


**Housing, education, mining and hybrid -**  
*an exciting new advancement in modular project delivery*





*"Parkwood can be relied upon to produce a quality product on time at an affordable price."*

*"Modular developments are recognised to 'sit lightly' within our environment."*

## 22 YEARS EXPERIENCE

Parkwood Modular have worked with some of Australia's best architects engineers & builders to produce designs specific for their clients' needs. Parkwood was established in 1988 and has completed approximately 2500 Housing and Education units comprising of some 10,000 modules.

Parkwood Modular has completed over 2,200 homes and believes we are at the leading edge of the Offsite Modular industry and specialise in producing affordable innovative design with minimal impact to the site. Parkwood has received numerous major HIA & MBA industry awards

The **2 Ha Parkwood Manufacturing Facility at Somersby** with 1,500m<sup>2</sup> under roof and 2,500m<sup>2</sup> of outdoor hardstand by the F3 is designed to produce manufactured modules with convenient access to the major north south freeway. Plans for 3,500 m<sup>2</sup> of additional under roof area is underway resulting in doubling our capacity to deliver to our clients needs.

We operate a production line method of rolling the modules through the factory efficiently in the use of labour and materials not possible with in-situ construction.

Parkwood Modular has developed a simple but robust CERTIFIED Management Systems for QUALITY, ENVIRONMENTAL AND OH&S compliance ISO 9001-2008.

Parkwood Modular have and implement descriptive Policies in Quality, Environmental and OH&S.



## Housing, education, mining and hybrid - an exciting new advancement in modular project delivery

### MODULAR CONSTRUCTION

Manufactured modular building elements are constructed within a factory environment suitable for all modes of transport. The modular sections do not necessarily need to be repetitive with all sorts of shapes and sizes designed and manufactured. Parkwood Modular have in-house design services producing complete shop drawings and 3D modelling prior to production. Parkwood Modular successfully works with client design teams to coordinate details interfacing between the in-situ and offsite works. Many well known architectural firms have worked with Parkwood Modular to deliver **exciting and innovative solutions** for its clients.

### QUALITY

Parkwood Modular manufacturing systems has the highest levels of quality control. All manufactured elements do not leave the factory without sign off and therefore almost eliminating operational interruption during defects liability periods. Our Quality Assurance systems can integrate with our clients Quality systems.

Certifications of all structural elements are provided as part of our System and Comprehensive Warranty and As Built documentation is also provided on completion. **Parkwood Modular only specify the highest of quality materials backed by industry standard warranties.**

### COST

**DESIGN COSTS** - Parkwood Modular Manufacturing includes detailed shop drawing design costs which are largely absorbed within the cost of the manufacturing process. Thus reducing expensive costs that are usually incurred with design team consultants for insitu construction. **A design freeze is established prior to manufacturing and this does result in 90% less variations unlike insitu construction.** Parkwood Modular Manufacturing means significant savings in on site time and this **reduces** expensive **project** preliminary costs such as site establishment, material handling, supervision, environmental compliance, OHS compliance and no lost time for inclement weather.

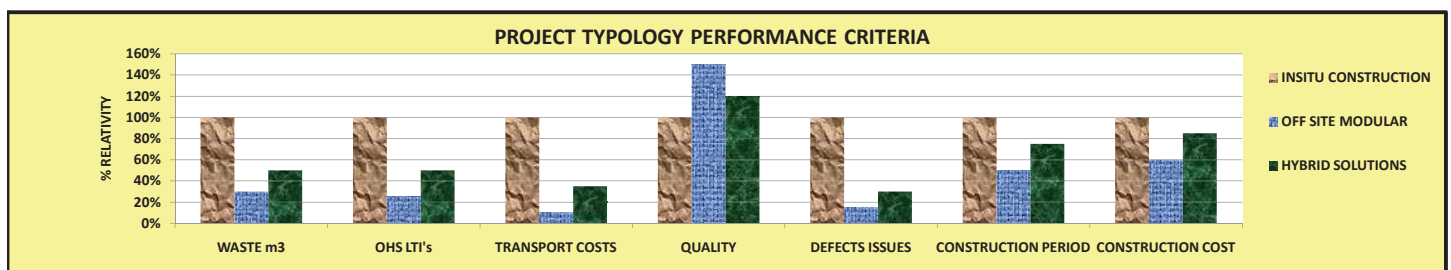
Our analysis has proved that modular transport costs a fraction of the transport costs incurred whilst constructing in-situ. **The savings comparison between modular and in-situ preliminary costs can range from 30-60%.**

**CONSTRUCTION COSTS** - Modular Construction is proven to be up to **40% faster than Insitu developments** with no inclement weather stoppages, much safer working conditions, minimal industrial relations issues with all labour and materials available on time and in sequence. There is significantly less waste when manufacturing modular components and cost effective bulk purchasing. Modular components are manufactured in lightweight construction thus eliminating expensive heavy weight construction, ie concrete and masonry. Working in a factory environment is much safer and therefore significantly reducing **lost time injuries** than that of Insitu construction. **The savings comparison between modular and insitu construction costs can range from 15-30%.**



PROJECT TYPOLOGY PERFORMANCE CRITERIA

	WASTE m3	OHS LTI's	TRANSPORT COSTS	QUALITY	DEFECTS ISSUES	CONSTRUCTION PERIOD	CONSTRUCTION COST	CLIENT SATISFACTION
INSITU CONSTRUCTION	100%	100%	100%	100%	100%	100%	100%	75%
OFF SITE MODULAR	30%	25%	10%	150%	15%	50%	60%	150%
HYBRID SOLUTIONS	50%	50%	35%	120%	30%	75%	85%	100%



## ENVIRONMENT

Parkwood Modular is committed to supporting our environment and has a certified Environmental Management System in place. Modular developments are recognised to 'sit lightly' within our environment.

### Energy Efficiency

Parkwood Modular work closely with Environmental Engineering consultants to achieve highly energy efficient modular elements that provide clients and their end users with more cost effective operating costs along with ensuring that materials are environmentally sustainable. Parkwood are continually working on more energy efficient design solutions for its clients.

**Modular construction is proven to be up to 20% more energy efficient than insitu developments.**

### Materials

#### Environmentally Sustainable

**Modular manufacturing contributes significantly to providing more sustainable environments.** Parkwood is committed to working with only those materials that are environmentally sustainable.

### Waste

Significantly less material is wasted during the manufacturing processes. The Parkwood modular design system more readily take into account building material component sizes thus reducing unnecessary cutting to suit. Any waste from the manufacturing process is either recycled in the manufacturing of new elements or discarded into recycling during rubbish removal.

**Modular construction is proven to be up to 75% less wasteful than insitu developments.**



## SAFETY

**OCCUPATIONAL HEALTH AND SAFETY** - Modular Manufacturing takes place within a highly supervised factory environment that is undeniably a much safer workplace than 'on site' construction. WorkCover NSW has praised Parkwood for its innovative manufacturing and onsite installation safety systems. Parkwood Modular operates with certified OHS Management Systems that can integrate with its clients OHS systems.

Parkwood Modular develops and implements Project and Site Specific Safe Work Method Statements for all delivery and installation.

## TRANSPORT

Parkwood Modular have barged units to Milson Island and The Basin on the Hawkesbury River, delivered school buildings to remote farming communities and supplied athlete's accommodation in the Olympic Village at Homebush.

Parkwood Modular can install in most site terrains and conditions due to its **innovative installation systems and methods** not usually used in the transportable prefabrication industry.

Parkwood Modular deliver and installed on mining sites, have had services pods lowered and installed through site built structures, **transported to remote locations**, from Jindabyne and Thredbo in snow fields in the south, to Lennox Head, NSW north coast and west to Warren in the heat of summer.

Parkwood Modular only works with the most reliable transportation and materials handling companies. **Offsite Modular reduces transport movements to building sites by up to 90%**, making safer material movements in relation to a project, reducing site traffic management requirements, materials handling safe work method statements etc.

## CAPACITY

**Parkwood Modular can produce up to 3000 square metres of modules per month.**

Parkwood Modular maintains an extremely stable full time workforce of 40, many of whom have worked for the company for in excess of ten years and most have experience in constructing over 3-4000 modules. The factory is staffed with qualified carpenters and metal workers.

Cabinet makers, electrical, plumbing & tiling contractors also maintain a 100% presence to the needs of our production schedule.

### Project Management

Parkwood Modular can integrate its Project Management capability with the client project management systems to seamlessly coordinate any project. Parkwood have **experienced commercial project managers** that will take a project from contract commencement to final completion without interruption.

**HYBRID SOLUTIONS** - Parkwood Modular have experience in integrating manufactured modular elements within insitu developments such as switchrooms, plant-rooms, amenities, storage facilities, commercial kitchens etc. The integration of modular elements into insitu developments is increasingly becoming popular and solves all the risk associated with late in-project long lead time installations.



# EDUCATION

## THE SCHOOL ENVIRONMENT

As the majority of construction work is carried out at the Parkwood factory, the time and number of workers required in the school environment is drastically reduced making the construction site much safer within the school operating environment. For example "The Bateau Bay Public School commissioned Parkwood to construct a 250m2 General Purpose Hall including 2 bathrooms (1 being disability compliant) an office and canteen over two weekends with an onsite staff of 6."

Working for the Department of Sport & Recreation Parkwood has supplied extensive construction projects in an extremely short onsite construction time frame, aimed at greatly minimising the inconvenience of construction activity within the outdoor education environment.

Under the BER Federal Stimulus Programme Parkwood Modular assisted in the development of a school hall product and then supplied in excess of 50 buildings (175 modules) to the Illawarra and the Newcastle / Hunter Valley regions in a very short period of time.

### Recent Projects including

#### Building Education Revolution (BER)

CLIENT	<b>NSW Department of Education and Trading</b>
Project	South Western Region for the supply and installation of 37 BDR school buildings (100+ modules)
Managing Contractor	Richard Crookes Constructions
Value	\$4.0 million
Program	24 weeks - March 2010 to October 2010

CLIENT	<b>NSW Department of Education and Trading</b>
Project	Hunter Central Coast Region for the supply and installation of 13 BDR school Buildings (40+modules)
Managing Contractor	Bovis Lend Lease
Program	20 weeks
Value	\$1.5 million

# HOUSING & ACCOMMODATION



In regional New South Wales the housing industry understands that the future of housing construction methods for residential accommodation to various housing sectors, like key worker, social, defence, health and teacher housing will be increasingly answered from the offsite modular construction industry.

The Australian residential and accommodation industry suffers from poor performance due to a skills and resources shortage in the remote regions and towns with no apparent solution. The lack of apprenticeships across the industry is a case in point. These sectors that are enduring an increasing demand to decentralise from metropolitan centres into regional areas can better be delivered with offsite modular solutions because of the higher quality, affordability with timeline efficiencies that Parkwood Modular can guarantee.

Working with some of Australia's finest recognised architects, Parkwood can provide built solutions that will exceed the design requirements often set down by its State Government clients and other corporate developers. These solutions are designed without compromise to aesthetics, durability, comfort and energy efficiency, as well as environmental requirements.

On site periods are reduced by 50% compared to insitu developments. Quality is guaranteed as manufacturing eliminates low quality workmanship, resulting in few defects and client satisfaction. The design freeze process enables the manufacturing to commence without any variations by minimising specification change or scope creep changes. This determines cost accuracy with limited contract administration for variations.

## Recent projects including

**CLIENT** NSW Sport & Recreation  
**Project** Jindabyne Athletes Accommodation for the supply and installation of 5 architecturally designed 4 bedroom self contained accommodation residences (20 Modules)  
**Program** 16 weeks (4 weeks on site)  
**Value** \$1.1 million

**CLIENT** NSW Sport & Recreation  
**Project** Lake Ainsworth, Lennox Head Athletes Accommodation for the supply and installation of 5 architecturally designed 2 bedroom self contained accommodation residences (15 Modules)

**Program** 16 weeks (3 weeks on site)  
**Value** \$1.2 million

**CLIENT** NSW Sport & Recreation  
**Project** Sydney Academy of Sport for program accommodation for the supply and installation of 2 architecturally designed 4 bed accommodation residences (6 Modules)

**Program** 12 weeks (3 weeks on site)  
**Value** \$0.75 million

**CLIENT** NSW Sport & Recreation  
**Project** Jindabyne Staff Accommodation for the design, supply and installation of 5 architecturally designed 2 bedroom self contained accommodation residences (10 Modules)

**Program** 16 weeks (4 weeks on site)  
**Value** \$1.5 million

**CLIENT** Department of Public Works  
**Project** Milson Island - Hawksbury River for 10 architectural designed self contained program accommodation residences (40+ modules)

**Program** 25 weeks (including all onsite works)  
**Value** \$2.2 million

**CLIENT** Narrabeen Lakeside Caravan Park  
**Project** For the design, supply and install 20 duplex cabins, 7 single cabins and a fully accessible unit. (80+ modules)

**Program** 12 weeks (4 weeks on site)  
**Value** \$1.7 million

**CLIENT** SYDNEY 2000 OLYMPIC GAMES OCA  
**Project** Mirvac / Bovis Lendlease Olympic Village for the supply and installation of 85 architectural designed homes

**Program** 36 weeks (12 weeks on site)  
**Value** \$5.4 million

**CLIENT** Meriton - Affordable Homes  
**Project** For the supply and installation of 75 homes - affordable with specific design requirements (360+modules)

**Program** 52 weeks (12 weeks on site)  
**Value** \$3.8 million

**CLIENT** Wesley Mission Mangrove Mountain Retreat  
**Project** Supply and installation of 7 architectural designed self contained residences (28+ modules)

**Program** 2 months









Registered Licensed Builder  
NSW and QLD Housing and Commercial

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