

# Self Lock System - SSLS

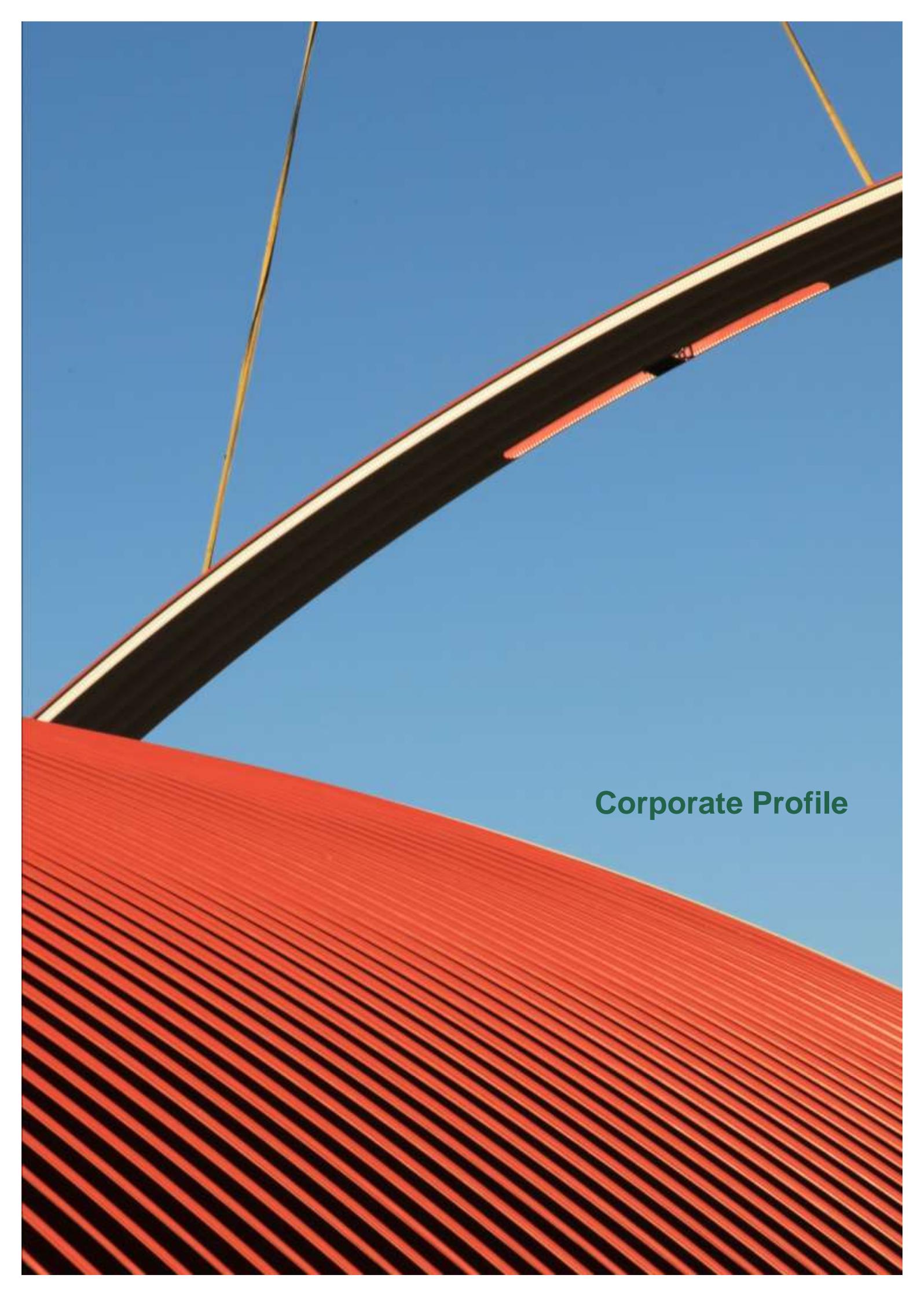
شركة المشغولات والمباني المعدنية المحدودة  
Steel Building & Structure Co. Ltd.



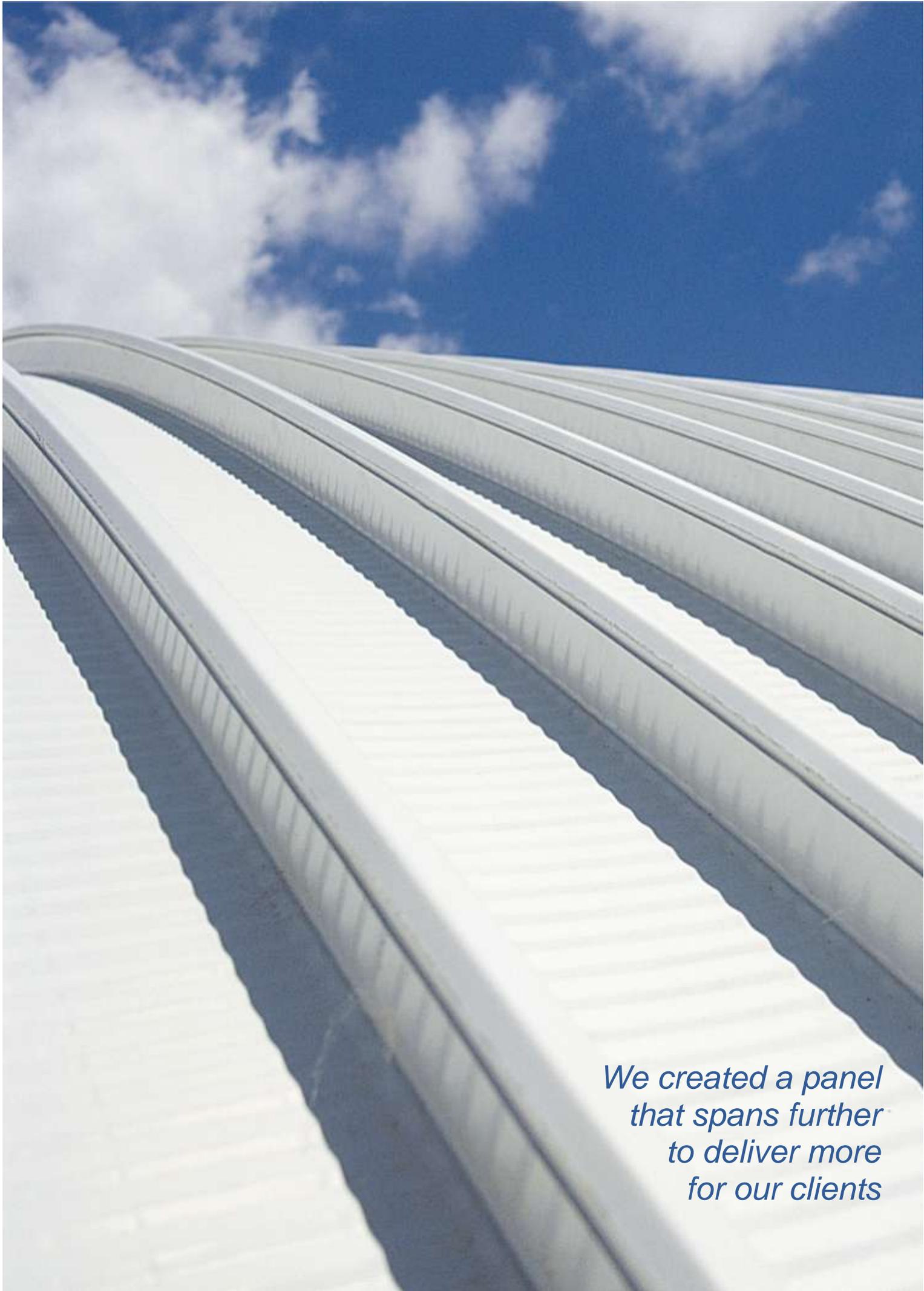
**SBSCO Industrial Services**

سبسكو للخدمات الصناعية





**Corporate Profile**



*We created a panel  
that spans further  
to deliver more  
for our clients*

# Company Profile



## The design and construction company with a unique construction system

Spantech is a privately owned Australian construction company.

The company was established in 1985 to design and construct buildings using the Spantech Construction System.

Spantech developed and patented the system. It features a site rollformed construction panel with wide-span capabilities and a unique connection method.

Spantech has two profile sizes. The original 300 Series can span up to 30 metres wide. The 370 Series panel which was introduced in 2001 can span up to 40 metres wide. Both profiles can also be used for curved roofs, pitched roofs, walls or permanent formwork.

Spantech services a number of industries including: agriculture, aviation, education, commercial, defence, industrial, mining, public, sport, recreation and water.

The system was initially designed to economically store bulk grain and other agricultural produce. The early designs used the continuous curved panel to free-span between concrete footings to create a Quonset style building.

Today the panel is more commonly used as a free-span roof with the panels supported by walls or columns.

As the inventors of the technology, Spantech has a vested interest in ensuring the continuous improvement of the technology. The culture of creativity and resourcefulness within the organisation provides direct benefits to clients.

For example, Spantech designed and constructed a number of 11,000 tonne potato stores for McCain Foods at their processing plants in Tasmania and Victoria. The buildings

maintained potatoes for up to nine months with minimal loss or degradation. This was a key factor in McCain Foods securing the contract to provide French Fries to McDonalds and other major fast foods chains in South East Asia.

In 1991 Spantech constructed its first earth covered building to safely store explosives.

The design created international headlines when a number of Spantech buildings were tested in a series of full scale explosives trials at Woomera, South Australia. The Spantech Explosives Storehouses proved safer and more cost effective than alternatives, saving the Australian Department of Defence millions of dollars in the first explosives depot project alone.

The same construction technology is now applied to other types of hardened buildings such as Aircraft Shelters and underground Command Centres.

Spantech defence buildings are now constructed in the Middle East and South East Asia by appointed licensees in the United Arab Emirates and Malaysia. Projects are also constructed in New Zealand through the Australian head office.

The focus on delivering the best for clients through better design, more economical construction methods or more advanced technology remains a key factor in the success of Spantech.

The company is still owned and managed by one of the founding partners. Dick Lucas is a respected Queensland builder with a wide range of practical international construction experience. His inventiveness, work ethic and honesty in business are cornerstones of the company.

Dick is supported in the business by his wife, two sons and a team of highly skilled and experienced employees. A large percentage of the team have worked with Spantech for more than a decade, a few for significantly longer.

At Spantech we strive to go further to deliver more for our clients.

**Span further. Deliver more.**

# Expertise

## Spantech brings experience and unique solutions to every project

### Agriculture

Spantech builds horizontal bulk grain stores at grain terminals, ports or on farms.

Spantech's Potato Stores are an integrated system designed for the extended storage of potatoes used in the production of French Fries and Oven Fries. This high quality storage can be built on-farm or at processing plants.

### Aviation

Airport Terminals and Aircraft Hangars alike benefit from the clear wide spans achieved by the Spantech system.

### Defence

Spantech is a world leader in the design and construction of hardened earth-covered buildings.

Spantech's technology has been used to design and construct buildings to store and process explosives, protect and service fighter aircraft, underground command centres and personnel shelters, plus a variety of buildings to protect essential services such as generators and high value front-line equipment.

A selection of non-hardened buildings have been delivered to international defence departments including weapons training centres, secure guardhouses and weather protection structures for key plant and equipment.

### Education

Since 1985 Spantech has delivered cost effective Covered Outdoor Learning Areas, Shade Structures over multipurpose Sports Courts, Multipurpose Halls and specialised learning facilities for schools. Spantech works with the school's Architects to deliver functional and affordable facilities which compliment or enhance the school's Master Plan.

### Commercial and Industrial

Numerous Offices, Retail Centres, Factories, and Warehouses have used either curved or pitched Spantech roofing solutions.

Spantech has also created specific solutions for Recycling Centres where highly corrosive chemicals and atmosphere may exist.





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### Mining

Bulk Copper Concentrate Stores where the extremely heavy material can be stacked against walls have been constructed at ports including Port Kembla. Spantech helped to maximise the efficiencies of portside storage and minimise handling costs.

### Public

Railway Stations, Bus Stations and Public Cyclone Shelters feature in Spantech's range of public buildings.

Spantech is also currently testing roofing profiles to make Public Fire Refuges more affordable for those communities at risk.

### Reservoir Roofing

All of Spantech's profiles can be rolled from either Colorbond pre-painted steel or ultra-long-life aluminium, creating a roofing alternative ideal for covering water reservoirs.

### Sport and Recreation

Almost any indoor sport can be accommodated in a Spantech building.

Court based sports such as basketball, netball, tennis and futsal are well within the range of a Spantech building.

Spantech has also constructed facilities for indoor soccer, ice skating and roller skating, horse riding, and even shooting.

Community Centres have been constructed for Councils to provide a focal point for community sports and cultural events. Some of these buildings have been upgraded to provide refuge and disaster relief centres in the event of cyclone, flood or bush fire.

### Swimming Pools

New and existing swimming pools can be covered with a Spantech roof. Insulation and acoustic ceilings that will resist the effects of swimming pool chemicals can be incorporated.

### Remote Construction

The experience and knowledge gained over decades of building defence and agricultural projects in isolated locations across Australia and New Zealand has made Spantech an expert in remote construction.

Many senior members of Spantech's construction team have also worked in Saudi Arabia, Malaysia or the United Arab Emirates supporting or training our international licensees.





# Technology

Spantech's construction technology is strong, fast to erect and cost effective.

The company developed a unique method of connecting rollformed metal roofing panels together.

The panels are joined with a patented interlocking clip that is formed at the edge of each panel. There is no need to use fasteners or mechanical folding to join the panels. The result is a fast watertight and strong connection that adds to the strength of the panel without stressing or weakening the base metal material or its protective coating.

Spantech panels are rollformed on site in continuous lengths. The first stage of rolling creates a straight panel used for pitched roofs, walls and permanent formwork. The second stage curves the panel to a preset radius to form a curved roofing panel or permanent formwork.

The material is either pre-painted Colorbond or galvanised steel available in thicknesses from 0.8mm to 1.2mm thick. Aluminium can also be used for selected applications.

The Spantech system is currently available in two sizes:

## The 300 Series

- Material thickness: 0.8 or 1mm
- Maximum curved panel span: 33 metres
- Maximum straight panel span: 7 metres

## The 370 Series

- Material thickness: 1.2mm
- Maximum curved panel span: 40 metres
- Maximum straight panel span: 9 metres

Wider spans may be possible with additional structural support.

Loads can be suspended directly from the roof via ceiling clips or additional structural fixtures to a maximum of 1 tonne per/metre (roof length).

The Spantech panels can accommodate a wide range of conventional construction finishes and features.

Skylights and rotary vents sit neatly within the base of the roofing pan.

Insulated and acoustic ceilings can be either curved to follow the roof line, or a suspended ceiling system.

A roof access system is also available with fixing points specifically designed to suit the Spantech panel.





Spantech operates an Integrated Management System to eliminate or control the risks associated with safety, quality and the environment.

The safety components of the system are designed to protect individuals, quality elements protect the interests of our clients, while the environmental elements protect the community as a whole.

The integrated system is designed to ensure a sustainable future for everyone affected by the operations of our company.

### Quality Assurance

The system was first implemented in 1997 as a Quality Management System

that complied with AS/NZS ISO 9001. Constant improvement to the system is testament to Spantech's commitment to quality.

Spantech is a recognised supplier to the Australian Department of Defence and has been awarded a number of Defence Quality Awards in both Australia and New Zealand.

Spantech is also committed to maintaining the quality of its technology with an on-going research and development program.

### Health and Safety

Spantech has a lost-time injury record well below the industry benchmark.

The safety elements of the integrated management system are independently audited and certified by auditors BSI as being compliant with AS/NZS 4801.

### Environmental Management

Spantech maintains an impeccable environmental record.

The company's integrated management system includes comprehensive environmental management procedures. Environmental Plans which meet the demands of the Australian Defence Force and all regulatory requirements are prepared and implemented for each project.



# Agriculture



## ABB Grain, Mt. Maunganui

Client	ABB
Project	Bulk grain store
Location	Mt Maunganui, New Zealand
Completion	2008
Scope	Design and construct a wide-span roof

The ABB grain handling facility includes over 9,000 sq/m of distinctive Spantech roofing. The structure is the widest clear span roof constructed by Spantech to date using the 370 Series profile to achieve a span of 41.6 metres.

The roof is supported on 6.5 metre high precast concrete walls with a roof apex height of 15 metres.

The roof includes double-sided pre-painted ColorGuard steel for extended life, a completely sealed internal finish, skylights, actuated controlled roof vents and end wall louvres.



# Agriculture



## Cameron's Pastoral Company

Client	Cameron's Pastoral Company
Project	Grain Stores
Location	Goondiwindi, Qld
Scope	Design and construct a grain storage facility to suit sorghum and other bulk grains.

Cameron's Pastoral Company operate a major piggery outside Goondiwindi.

The buildings allow the piggery operators to store enough bulk grain to ensure continuous operation for almost six months. The buildings compliment the vertical silos designed to store smaller quantities of ingredients used in the feed mix.

The facility has been expanded and modernised over a number of years as the piggery operation has grown.



# Aviation



## Roma Airport Terminal

Client	Maranoa Regional Council
Project	Roma Airport Terminal
Location	Roma, Qld
Architect	Sanders Turner Ellick Architects
Completion	2011
Scope	The mining industry, with its extensive fly-in-fly-out work force, requires modern, efficient transport infrastructure.

Spantech was selected to design and install the angled structural steel columns and beams, Spantech 300 Series curved roof, flashings and insulated acoustic ceilings for the Roma Airport Terminal.

A complex intersection of self supporting curved roofs and a distinctive dark coloured roof features in the striking architectural design by Sanders Turner Ellick Architects.

Referee	Steve Turner Sanders Turner Ellick Architects
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# Aviation



## Bundaberg Airport Terminal

Client	Bundaberg Regional Council
Project	Bundaberg Airport Terminal, Stage 2
Location	Bundaberg, Qld
Architect	Sanders Turner Ellick Architects
Completion	2009
Scope	During the upgrade to the airport terminal, Architect Steve Turner wanted to emulate the gently curving roof of the existing building, while avoiding the expense and visual clutter of the external overhead cables and columns.

Spantech was selected to design and install the structural steel and roof for the three new pavilions - a check-in building, departure lounge and baggage reclaim.

Spantech achieved the look and feel the architect was seeking by using the Spantech 300 Series panel and featured curved beams.

Referee	Jeff Lennox (Builder) 07) 4155 2288
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# Aviation



## ATSC Hangar, Malaysia

Client	Aerospace Technology Systems Corporation (ATSC)
Project	Fighter Aircraft Maintenance Facility
Location	Kuantan, Malaysia
Scope	Design and construct an Aircraft Maintenance Complex for intermediate level maintenance repair of Royal Malaysian Air Force MiG 29 aircraft.

The complex is centred around a 60m wide x 80m long fighter maintenance hangar with workshops, administration and technical facilities, plus full-width mechanical hangar doors.

Other Spantech buildings in the facility include a fighter aircraft wash-bay, shaded parking for emergency vehicles, equipment stores and under-cover parking for staff and visitors.

The project was designed and constructed under contract with Spantech's Malaysian licensee, Target Resources.



Images courtesy of ATSC

# Cyclone Shelters



## Karumba Sports Centre

Client	Carpentaria Shire Council
Project	Karumba Sports Centre
Location	Karumba, Qld
Completion	1998
Scope	Design and construct a sports centre which can be used as a category 3 cyclone shelter.

The simple efficient design of this sports centre includes all the features required to meet the needs of a remote community. While catering for a range of indoor sports, the centre has also become a focal point for regular community events and gatherings.

The building has been subjected to a number of cyclones and severe weather events since 1998, proving the design and ensuring peace of mind for locals.



# Industrial



## Advanced Trucks

Client	Advanced Trucks
Project	Workshop and Offices
Location	Burleigh Heads, Qld
Completion	1989
Scope	Spantech designed and constructed a large mechanical workshop to suit all types of heavy vehicles for Advanced Trucks.

The facility includes a fully featured workshop with an internal ceiling high enough to tip a semi-trailer, an indoor wash bay, a spare parts storeroom, hazardous chemicals store, showroom, mezzanine level offices and a truck driver's waiting lounge.



# Industrial



## Multipurpose Bulk Storage Facility

Client	GrainCorp
Project	Multipurpose Bulk Storage Facility
Location	Pinkenbah, Port of Brisbane
Completion	July 2004
Scope	Design and construct a multipurpose bulk storage facility to store urea, grain or associated bulk products.

This was the first building to use the Spantech 370 Series Panel.

The roof height is designed to allow semi-trailers to tip directly inside the structure. A centre dividing curtain and concrete nib wall provides additional segregation of materials or grades of materials.

The project was made possible with the aid of technology developed with the assistance of AusIndustry and the Australian Government.



# Mining



## Hyrock, Port Kembla

Client	Hyrock Pty Ltd
Project	40,000 tonne copper concentrate bulk storage facility
Location	Port Kembla, NSW
Scope	Design and construct a 40 x 100m bulk store with buttressed tilt slab walls and concrete slab suitable for side loading of copper-concentrate up to 7m high.

Spantech used its 370 Series panel to achieve a 40 metre clear span.

Spantech's design incorporates openings and fixtures to accommodate material handling conveyors and hoppers.

The project was completed in less than six months and commissioned on 27 May 2006.

The Spantech building has helped to dramatically reduce handling costs, loading times and product loss at the facility.



# Education



## King's Sports Centre (Stage 2)

Client	King's Christian College
Project	King's Sports Centre, Stage 2
Location	Reedy Creek, Qld
Architect	Facility Design Group
Completion	September 2012
Scope	Design a complete indoor sports facility and construct the project in stages to suit the school's budget.

The facility features a major indoor sports hall with multipurpose courts for basketball, netball, futsal and volleyball.

A two story central hub includes four classrooms, a gymnasium, a staff room and two sets of amenities to service the sports hall and the future swimming pool hall.



# Education



## Citipointe Christian College

Client	Citipointe Christian College
Project	Multipurpose Hall
Location	Mansfield, Qld
Completion	2010
Scope	Spantech was contracted to provide the engineering design, footings, structural steel, roof, insulated ceiling, gutters and downpipes.

The building features two multipurpose courts laid out end-to-end, a fully featured performance stage, class rooms on the mezzanine level and amenities.



# Education



Stage 2

## Northpine Christian College

Client Northpine Christian College  
Project Multipurpose Hall  
Location Dakabin, Qld  
Completion Stage 1 - 2007, Stage 2 - 2009  
Scope Spantech designed and constructed a multipurpose hall in two stages to suit the budgetary requirements of the College.

Stage 1: Shade structure over an existing double basketball court (*top right*).

Stage 2: Fully enclose the structure adding a new concrete slab, side walls, doors and windows, insulated ceiling, fire and electrical services, sports floor and sports equipment (*above and bottom right*).

Plus extend the original structure to include a new feature entrance, stage and storage areas.



# Education



## Northpine Christian College

Client	Northpine Christian College
Project	Senior School Multipurpose Court Cover
Location	Dakabin, Qld
Completion	2006
Scope	The contract included the design and construction of a permanent shade structure over two existing basketball courts. It included an annex large enough to seat a class for pre-game briefings.

The design had to consider and allow fire truck access to the remainder of the College.

With limited run-off available on one side of the courts, permanent column padding was installed to ensure the safety of students and others who use the facility outside school hours. Padding is secured with concealed locks to prevent theft.

# Education



## Marymount College

Client	Marymount College
Project	Junior School Multipurpose Hall
Location	Burleigh Heads, Qld
Architect	Bertoldi Architects
Completion	2010
Scope	Spantech was contracted as a nominated subcontractor to install structural steel and an insulated roof.

This distinctive architecturally designed complex includes two partially open multipurpose courts, three classrooms, a canteen, storages and amenities on both levels. Terrace seating along one court is complimented by wide tiered steps that lead up to the stage.

The open sided structure is cool and light all year round.

Referee	Lawrie Bertoldi Bertoldi Architects 07) 5530 4660
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# Education



## Trinity Sports and Aquatic Centre

Client Trinity Catholic College

Location Lismore, NSW

Completion March 2006

Scope Spantech designed and constructed the multipurpose sports and performance facility for this preschool to Yr12 school.

The facility includes a 25m waveless indoor swimming pool and a 400 seat grandstand.

The multipurpose hall includes two indoor sports courts for basketball and netball, a full performance stage, stage wings, lighting/sound control booth, make-up and storerooms. Under the stage is storage for over 1,000 seats.

The facility also includes classrooms and space for a future gymnasium.

Referee Roz Robinson, Trinity Catholic College  
[www.trinitylismore.nsw.edu.au/](http://www.trinitylismore.nsw.edu.au/)  
[www.trinityaquatic.com.au/](http://www.trinityaquatic.com.au/)



# Education



## Emmanuel College

Client	Emmanuel College
Project	Junior School Shelter
Location	Carrara, Gold Coast, Qld
Completion	February 2012
Scope	Design and construct a covered learning area over an existing concrete sports court.

The multipurpose play area is adjacent to the school oval near the front entrance of the school.

The all weather building is now the designated pick-up area for Grades One to Three, making it safer for children and much more convenient for parents.

The Spantech building replaced an aging portal frame structure and a number of shade sails.

Referee  
Bruce Ward  
[bw@emmanuel.qld.edu.au](mailto:bw@emmanuel.qld.edu.au)



# Education



## Cape Byron Rudolph Steiner School

Client Cape Byron Rudolph Steiner School  
Project Multi-purpose COLA  
Location Ewingsdale, NSW  
Completion 2011  
Scope Spantech design and constructed a shade structure and new multipurpose concrete court.

Perimeter nets prevent balls from escaping into the adjacent wetlands.

Sports equipment includes padding for all columns, rotating basketball-netball towers, plus additional practice basketball backboards on four columns at height to suit primary and secondary students.

Beams located near the apex of the roof allow for aerial circus training.



# Defence



## Myambat Explosives Depot

Client	Department of Defence, Army
Project	Myambat Supply Company, ESH
Location	Myambat, NSW
Completion	1992
Scope	Construct 34 No. 23m Spantech ESH

Spantech won the contract to build 34 Spantech Explosives Storehouses after extensive full scale trials primarily aimed to identify the most effective solution for the Myambat project. Construction was completed in 12 months, much faster and for significantly less than Defence's original budget estimate.

Each 23m ESH is licensed to store up to 75,000 kg NEQ of HD 1.1 at D3 and D4 NATO inter magazine safety distances. Each building can nominally store 380 pallets.

Awards	1993 Australian Defence Industry Quality and Achievement Award Winner - Facilities and Property
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# Defence



## Waiouru APB

Client	Department of Defence, New Zealand
Project	Waiouru Army Depot
Location	Waiouru, North Island, NZ
Completion	2007
Scope	Design and construct an ammunition preparation building (APB) to NATO specifications.

The design features an extensive use of the Spantech 300 Series Straight Panel.

The Spantech panels cover the main entrance and loading area with a single unsupported span of eight metres.

The straight panel is also used in the main roof, external walls and as permanent formwork in selected areas of the structure.



# Sports Centres



## Goonellabah Sports and Aquatic Centre - Sports Hall

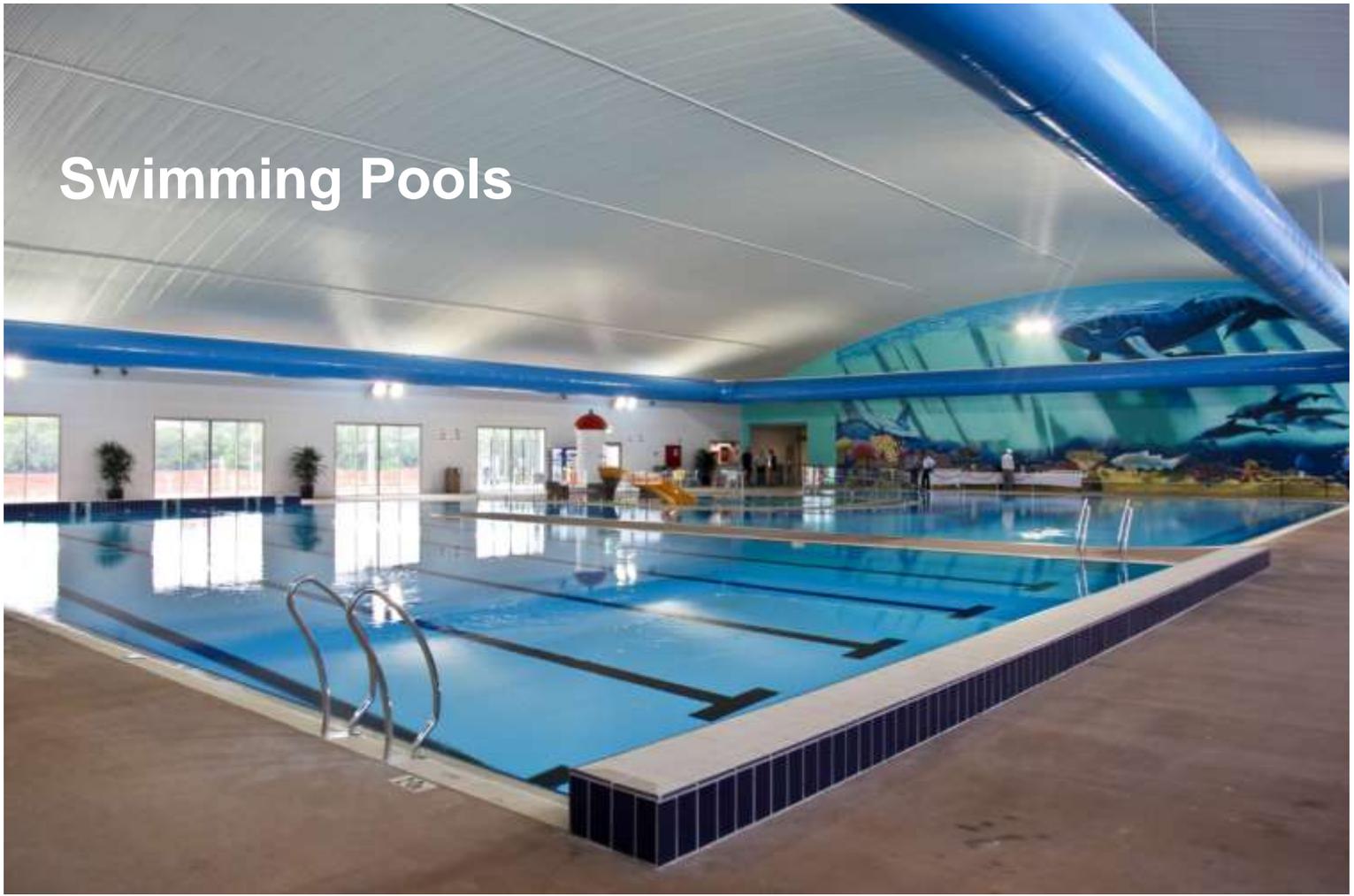
Client Lismore City Council  
Project Sports and Aquatic Centre  
Location Goonellabah, NSW  
Completion 2009  
Scope Design and construction of an indoor sports and aquatic centre including:

- Car park and landscaping
- 2 multipurpose courts
- 25m pool, leisure and toddlers pool
- Waterslide
- Humidification system
- Gymnasium, crèche, administration area, two youth halls and amenities

Referee Scott Turner  
Lismore City Council  
07) 6625 0500



# Swimming Pools



## Goonellabah Sports and Aquatic Centre - Pool Hall

Client	Lismore City Council
Project	Sports and Aquatic Centre
Location	Goonellabah, NSW
Completion	2009
Scope	Design and construction of an indoor sports and aquatic centre including:

- Car park and landscaping
- 2 multipurpose courts
- 25m pool, leisure and toddlers pool
- Waterslide
- Humidification system
- Gymnasium, crèche, administration area, two youth halls and amenities



# Swimming Pools



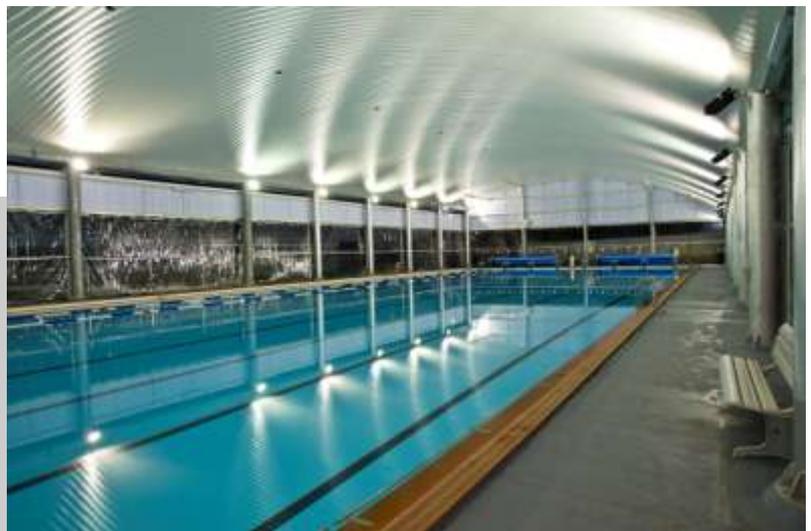
## Roma Pool

Client	Maranoa Regional Council
Project	Denise Spencer Memorial Pool
Location	Roma, Qld
Completion	2011
Scope	Design and construct a shade structure over an existing 50m swimming pool.

The design includes:

- a 25m x 62m curved roof structure over the main pool
- a flat roofed covered area connecting the existing entry and amenities building to the new structure
- café blinds around the perimeter of the main structure
- polycarbonate feature skylight walls and lighting
- roof-top solar pool heating equipment

Referee  
Matthew McGoldrick  
Maranoa Regional Council  
07) 4624 0604



# Swimming Pools



## Redcliffe High Performance Centre

Client	Redcliffe City Council
Project	Enclose an existing 50m swimming pool
Location	Redcliffe, Qld
Completion	2002
Scope	Design and construction of a shade cover to existing pool.

Awarded tender both on initial construction costs and whole-of-life costs of both the structure and the operation of the centre.

Construction was programmed to ensure Olympic team members' training was not interrupted.

Attendance dramatically increased in the winter months, particularly in the learn to swim areas.



Water



## Onkaparinga Reservoir Roof

Client	Brice Engineers Pty Limited
Project	Onkaparinga 10ML Reservoir Roof
Location	Kelly Road, Onkaparinga Hills, SA
Completion	2002
Scope	Supply and installation of roof cladding

The scope included:

- Supply, manufacture and installation of roof cladding
- Walkway
- Rails
- End wall cladding
- Associated flashings



# Water



## Young Reservoir Roof

Client	Brice Engineers Pty Limited
Project	Young Reservoir Roof
Location	Young , NSW
Completion	2001
Scope	Supply and installation of roof cladding

The scope included:

- Supply, manufacture and installation of roof cladding
- Ridge vent
- Associated flashings



# Potato Stores



## Talley's Potato Stores

Client	Talley's Group
Project	Potato Stores
Location	Ashburton, New Zealand
Completion	Constructed in 3 stages
Scope	Spantech designed and constructed a series of Spantech 11,000 tonne potato stores for Talley's Vegetable Division at their Ashburton processing plant.

The fully automated climate control system and insulation sprayed directly to the inside of the Spantech panel maintains the temperature within the store at 4 degrees Celsius, year round.

The buildings store potatoes that are processed as French Fries and Oven Fries for export to Australia and Asia.



# ALABUO GROUP



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