



COMPANY PROFILE

AWT Consulting Engineers Pty Ltd
Level 2, 18 Brindabella Cct
CANBERRA AIRPORT ACT 2609
ABN 35 093 828 794
Telephone: (02) 6257 2614
Facsimile: (02) 6257 1723
Email: alan@awtce.net.au

AWT Consulting Engineers Pty Ltd
Suite 402, 93 Pacific Highway
NORTH SYDNEY NSW 2060
Telephone: (02) 9922 2466
Facsimile: (02) 9922 3705
Email: adam@awtce.net.au



Introduction

AWT Consulting Engineers are pleased to have the opportunity to present our profile and detail services provided by us as structural engineering consultants.

AWT Consulting Engineers was established in 2000 in Canberra by Mr Alan Tingcombe who was previously a Director of Taylor Thomson Whitting (TTW) from 1988 to 2000. Alan Tingcombe had established the Canberra Office of TTW in 1984.

AWT has grown from a staff of 2 in 2000, to 18 in 2007 with offices in both Canberra and Sydney. The Sydney office is managed by Adam Zahra who has over 11 years experience in the Sydney Region.

AWT is currently servicing projects in Canberra, Sydney, [Gold Coast](#), [Brisbane](#), [Maroochydoore](#), [Bundaberg](#), and [Airlie Beach](#). The annual turnover of projects at present exceed \$600 million annually. It specializes in major building structures particularly post tensioned design and offers the Client a full design and documentation service on all its projects.

AWT concentrates on delivering cost effective, well designed and coordinated solutions with an emphasis on thorough documentation and accurate costing.

AWT Consulting Engineers has the;

- resources
- expertise, and
- commitment

required to deliver a high level of service on any project.

This promise is based on;
Committed, stable staff currently

- 1 Director
- 6 Full time Engineers
- 11 Full time draftsman

AWT Consulting Engineers has

- Fully integrated computer system including engineering, drafting and office procedures
- Established Quality Procedures
- Proven track record of performance
- Innovative, sound and economical design

AWT Consulting Engineers is committed to

Excellence in Engineering
&
Design Solutions

that provide the Client with value for money.

General



AWT has considerable experience in providing structural services on projects ranging from residential developments to retail, parking, commercial or Public Buildings. We are committed to investigating all appropriate design solutions and have an extensive range of in house design software to ensure a rapid and accurate response to structural issues.

The budgets for most projects are always tight and AWT are committed to ensure that projects can be delivered by minimising structural costs and evaluate all feasible alternatives working closely with the architect, design consultants and cost planner. We have won many commissions on D&C contracts and fully understand what is required to deliver costs effective solutions without compromising the architecture.

In general a structural engineer has to ensure that a building is;

1. Structurally adequate
2. Serviceable
3. Durable
4. Cost Effective
5. Practical
6. Easy to build

This requires a thorough understanding of the Clients requirements and the proposed function of the building. Australian Design Codes and the BCA provide the basis of achieving the first three requirements, however, it is the **skill and experience of the design engineer** that interprets these criteria and produces a cost effective, practical solution.

To achieve these results, the structural engineer cannot work in isolation but must be an **integral member** of the design team. The key to a successful project is a team of consultants, which are not only individually skilled, but appreciate the requirements of each other and work closely together to provide the best overall solution.

It is important that the structural design be coordinated early for the majority of the development to allow the architect to more fully understand the constraints as well as to allow more accurate budget costing to be established.

This will allow many of the areas of concern for the structure to be addressed while other areas can be flagged which require more resolution and consideration.



General - Cont

AWT appreciates the constraints and complexities of most developments, in particular the pressure on construction budgets.

It is extremely important that solutions are obtained within these constraints to allow the smooth development of the design process.

AWT provides a level of documentation far in excess of other consultants. While fees over the last 20 years have eroded quality documentation AWT is committed to ensuring the highest standard of both design solutions and documentation.

This has been achieved by the development of sophisticated engineering design software as well as drafting macros unique to AWT.

The client can have upmost confidence in the design solutions provided by AWT not only in their accuracy but also in their cost effectiveness. At all times during the design and documentation process AWT are checking the actual quantities on the project against the original budgets.



Recent Projects

AWT has significant experience working on various projects. Following is a sample of recent projects which have been undertaken by AWT:

Brindabella Office Park, Canberra International Airport \$120M

- DIMA Office Redevelopment \$38M
- Section 84 Redevelopment Retail & Commercial Development \$200M
- Sky Plaza, 22 Storey Residential Development Woden \$60M
- Kythera Apartments \$40M
- Space Residential Development **Maroochydoore** \$30M
- Benjamin Offices Redevelopment \$60M
- Section 88 Commercial Development Civic \$80M
- Kingston Waterfront Development \$60M
- Fairbairn Office Park \$40M
- Aeropark Development Majura Lane \$80M
- Sundale A2, 37 Storey Residential Tower **Gold Coast** \$50M
- Scarborough House Refurbishment \$30M
- Sydney Place Stage 1,2 and 3 \$80M
- Glass House Woden \$30M
- Benjamin Orange Redevelopment Belconnen \$35M
- Acton Hotel \$30M
- Pacific Square Maroubra \$120M

Current Projects

- DEST Development Canberra City \$80M
- DOHA Development Woden \$120M
- Brindabella 3,5,7 Canberra Airport \$90M
- Space Development Woden \$80M
- Glebe Park Apartments
- Childers Street Redevelopment
- City Gate Redevelopment

Gold Coast Projects

AWT has undertaken a number of projects over the last few years on the Gold coast and currently has three residential high rise apartments currently under construction on the Gold Coast that were done as specialist consultants to CR&SS

- Kirra
- Sundale B1 and
- Pegaus

We are also providing structural consultancy to Watpac on the Robina Stadium and associated projects. **AWT** has established working relations has with a number of local engineers that service the Gold Coast area including Bill Short, Bruce Lemke, Cardnos and Birds.

It is our aim to establish a full time office to service the Gold Coast/Brisbane area this year.



Company Details

Director: Mr Alan William Tingcombe

Professional Indemnity Insurance - \$10M

Insurer Macquarie Underwriting
Period 1/8/07 to 1/08/08
Policy No: 103444401036

Workers Compensation Insurance

Insurer GIO
Policy No CW0011855
Expiry Date 03/10/08

Public Liability - \$20M

Insurer GIO
Policy No SB2918315
Expiry Date 03/10/08

Quality Assurance

AWT has had extensive involvement with Quality Assurance programmes, including;

- Times Square Development
- James Court Apartments
- ALP Headquarters, Barton
- National Defence College, Weston
- Russell Offices Redevelopment
- Tuggeranong Hyperdome
- ABS Development Belconnen
- DIMIA Development Belconnen
- DNOC Headquarters Harman

Calculations and drawings are subject to various levels of checking and approval before "approved-for-construction" documents are issued. We therefore believe AWT can contribute greatly to any QA System.

Our Quality System is based on AS/NZS ISO 9001:1994 and is documented as follows;

- Quality Procedures Manual, QM 2.0
- Technical Procedures Manual, QM 3.0
 - QM 3.1 Office Procedures
 - QM 3.2 Structural Engineering Design
 - QM 3.3 Structural Drafting
 - QM 3.4 Site Inspections
 - QM 3.5 Civil Engineering Design
 - QM 3.7 CAD Procedures
- Model Project Quality Plan, QM 4.0



Alan TINGCOMBE

Senior Structural Engineer



POSITION

DIRECTOR/CANBERRA MANAGER

QUALIFICATIONS

**BE (Hons) Sydney University
(Second Class Honours)**

AFFILIATIONS Fellow Institution of Engineers, Australia

Member Concrete Institute of Australia

Member Australian Institute of Steel Const

Member Association of Consulting Struct Eng

Registered Prof. Engineer Queensland -

Certificate No. 2785

Registered Prof Engineer Victoria

Certificate No. EC-2026

SUMMARY OF EXPERIENCE

Alan Tingcombe graduated from the University of Sydney in 1979. He has considerable experience working on major commercial and residential projects. He specialises in the development of computer software for the design office and won an Engineering Excellence Award for the design program RAPID currently marketed by Standards Australia.

Mr Tingcombe approaches all design work by obtaining a thorough understanding of the client's needs to produce practical, efficient and cost effective design solutions. To achieve this it is necessary to be an active member of the design team and to be flexible, responsive and to provide a high level of documentation to time and quality.

PROFESSIONAL EXPERIENCE

1980-1981

LONGWORTH & MCKENZIE, SYDNEY

Design Engineer involved in the preparation of office design standards, major industrial structures for coal handling facilities. Responsible for design and shop detailing of Tarong Power station, QLD.

1981-1984

TAYLOR THOMSON WHITTING PTY LTD, SYDNEY

Senior Design Engineer involved in the design and supervision of a variety of commercial and industrial buildings.

1984-2000

TAYLOR THOMSON WHITTING PTY LTD, CANBERRA

Appointed Canberra office manager in 1984, Associate Director in 1985 and Director in 1988. The Canberra office has established itself as the leading structural Consultancy in Canberra and currently turns over projects to the value of \$100 million annually.

2000-Present

AWT CONSULTING ENGINEERS

After 16 years of Director and Manager of the Canberra office of TTW, Alan has established a Canberra based consulting practice to ensure comprehensive servicing of projects. In 2005 a Sydney office of AWT has been established to enable the high level of servicing to be extended to AWT's Sydney projects.



PROJECTS UNDERTAKEN

Housing/Residential;

- 222 City Walk \$14M
- James Court \$24M
- Birkenhead Point Sydney \$30M
- Colgate Development Balmain \$6M
- Meriton Development Arncliffe (part) \$120M
- "Space" Development Turner Stage 1 \$40M
- Weston Town Houses \$5M
- Manuka Plaza \$30M
- Sky Plaza 22 Storey - \$60M
- Kythera - \$40M

Schools;

- CCEGGS Indoor heated pool and gymnasium (MBA Excellence Award 1996)
- CCEGGS Science Block
- Chisholm Primary School
- Florey Primary School
- Young High School
- Nicholls Primary School
- Burgamn College Pre School

Defence Style Projects;

- ADFA Cadet Accommodation
- Academy House - ADFA
- Victoria Barracks, Refurbishment
- RMC Duntroon Headquarters Building (MBA Excellence Award 1996)
- RMC Duntroon Building A73
- National Defence College Theatres, Weston
- Army Technical Senior Officers Lecture Theatre
- ADFA Library Extensions
- Russell Offices Redevelopment R1 and R2
- MUD Facility Harman
- DNOC Facility Harman

Recent Major Office Development Projects;

- 10 Mort Street, Civic \$12M
- Times Square, Civic \$25M
- Civic Advance Bank Bldg, Civic \$50M
- New John Curtin House, Barton \$20M
- 14 Mort Street, Civic \$12M
- Chamber of Commerce Building Barton \$12M
- ABS Building Belconnen \$60M



PROJECTS UNDERTAKEN Cont....

Centenary House (\$20M) A 4 storey commercial office development in Barton with a NLA of approx 14,000m² and associated carparking. It was constructed in 1990 and incorporates a number of innovative design solutions to some demanding architectural constraints.

Civic Advance Bank Building (\$50M) A twelve storey commercial development comprising 20,000m² of office space with associated carparking for 150 cars. The building won the 1991 BOMA National Award for Best Building in Australia.

Times Square Building (\$25M) A six storey commercial office development in Civic incorporating 2 levels of underground carparking, constructed in 1991. Each floor is approximately 3,000 m² and is constructed with a reinforced concrete flat slab floor system.

10 Mort St (\$12M) A six storey commercial development incorporating approx. 10,000m² office space and two levels of underground carparking. Constructed in 1993 it required substantial shoring to boundaries with underpinning of the adjacent building at 12 Mort Street. As part of the tenant brief, the floors were surveyed after concrete placing and just prior to fit out. This enabled us to check the actual deflections of the floor against those predicted by design and very good correlation was achieved.

14 Mort St (\$12M) A six storey commercial development incorporating approx. 10,000m² office space and two levels of underground carparking.

Russell Offices (\$95M) A six storey commercial development incorporating approx. 40,000m² office space and one level of underground carparking. A Post tensioned floor system on an 8.4m grid.

ABS Redevelopment Belconnen (\$60M) Two storey commercial buildings joined by a central atrium. Each building has approx 20,000 m² of office space. The floors are essentially column free with a central core allowing using spans of almost 13.0m. This was only possible by the use of a post tensioned banded structural solution.

DIMA Redevelopment Belconnen (\$38M) A six storey commercial development incorporating approx. 10,000m² office space and two levels of underground carparking. Recently completed, the floors are a postensioned banded slab system due to an architectural requirement for 12m spans.

Brindabella Offices Canberra International Airport. (\$120M) A number of 2, 3 and 4 storey commercial office buildings each designed to reflect the individual requirements of each building. The first building B1, utilised structural steel framing with precast floor planks while the majority of others used a more conventional post tensioned floor slabs.. This ongoing development continues to be one of the most significant major commercial projects in Canberra against which most other projects set as a benchmark.



Alan TINGCOMBE

Senior Structural Engineer

PROJECTS UNDERTAKEN Cont....

Sky Plaza (\$60M) This recently complete residential building in Woden comprised a number of structures ranging from 3 storey walkups, to 6, 11 and 22 storey residential towers. The building was the first true high rise in Canberra to use structural precast both for the external façade and internal party walls. This system eliminated costly scaffolding and when combined with the post tensioned floor system enabled the structure to be built quickly, efficiently and cost effectively.

Spa Hanger (\$40M) AWT were initially involved with the design of the associated office structures for this development at Fairburn Canberra. Strach International were responsible for the design and construction of the hanger structure that was approx 100m x 120m free spanning using their patented post tensioned arch system.

After the collapse of the hanger structure during construction in mid 2004 AWT provided specialist engineering advice in relation to the collapse to Construction Control who were the overall project managers. This involved reviewing the Strach system in some detail. AWT was then subsequently engaged by the Canberra Airport Group, the Client on this project, to oversee the redesign of the hanger and to supervise its re erection as Strach had gone into liquidation and were no longer able to provide expert advice in respect of this project. The hanger was re erected without incident late 2004.

Canberra Centre Redevelopment (>\$200M) This is the largest single development of its type in Canberra, totalling over 200,000m² of GFA, including carparking, retail, commercial and cinemas.

The construction was fast tracked over a two year period with significant changes done under an extremely tight time frame, including the relocation of the 10 storey lift core from the perimeter of the commercial space to the middle, resulting in major transfers at Level 2, while the structure was under construction. All structural work on the job was done under difficult circumstances without compromising cost or time to the project.