritise smarter, safer designs, believing that choosing a sustainable solution today will be the key to unlocking a more sustainable tomorrow. ZAIT aims to mitigate risk, protect people, and preserve environments, helping our clients build the projects that will come to serve our future.

OUR LEADERSHIP

The ZAIT Team

ZAIT is your project partner of choice, and it is our people and our teams that drive your project's success. Led by experienced Project Leads, we assemble expert teams of engineers who are helpful, take the initiative and cooperate with your greater project team. We work together to deliver integrated design solutions that meet your requirements.



David Louie Zaiter

FOUNDER & MANAGING DIRECTOR



Sohrab Nezami

TECHNICAL DIRECTOR



Brian Parker

TECHNICAL DIRECTOR

The ZAIT Approach

Our design approach is centred around four pillars – innovation, efficiency, practicality and sustainability. Through close client collaboration and the support of our team of experienced, in-house engineers, we apply this approach across every one of our structural, civil and facade disciplines.

Whilst we push for cost-efficiency and industry-best standards, our design goals are grounded in practical outcomes. We understand the importance of delivering a final design with zero variation; one that is NCC compliant and able to obtain construction certification.

We follow structured frameworks for quality and we routinely employ full building modelling, serving success to major residential, commercial, industrial, health and education projects.

BIM

REVIT AND BUILDING INFORMATION MODELLING



Smarter tools for project coordination

ZAIT is BIM capable, regularly drafting virtual projects in Autodesk Revit to carry out detailed engineering analysis. This allows us to predict building performance and sustainability in the planning stages, capturing quantities for cost estimates, construction sequencing and facility management. We also import documentation and perform clash detection in the Autodesk Construction Cloud, enabling the coordination of complex projects within compressed timeframes.

SID

SAFETY IN DESIGN



Integrated controls for risk management

SID is a legislative requirement in NSW and an integral part of ZAIT's design process. For us, SID starts at the concept phase, integrating control measures early on to eliminate or minimise potential risks to health and safety. Throughout the lifecycle of the project, we employ conscious protections for buildings, structures, machinery, equipment, tools and vehicles, preventing cases of injury and damage before they can become an issue.

Structural

Structural engineering is at the heart of ZAIT's services. We are known for providing a consistently high level of structural design, adopting the latest advances in construction materials and technology to deliver creative engineered solutions.

We strive to address each and every parameter for project performance. This includes cost and commercial viability, buildability, compliance and safety, resource efficiency, durability and functionality, long-term operational flexibility and environmental sustainability.

Our team is able to hit these targets because of our ability to step back and look holistically at a project. We place a lot of value in effective communication, placing engineers with decades of experience in close collaboration with project teams to achieve defined outcomes in the desired timeframes.

We cater to a wide range of sectors, offering ISO9001- compliant Quality Assurance, full building modelling using ETABS/RCB and a world-class engineering team.

Key services

- Preparation of structural design briefs
- Concept design
- Detail design and documentation
- Building information modelling (BIM)
- Peer review
- Proof engineering
- Restraint of services for seismic design
- Retaining and shoring walls
- Specialist engineering advice (SEA)
- Construction phase services
- Due diligence inspections
- Dilapidation inspections
- Temporary works and site sheds
- Vibration control
- Structural movement reports
- Certification services to the NSW ACT
- Safety in design





14-20 Premier Street

NEUTRAL BAY, NSW

Premier Street is a prestige apartment project, built in the harbourside suburb of Neutral Bay. Cascading down a hill for 6 levels, this project utilised state-of-the-art computer analysis to realise a cost-effective, post-tensioned concrete solution for the client.

The architectural design needed to cater for large spans and multiple transfers. Parking was set underground, accessible by 2 vehicular lifts at street level, while from level 3 the apartment complex was built out of the ground with grand courtyards on all sides. Structural plates required construction joints through to the middle, allowing for movement during post-tensioning to ensure safe, feasible construction.

Client

Podia

Architects

ESS Lifestyle

Services Provided

Structural Engineering

Civil

Civil engineering requires consideration of all stakeholder interests. As a multi-disciplinary consultancy firm, ZAIT understands everything that goes into a successful civil project. We align with the creativity of the landscape architect, the pragmatism of the construction team, the economic goals of the client and the holistic approach of the larger design team. From pre-planning to on-site construction, we offer seamless coordination and communication.

Our expert engineers ensure that designs are feasible, cost-effective and tailored to the client's unique requirements. We strictly observe all construction codes and national standards, providing solutions in cooperation with Local Council and government concerns. We design with an awareness of the interrelationship between topology and the built form, delivering long-term sustainability to the environments we work within.

With our combination of expertise and problem-solving, our engineers provide practical and efficient solutions for all civil designs.

Key services

- Preparation of civil design briefs
- Master planning
- Concept design
- Detail design and documentation
- Peer review
- Cut and fill
- On site detention
- Construction phase services
- Due diligence inspections
- MUSIC modeling
- Flood reports
- Traffic engineering
- Sedimentation Environmental Management Plans (SEMP)
- Traffic management plan
- Sizing of pumps
- Certification services to the NSW ACT





Cabravale Diggers Club

CABRAVALE, NSW

ZAIT is proud to be collaborating on the Stage 2 development of the Cabravale Diggers Club. This development will see a substantial extension to the venue, bringing new bars, restaurants, entertainment facilities, a two-level basement car park and outdoor pool and cabanas for a new multi-storey hotel.

Working across all aspects of the engineering, ZAIT used Revit and BIM 360 analysis to provide comprehensive clash detection for building elements during the design phase. This was crucial for the mixed material facade design of the Porte Cochere, which required powerful Strand 7 3D modelling to achieve the design intent. The results – a uniquely amazing look delivered with optimal efficiency.

Client

Wardan Constructions

Architects

Altis Architecture

Services Provided

Structural, Civil and
Facade Engineering

Facade

From design to construction to post-completion assessment, ZAIT delivers an integrated approach to facade engineering. Our facade design promotes functional aesthetics, prioritising sustainable, energy-efficient solutions that offer first-class protection whilst preserving the character of the building.

At every stage, we ensure compliance with state and national building codes, recognising the critical importance of planning, construction and selection of materials. We employ rigorous quality control frameworks during fabrication and installation to ensure superior durability in every building envelope.

In realising the vision of our clients, ZAIT also understands the importance of strategic alignment. We consistently deliver bespoke facade solutions, designed in dialogue between the architect and the facade consultant. We consider factors such as climate, building purpose, environment and occupant needs, combining technical expertise with artistic vision to create facades that protect and impress for generations.

Key services

- Preparation of facade design briefs
- Waterproofing to F3P1 in NCC 2022
- Condensation to NCC 2022 using WuFi
- Concept facade design
- Structural Facade design
- Facade fixing detail review
- Framed balustrades and handrails
- Glass balustrades by finite elements
- Facade durability
- Product review and assurance
- Glass reflectivity and glare
- Facade thermal performance
- Construction phase services
- Due diligence inspections
- Maintenance plan review
- Certification services to the NSW ACT





Christ The Redeemer

DURAL, NSW

ZAIT was chosen by the Maronite community for the engineering design and supervision of their new spiritual home in Dural. As a place of worship, Design Cubicle's architectural intent for the church was to emphasise community. This translated to a column-free nave with clear sightlines and a solid concrete cross spanning the congregation.

We utilised Revit and BIM 360 to answer this structural challenge. The concentrated loads of the roof structure were brought down to the underlying building and basement carpark, alongside integrated vehicle ramps for ceremonial requirements. Ultimately, ZAIT delivered an optimal solution that achieved the vision of the church and architect.

Client

Maronite Catholic
Parish of the Hills

Architects

Design Cubicle

Services Provided

Structural and
Facade Engineering

Quality Management

ZAIT operates under AS/NZS ISO 9001 Quality Management Guidelines. This covers all of our services, procedures and associated systems, ensuring appropriate resource allocation, work scheduling, coordination, quality assurance, monitoring of programs and delivery of high-quality design and services. We produce a Project Specific Plan for every client, minimising risk and including all necessary quality controls.

Through our integrated Project Delivery protocols, we make certain that quality remains a core part of our project delivery process. All ZAIT personnel have a responsibility to ensure that our Quality Guidelines are followed, and we continually review and monitor operations with key staff to improve processes. Our QA system additionally produces records that track performance and compliance, minimising project risk.



WHO WE WORK WITH

ZAIT's Clients

ZAIT has delivered countless projects to the public and private sector and have proudly worked alongside some of the most well-respected providers in the industry.



COTTEEPARKER 



bluesox

podia



ALEKSANDAR PROJECTS

J+CG



JOHN HOLLAND



/NDRSN



PBD | ARCHITECTS



RICHARD CROOKES CONSTRUCTIONS

TAYLOR

HUMEL

WestConnex

BUREAU SRH

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