Woolacotts.
CONSULTING ENGINEERS

Industrial.

Company overview.

Woolacotts Consulting Engineers is part of the Daly International group of companies. Together, we employ more than 280 people to provide project delivery and management services throughout Australia and the United Kingdom.

Services

- STRUCTURAL ENGINEERING
- CIVIL ENGINEERING
- HYDRAULIC ENGINEERING
- ASSET AUDITING
- DRAFTING

Sectors

- COMMUNITY INFRASTRUCTURE
- EDUCATION
- HEALTH & AGED CARE
- INDUSTRIAL & AVIATION
- JUSTICE & EMERGENCY
- RESIDENTIAL

Employees

200
AUSTRALIA

80
UNITED KINGDOM

Locations

UNITED KINGDOM

Glasgow, Scotland
Manchester, England
Theale, England
Reading, England

Locations

AUSTRALIA

Sydney
Melbourne
Brisbane
Adelaide
Perth

Known for excellence, Woolacotts provides high quality structural, civil, and hydraulic engineering services Australia-wide.

Woolacotts Consulting Engineers

Established in the early 1930s by Frank Woolacott, a structural engineer and architect, Woolacotts has a long, proud history.

Known for exceptional design and responsive service, Woolacotts provides structural, civil, and hydraulic engineering services to a wide variety of clients.

We have played a role in shaping many of Australia's hospitals, aged care facilities, schools, universities, colleges, prisons, parks, civic buildings, industrial and aviation facilities.

Today, Woolacotts is a division of Daly International.

Daly International

With operations that span Australia and the United Kingdom, Daly International is an infrastructure deployment and project delivery organisation. The company employs more than 280 people to provide engineering, design, property, town planning, construction and project management services.

Daly International works on projects for a diverse range of clients in the energy, environment, telecommunications, resources and commercial sectors.

The company prides itself on its well-proven record of international experience matched with detailed local expertise, gained over 20 years of operations.

Why Woolacotts?

Decades of experience

We have been providing services to the industrial and manufacturing sector since the 1930s. From the Slazenger Ball Factory in 1937, to the recent Qantas A380 parking project, our highly experienced engineers create exceptional design solutions for our industrial clients.

Long-standing relationships

We have fostered long-standing relationships with clients by providing responsive service and close contact with our key senior people. We have remained a trusted advisor to our clients over many decades – we've worked on hundreds of projects for Nestlé since 1938.

Specialist expertise

We have specialist expertise in high bay warehousing, large column-free spans, storm water handling for large impervious sites, as well as material and pavements detailed to withstand industrial loadings.

Continuity of operations

Although we are passionate about our engineering solutions and specialist expertise, our key focus is to keep your business running. We understand the imperative to maintain production, programming works during shutdown times and changing details of repair to minimise disruption.

Our services

We have decades of experience in the industrial and manufacturing sector.

Structural engineering

- New buildings and structures
- Building refurbishments and heritage
- Production facility design
- Long span steel shed design
- Very flat floor design
- High bay racking and warehousing design
- Cool rooms and refrigerated storage design
- Portable site accommodation design
- Deflagration design, blast-proof buildings and structure design
- Reinforced, post-tensioning, metal formed, precast concrete framing
- Precast and modular wall design
- Deep basements and retaining structure design
- Vibration analysis and control

Civil engineering

- Road alignment and pavement design
- Vehicular and pedestrian bridge design
- Residential, public and industrial pavement and car park design
- Traffic modelling and intersection analysis
- In-ground storm water and drainage
- Water sensitive urban design
- On-site detention and pollution controls
- Flood modelling

Hydraulic engineering

- System audits and assessments
- Feasibility and design
- Building storm water management
- Water supply and reticulation
- Gas supply and reticulation
- Sewerage and waste water design
- Fire hydrant and hose reel systems design
- Sprinkler and dry fire systems design

Asset management

- Compliance auditing
- Condition assessment and remediation
- Expert witness

“We understand the imperative to maintain production; our key priority is to keep your business running.”

Scott Clemmett
Principal Engineer

Key projects

Document storage facility
Grace Records

ABOVE RIGHT
Grace Records storage facility in Campbelltown, NSW

Grace Records is part of Australasia's largest records management, removals and storage company. Safe storage is critical to the company's continued operations. All storage facilities are custom-designed and built with the highest regards to weatherproofing, vermin protection, extensive fire prevention, environmental control and security.

We were appointed as structural and civil engineers for the new 20,000 square metre purpose-built warehousing facility in Campbelltown, New South Wales.

Very narrow aisle, high bay storage units using wire–guided stock pickers are used to access, store and retrieve documents. Accuracy was key; minute changes in ground level translate into unacceptable tolerances some 15 metres above ground level.

High quality concrete floors were required to enable the effective use of the stock pickers. The floor was constructed to a very tight tolerance for flatness and levelness. High strength concrete with a burnished finish provides abrasion resistance for the solid wheel stock pickers.

The earthworks required to create the building platform had varying depth of fill across the site. Areas of the building near the edge of an embankment had to be suspended, adding further complexity.

Customs Facility
Australian Customs

Australian Customs and Border Protection Service employs more than 5,000 people to manage the security and integrity of Australia's borders.

The customs facility at Port Botany includes hi-tech x-ray scanning equipment for the screening of shipping containers, undercover work areas for physical examination of container contents and secure storage of contraband.

Woolacotts was responsible for supervising construction of the container scanning facility and for the structural and civil engineering design and documentation of the adjoining 5,000m^2 high bay warehouse and 17,000m^2 of hardstand pavement.

The site included buried footings and concrete bunkers, plus contaminated fill as the result of the explosive demolition of a former power station.

It was necessary to design a footing system for the building that minimised excavation of the contaminated site and was flexible enough to readily allow for on-site alterations to avoid in-ground obstructions encountered during the works. Woolacotts developed an above-ground on-site detention system to minimise excavation.

Other design challenges included the very tall precast concrete external wall panels for the high bay warehouse.

Various projects
Nestlé

Woolacotts has a long history with the world's largest food business, Nestlé.

Nestlé manufactures some of Australia's best known food products, including Milo, Maggi noodles, KitKat, and Nescafé.

We have completed many projects for Nestlé, including:

- Structural, civil and workshop drawings for a frozen food plant extension and noodle plant building in Pakenham, Victoria
- Milo production building in Smithtown, New South Wales
- New boiler house, infill slabs and first floor extensions at Maggi factory in Abbotsford, Victoria
- Proposed green bean tipping station at Dennington factory, Victoria
- Cooling tower base at Maffra, Victoria
- Structural check on reinforced concrete tank at the Tongala factory in Victoria

Various projects Qantas

Since 1957, Woolacotts has provided engineering and project management services on a variety of Qantas projects. Woolacotts has an invaluable experience and knowledge of Qantas infrastructure and operational environment.

We have worked on a number of critical infrastructure programs such as hangar upgrades, new heavy grade hard stand areas, aprons, runways and maintenance facilities.

Re-roofing hangar buildings

Hangars are critical for the ongoing maintenance of aircraft, 24 hours a day, seven days a week. Special attention to programming and staging of works is required to ensure minimal disturbance to the maintenance schedule. Full safety audits were completed, encompassing access and egress, as well as hazardous material assessments. Some older buildings contained asbestos sheeting – the safe and timely removal of the material was accommodated in work programs.

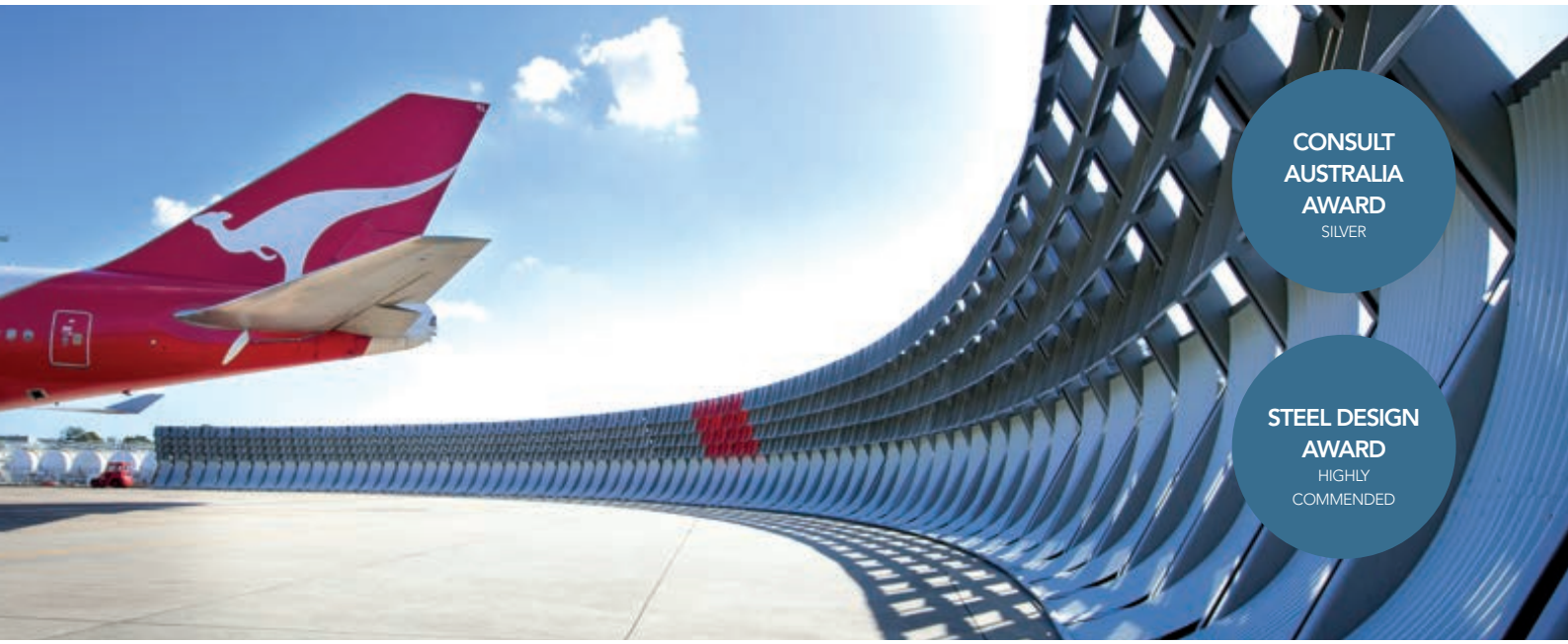
A380 blast fencing

Woolacotts designed state-of-the-art blast fences to protect people and property from the impacts generated by engine blasts during post-maintenance testing. We created an original and highly specialised design for a new blast fence to accommodate the massive size of the A380.

Due to space limitations, the engine run-up test areas are on the hardstand area in the hangar precinct. The fences were designed to be rail mounted and run full circle, to allow the fence to be positioned behind the aircraft to suit the prevailing wind direction. Air flow was modelled using specialist software, allowing the fences to be optimised to satisfy the design criteria.

Woolacotts was responsible for structural and civil engineering design, coordination of consultants' documentation and project management. The program was carefully managed and coordinated to allow to continued operation of the jet base.

BELOW
Our multi award-winning Qantas blast fence at the Mascot jet base, NSW



Rubber products facility
Toyo Tyres

Woolacotts has a long-standing relationship with Toyo Tyres, having worked on many projects for the company.

We were engaged to refurbish a cable manufacturing complex into a rubber products facility for Toyo Tyres. The scope of work included project management, structural, civil and hydraulic engineering design and documentation.

The brief required the coordination of consultant documentation, tendering and contract administration on several concurrent works packages including two building packages; a complex electrical package, including new substations; a communications and security package; and a fire services package, including new booster pumps and sprinklers.

Project challenges included the assessment and disposal of contaminated soil beneath the areas of pavement to be replaced and the development of a fire engineered solution for the site.

The design brief included:

- Replacement of internal pavement in warehousing area, including bunding
- Replacement of large areas of damaged external paving including creation of new truck turning bay
- Creation of new openings in existing precast wall framing
- Documentation for re-roofing the main building
- Alterations and strengthening of upper levels and design of new concrete and steel mezzanine platforms to support rubber manufacturing plant
- Design of new internal two storey enclosed offices and the complete refurbishment of two separate two storey office buildings at the site.

Brookvale bus depot

State Transit Authority

MBA AWARD
BEST INDUSTRIAL BUILDING
$10-25 MILLION

Brookvale bus depot was established in 1952 and today remains the main state government transport facility serving the northern beaches of Sydney, New South Wales. The depot houses 180 buses.

The new $13 million master planned depot involved the demolition of the existing administrative building and the construction of a new administration building on the same site while the depot continued operating.

The project also involved extensive new roadworks on Pittwater Road, including a new bus lay-by, carpark deceleration lane, new bus entrance and free left-hand turn exit lane.

Woolacotts was engaged as principal structural, civil, and hydraulic engineers on the project.

The building comprises 2000 square metres of floor area over two levels and boasts state-of-the-art facilities, including:

- Staff and driver training facilities
- Large rooftop array of solar panels to power bus yard and car park lighting
- Hardstand areas for 180 buses
- Bus maintenance facilities
- Regional and local administration offices
- Warehousing
- Amenity areas and change rooms

The project was awarded by the Master Builders Association of Australia in 2010 and won the 'best industrial building in the $10 million to $25 million' category.

ABOVE
Brookvale bus depot

Port Kembla mill

Cement Australia

Cement Australia is one of Australia's largest industrial recyclers, transforming waste products into fuel and blending materials to use to safely make cement.

Since 1999, Cement Australia has been transforming slag, a by-product of the steel manufacturing process for use as an additive in making cement and concrete.

Cement Australia and Ecocem decided to expand the operation and entered into a joint venture to construct a new facility – the Port Kembla grinding mill – which will produce cement and ground granulate blast furnace slag.

The Port Kembla mill will be the largest single cement grinding mill in Australia, producing both cement and ground granulated blast furnace slag. It will utilise world's best practice technology to efficiently reduce energy consumption and contribute to reducing greenhouse gases by using slag in cement and concrete.

Woolacotts has been engaged to complete all hydraulics portions of the project, including water, gas and fire systems.

Flight catering facilities

Alpha Flight Services

Alpha Flight Services is an award-winning in-flight catering company with operations throughout Australia, Europe, the United States, and the Middle East.

The company provides catering for many well-known airlines, including Emirates, Etihad, Garuda and Virgin.

Woolacotts was engaged by Total Constructions on behalf of Alpha Flight Services to provide consulting engineering services for several projects around Australia. One of these projects was a new catering facility in Adelaide.

Woolacotts designed and documented the structural and civil engineering portions of the new purpose-built flight catering facilities, and our local team provided services during construction including site inspections.

The facilities contain administration offices, freezer rooms for snap freezing, secure rooms for duty free, rooms for packaging meals, loading docks for catering trucks, a 2400m^2 single storey building, airside hardstand pavement, landslide car parking and driveways.

Woolacotts was also engaged to provide structural and civil engineering services for extensions to existing Alpha Flight catering facilities at Brisbane and Perth airports.

Penrith bus depot
Busways

Busways began in 1942 with a single charcoal powered hire car running between Rooty Hill station and Plumpton. Today, Busways employs over 1400 people responsible for a 600 plus fleet operating 130 routes.

Woolacotts was engaged to provide structural and civil engineering services for the design and construction of a new bus depot at Penrith.

It contains a 2000m^2 workshop facility with attached covered bus parking area, a two storey office building, a fuel and wash bay, and 14,000m^2 of hardstand pavement to accommodate 100 buses.

The high bay workshop is framed by large precast concrete wall panels, supporting a steel framed roof. It contains an eight metre wide suspended concrete mezzanine level along its rear wall.

A tight programme was required to avoid disruption to services. Woolacotts developed several concept designs for different methods of construction the suspended concrete mezzanine level in the workshop and the upper level of the administration building with the aim being to minimise the need for temporary formwork and accelerate construction.

The adopted design for these suspended floors consisted of precast concrete floor planks, spanning six to eight metres unpropped, supported by steel beams. Once the frame was erected, the planks were placed in position and provided a working platform for completion of roof framing and cladding before being topped with a thin slab for floor finishes. This allowed fitout works to commence immediately at the ground floor, without the need to wait for strip-out of propping.

Sinter secondary waste gas cleaning plant
Bluescope Steel

Bluescope Steel is Australia's biggest steelmaker, and the Port Kembla steelworks is the company's largest manufacturing plant.

A $94 million gas cleaning plant was developed at the Port Kembla steelworks to clean secondary waste gases before being released into the atmosphere. It is a key piece of infrastructure in Bluescope Steel's long term environmental management plan.

Woolacotts was engaged as structural and civil engineers on this large heavy industrial project.

The new facility was built on a reused industrial site, which presented challenges with piling.

While the plant technology was designed in Japan by Sumitomo Heavy Industries, Woolacotts provided all locally procured engineering. Our scope of work included the design of the base slab, footings and road ways.

Show rooms and warehousing
Crane Group

Crane Group, a division of Fletcher Building, is an Australasian leader in the manufacturing and distribution of plastic pipelines systems, plumbing and electrical supplies and non-ferrous products. Its brands include Iplex, Tradelink and Hudson Building Supplies.

Woolacotts' parents company, Daly International, has been a trusted partner to Crane Group since 2009, rolling out its new showrooms and warehousing throughout Victoria and New South Wales.

Our scope of work includes engineering design and documentation; town planning for building works; change of use; signage; and project management.

The types of assignments have included:

- Change of use to existing premises – works often require a re-layout of the site and stormwater engineering
- Minor modifications of buildings where works require an internal mezzanine level or new signage
- Relocating an existing store as a result of a compulsory acquisition – this project was delivered within a critical time period with a very minimal impact to business trading days.

Holker Street remediation
Department of public works

Woolacotts was engaged as principal consultant for the remediation and building over of the Holker Street landfill site in Silverwater, New South Wales.

The site covers 40,000 square metres and is up to 12 metres deep into a clay and shale profile. A natural watercourse originally crossed the site on the diagonal, and the site sloped towards this channel.

Woolacotts' involvement included investigating the landfill material, remediation options, negotiations with the EPA, detailed remediation plans and preparation of tender documents.

Woolacotts was also involved in obtaining approvals for work to proceed, as well as ongoing monitoring and reporting to the EPA.

Sub-metering systems
Queensland Urban Utilities

Queensland Urban Utilities (QUU) is responsible for the delivery of water and wastewater services across five key council areas in South East Queensland, including the Brisbane metropolitan area.

Woolacotts was appointed to dimension new sub-metering systems to be retrofitted into large community title multi-unit dwellings.

Our hydraulic engineering assignment also involved site specific design of 15 new water metering systems to include water mains testing and financial benefit analysis.

The newly installed sub-water meters eliminated conflicts between residential and commercial about equitable water usage and captured loss of revenue within the community title schemes for QUU.

Our hydraulic engineers have also been saving strata complexes and commercial building owners money by dimensioning water, gas and sewage supply systems with smart water meters. Cost effective data loggers connected into supply systems provide building owners and operator with real time usage information per dwelling. These systems accurately identify system leaks and be remotely programmed to restrict usage.

Our clients and partners

Our clients

We work with a long list of government and major corporate clients, including Commonwealth Bank, Westfield, Stockland, UNSW and Macquarie University.

Our parent company, Daly International also works with a long list of industrial clients, including AGL, QGC, Queensland Department of Public Works, Optus, Tradelink, Hudson Building Supplies, and Ericsson.

Quality assurance

At Woolacotts, we want to be recognised as the highest quality provider of project delivery services.

That's why we have an established, quality assured management system.

We conduct regular reviews of our quality management systems in partnership with our clients to ensure that project planning, executing, monitoring and control processes reflect the scope of each project.

Our integrated management system for the provision of property, planning, design and project management services is compliant with:

- Quality Management ISO9001:2008
- Relevant state and federal government legislation

Safety, health and environment

Safety and health

Woolacotts Consulting Engineers is a values-driven organisation. Looking after the safety and wellbeing of our people is a core value that we share with our parent company, Daly International.

Safety is paramount for both our employees and suppliers – whether in our offices or on site.

As part of our integrated management system, we operate our own health, safety and environment policy. Adherence by staff is a mandatory condition of employment.

Environmental and social responsibility

Corporate social responsibility is another core value at Woolacotts.

We recognise our projects have significant outcomes beyond those within our scope of direct management. We strive to implement, deliver and manage our projects in a way that provides a net benefit environmentally, socially and economically.

We seek to provide leadership in sustainability, education, advice and support to our people, clients, suppliers and communities in which we operate.

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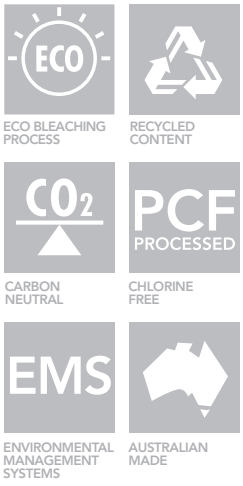

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