



## HERITAGE IN ACTION

# ADAPTIVE REUSE

HOW STATE REGISTERED HERITAGE PROPERTIES  
HAVE BEEN SUCCESSFULLY ADAPTED FOR NEW USES





# WHO WE ARE

## HERITAGE COUNCIL

The Heritage Council is the State Government's statutory advisory body on heritage.

The nine-member Heritage Council is established under Heritage Act (2018).

## DEPARTMENT OF PLANNING, LANDS AND HERITAGE

The Department of Planning, Lands and Heritage is a State Government department that supports the Heritage Council and the Minister for Heritage to recognise and celebrate our significant heritage places and to assure their long-term viability into the future, through sensitive development and adaptation.

The Department carries out the Heritage Council's day-to-day operations, projects and service delivery, and is the contact point for enquiries and development referrals.

## HOW WE WORK TOGETHER

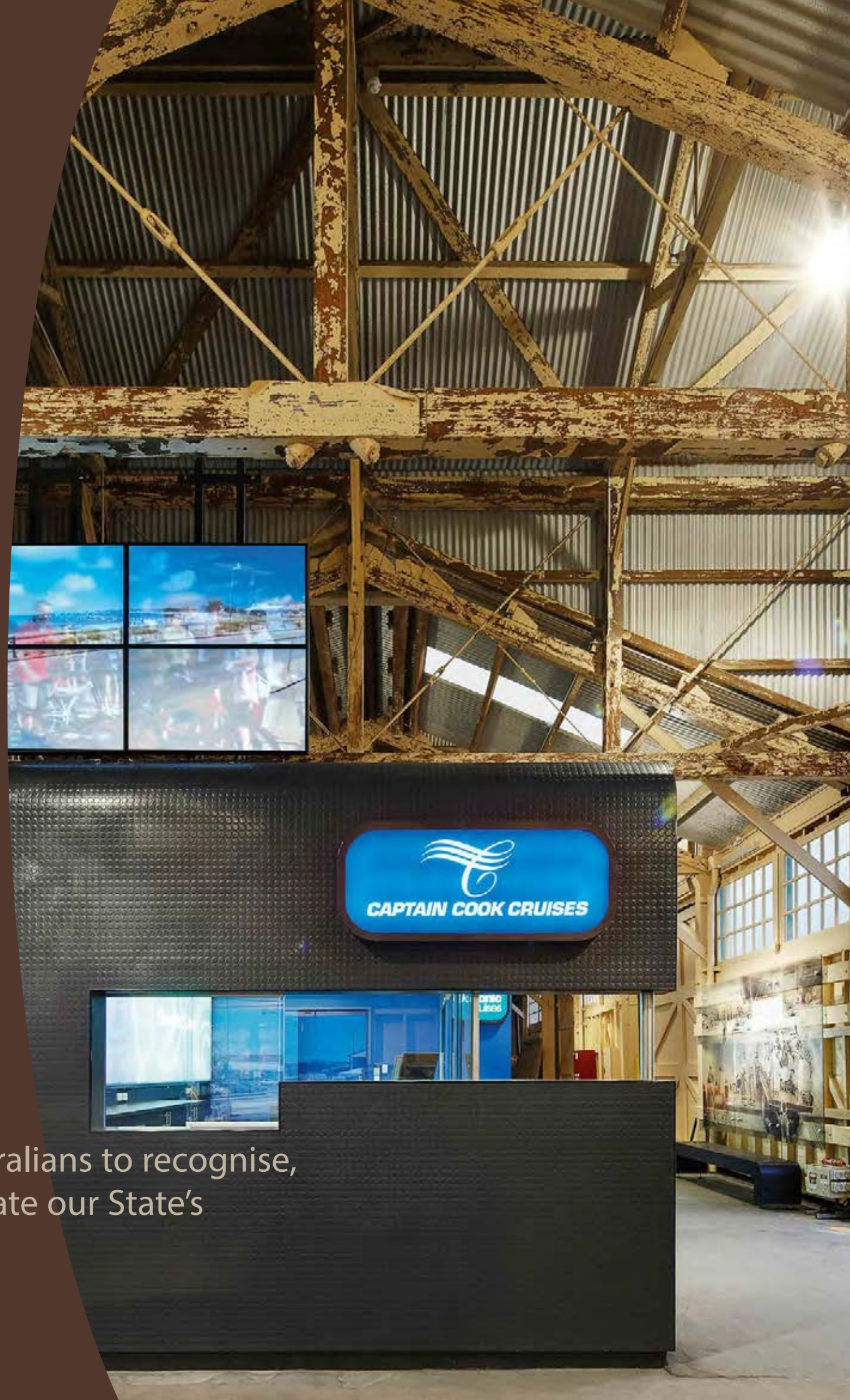
If a development or change to a place entered in the State Register of Heritage Places is proposed, it is referred to the Heritage Council for advice, usually by the responsible local government.

The Department of Planning, Lands and Heritage assists the Heritage Council with the assessment of development proposals and provides administrative support to the Council.

In most cases, the development referral will be handled by the Department. This allows the Heritage Council to concentrate on major and sensitive developments.

If you are considering making a change to your property, you can contact our development team to discuss your ideas and receive initial feedback and practical advice on your proposal.

Working with Western Australians to recognise, conserve, adapt and celebrate our State's unique heritage



## INTRODUCTION

Western Australia has a wealth of underutilised heritage buildings in prime locations that provide unique and exciting opportunities to develop and revitalise our urban and regional communities.

The sensitive adaptation of heritage buildings, when combined with contemporary design, can create vibrant and visually exciting spaces that people want to live, work or play in today.

In the competitive residential and commercial markets, heritage provides a point of difference that delivers an ambience that cannot be replicated by new builds.

The retention of heritage places also makes an important contribution to environmental, social and economic sustainability.

Adapting heritage places amounts to a substantial environmental and financial saving in embodied energy, by avoiding the creation of waste and the need for replacing building materials. It provides opportunities to assist local economies through employment and ensures that historic buildings continue to provide a sense of place for current and future generations.

A number of developments throughout our cities, suburbs and regional towns are already seeing the commercial benefits of adaptive reuse.

This brochure showcases different examples of how places that are important to our State heritage have been successfully adapted for new uses. We hope these examples provide a greater insight into adaptive reuse.

If you are considering adapting a State Registered place, we encourage you to contact our development team to discuss ideas and receive initial feedback and practical advice on your proposal.

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A stunning project that demonstrates all aspects of adaptation – conservation, clever design, fit for purpose and fulfils a need. An excellent use of interpretation material and historic imagery

## B SHED

### FREMANTLE (1902, 1926)

Entered in the State Register of Heritage Places in 1999



A former cargo shed is now a contemporary ferry terminal catering for an estimated 200,000 ferry passengers.

The adaptation of the B Shed was part of the revitalisation of Fremantle's Victoria Quay.

Located at the western end of the Quay, the 101m long and 21m wide shed presented itself as the ideal building for the new ferry terminal, café and home to the Leeuwin Ocean Adventure Foundation.

The B Shed was originally constructed in 1902 of Karri and Oregon timber and rebuilt in 1925-26. At the time, its cutting-edge facilities included electric hoists that could lift up to five tonnes and rolling shutters to provide ventilation for perishable goods such as fruit and vegetables.

B Shed has since been adapted for various uses including an ABC broadcasting centre during the American's Cup defence in 1987, a maritime museum, and a vintage car museum.

Works in this most recent transformation included conservation and restoration of the building's exterior and reconstruction of original elements like large timber sliding doors. Paint scrapings were taken to establish the original paint colours and the building totally repainted to an early colour scheme.

A series of self-contained single and two storey 'pods' made from modern materials were placed within the structure so as not to compromise the integrity of the original building fabric.

The juxtaposition of the selected colours and the new brightly coloured pods creates a greater sense of awareness and distinction between the old and new building fabrics.

Interpretation of the historical uses of the B Shed and the adjacent berth was an important part of this project. This was achieved through the installation of contemporary windows, glass panels and ceramic mosaic murals featuring historical photos of activities occurring in and around the B Shed.

In addition, two cut-outs were created in the deck over the water to allow patrons to view the original wharf structures, with information provided on the history and design of the wharf construction.

This project has achieved much-needed facilities for ferry operators and their passengers while maintaining the integrity of the building and interpreting aspects of the port's rich heritage. Through adaptation, this iconic heritage place has been opened up for the benefit of locals and visitors alike.

The project won the 2011 Western Australian Heritage Award for Excellence in Adaptive Reuse: The Gerry Gauntlett Award.

The Heritage Award judges said it was a stunning project that demonstrates all aspects of adaptation – conservation, clever design, fit for purpose and fulfils a need. An excellent use of interpretation material and historic imagery.





# MAIN PUMP STATION

## KUNUNURRA (1963)

Entered in the State Register of Heritage Places in 2006

The PumpHouse Restaurant and Bar must rank among the most unusual and picturesque restaurants in Western Australia.

Perched high on Lake Kununurra, the restaurant is housed in a piece of Western Australia's history – a disused main irrigation pump station that was an integral part of the Ord River Irrigation Scheme.

The Ord River Irrigation Scheme was a bold venture to develop and settle the North West of the State in the post World War II era. The scheme led to the establishment of the town of Kununurra.

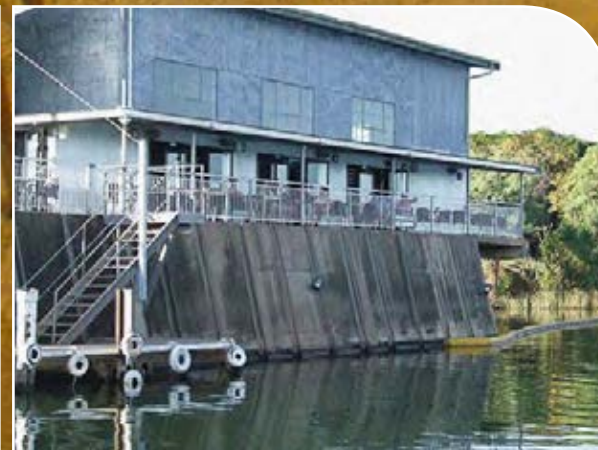
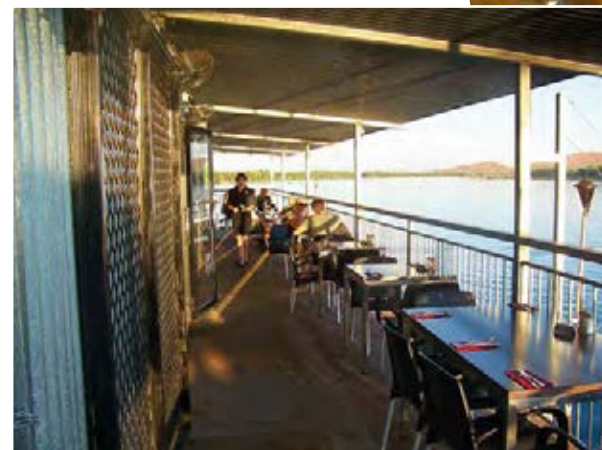
The largest capacity water pumping station in WA, it became redundant in 1972 when the water level in Lake Kununurra was maintained at a sufficient height to provide year-round gravity fed water to the M1 channel. The Water Corporation decommissioned the pump station in 2004.

As early as 1998, restaurateurs Thomas and Dominique Breig saw the potential to turn the disused facility into a tourist attraction. After leasing the property from the Water Corporation, the owners' dream was finally realised in 2008 when the PumpHouse Restaurant opened for business.

The restaurant cleverly incorporates many of the station's original features including the massive pumps, gantry and switchboards, creating a unique dining experience with an industrial edge.

Dining tables are placed amongst the pumps inside the building with alfresco dining on the original west platform. A pre-fabricated lean-to was built to incorporate the bar and commercial kitchen without impacting on the original fabric of the building. Air-conditioning, ceiling fans and bathrooms were other fittings and fixtures included in the fit-out.

Today, diners can marvel at the sun setting over the Ord River in a venue that played a major role in the State's development.







# W.D. AND H.O. WILLS WAREHOUSE

## PERTH (1927)

Entered in the State Register of Heritage Places in 2000

For many years, the W.D. and H.O. Wills Warehouse was an almost forgotten inner-city building, its stunning architecture masked from top to bottom in charcoal grey paint.

Built as an office and warehouse for tobacco company W.D. & H.O. Wills in 1927, it is one of Western Australia's few surviving examples of the interwar Chicagoesque style of architecture.

The three storey reinforced concrete, brick and steel structure was innovative for its time, with mushroom top columns eliminating the need for structural beams.

Over the years, it had been a storage facility, roller skating rink, disco and even a car park before it fell into disrepair.

However its size and prime location on a busy central city intersection (Murray and Milligan streets) made it an ideal candidate for adaptation into a mixed-use development.

Now called HOME, it was adapted into three commercial suites and 30 apartments including six penthouses. A new building next door added another two commercial suites, 37 apartments and 13 loft apartments.

Works included retention and repair of the facade, original floor plates, intricate columns, staircase and cast iron balustrade.

The significant cast iron balustrade was carefully raised in height to comply with building codes and the staircase treads were clad with European Oak to be sympathetic to the original design. A new passenger lift was inserted into the original location of the goods lift, and a fire-engineered solution was negotiated with authorities to allow for the original fire stair to be continued to be used.

Apartment layouts were carefully planned within the existing building envelope with no changes to the form of the original building. Three whole new floors were also added to a design that works with the proportions and rhythm of the building below.

This beautiful building was rescued from a derelict and fragile state and transformed it into a cultural asset.

The project has re-energised the local area, with the resulting increase in population serving as a catalyst to local small businesses including cafes, restaurants and amenities.



IMAGES SUPPLIED BY: Match





# ROYAL WA INSTITUTE FOR THE BLIND

## MAYLANDS (1937, 1955)

Entered in the State Register of Heritage Places in 1994

For more than 50 years, this landmark Art Deco building on Whatley Crescent provided vocational training and education services for the visually impaired.

Today, the building dances to a different tune as the home of the West Australian Ballet.

And its revitalisation from a worn-out ugly duckling to a gracious swan is worthy of a fairy tale ending. But like any fairy tale there were twists and turns along the way.

The Senses Foundation (formerly the Royal WA Institute for the Blind) sold the building and land in 2004. The land, which ran from Whatley Crescent through to Guildford Road, was subdivided, with three quarters of the site developed for residential. The 1937 building, which contained large open spaces, was initially intended to be adapted into apartments and then offices, before it was eventually sold to the City of Bayswater which leased it to the West Australian Ballet.

While the proposed residential development would have resulted in apartments with large open spaces, it would have required bigger changes to the existing fabric of the building.

Its adaptation for the West Australian Ballet proved to be the perfect fit. The existing interior layout allowed for large performance and rehearsal spaces, cafe and wardrobe functions, and open plan offices without significant alteration to the existing fabric.

It also ensured that this historic building could continue to be accessed by the public and enjoyed by future generations.



But the project was not without its challenges. The structure was strengthened, services were upgraded and concessions provided for parking. Areas that had been subjected to vandalism and fire damage in 2005 were repaired. The rear lavatory block was demolished to make way for a new steel structure incorporating toilets, stairwell and a lift to improve mobility access. The new addition is clad in ice opaque white Danpalon panels.

Today, the West Australian Ballet has a state of the art facility which boasts three dance studios, a wardrobe and production department and administration offices.

This project took a vacant and neglected building and adapted it into an attractive and sought after venue. And importantly, it illustrates how finding the right compatible use for a heritage building can be the key to a successful adaptive reuse project.



# MACKAYS AERATED WATERS FACTORY

## PERTH (1928)



Entered in the State Register of Heritage Places in 2007

One of Perth's few remaining light industrial buildings from the interwar period has been transformed into an award winning sustainable mixed-use development.

The former Mackays Aerated Waters Factory (1928,1942,1962) was one of a number of locally based soft drink manufacturers that thrived in Western Australia in the early 20th century, prior to the domination of the market by multinational companies.

A local landmark, the factory was sold and used for various purposes from the 1960s until the late 1990s, when it became vacant and succumbed to vandalism and squatting.

In 2008, work began to transform the derelict factory into a vibrant 6,320sqm mixed use development, incorporating 35 apartments, an office and a retail outlet. The project, guided by a Conservation Plan, was completed in 21 months at a cost of \$14million.

Sustainable design features were at the heart of this conservation and development project including rainwater harvesting, solar gas-boosted hot water heating, a 10kW communal photo voltaic system and an edible garden in the courtyard for residents to enjoy.

The project retained original masonry, two facades built in the 1940s and a number of boundary walls. Original timber trusses were reused or kept for other heritage projects. Bricks were salvaged and reused along the Little Parry Street facade and the sheoak stair treads and handrails were salvaged and machined from trees felled during extensions to the South West Highway.

The Square One Apartments project is an excellent example of a sustainable adaptive reuse project that has transformed a factory into stunning, contemporary apartments whilst preserving, enhancing and interpreting the industrial heritage of the site.

It has revitalised the surrounding area by bringing new residents and employees into the area while improving safety through more lighting and activity. Graffiti and tagging has reduced by providing a 'blank canvas' on the attached warehouse for local street artists to paint.

Square One Apartments has received numerous building awards including the 2010 Master Builders Award for Energy Efficiency, 2011 HIA Greensmart Award – Development of the Year, 2011 Royal Australian Institute Architects (WA) commendation, and the 2012 Western Australian Heritage Award for Excellence in Adaptive Reuse: The Gerry Gauntlett Award.

The Heritage Award judges said it was an outstanding example of a sustainable adaptive reuse project that has transformed the State Registered Mackays Aerated Waters Factory into stunning, contemporary apartments; preserving, enhancing and interpreting its industrial heritage.







# MIDLAND RAILWAY WORKSHOPS, FLANGING SHOP

## MIDLAND (1904-1912)

Entered in the State Register of Heritage Places in 1994

What was once a non-descript railway workshop has been revitalised into a state-of-the-art operational support facility for the Western Australian Police.

The transformation was part of the redevelopment of the Midland Railway Workshops, the most intact example of an early twentieth century railway workshop in Australia.

The Flanging Shop, built between 1904 and 1912, was one of the earliest brick buildings constructed within the precinct and contained a range of significant machinery, some of which remained operational until 1994.

The project team were inspired by the monolithic nature of the industrial brick forms, the huge volume of uninterrupted internal space, and the preservation of a unique part of Western Australia's history.

The design concept involved the insertion of a contemporary building structure into the existing building shell, leaving the face brickwork, fabricated steel columns, roof trusses, glazing and selected machinery intact. The new built form is intentionally skeletal in form, featuring exposed steel columns and beams with aluminium and glass infill panels.

These new structural steel connections purposefully contrast with the riveted and bolted framework by using contemporary fabrication and assembly techniques. The walls are canted in form and of contrasting colours to intentionally accentuate the heritage fabric.

Among the many challenges were the removal of site contamination and the installation of the new below ground services. The new structure was also built around significant machinery, including furnaces and steam presses that were required to be maintained insitu and interpreted.

According to the project team, the conservation of the existing structure might not have generated monetary savings however, it resulted in a unique design solution which was of far greater value overall than a complete new build would have achieved.

The WA Police Operations Support Facility – Traffic Operations won the 2009 Australian Institute of Architects (WA) Awards for Public Architecture and the Heritage Council Design Award. It also won the 2010 Western Australian Heritage Award for Excellence in Adaptive Reuse: The Gerry Gauntlett Award.

The Heritage Award judges said the project team had turned a redundant industrial building into a modern purpose-built facility for the WA Police, successfully complimenting the significant heritage fabric of the building, including its machinery, with a new and contemporary aesthetic building within the existing structure.

The project team were faced with conserving a deteriorated shell with contamination issues while meeting the requirements of their clients who had very specific and complex needs. As a major project on the site of the former Midland Railway Workshops, there were also the expectations of the heritage community. The project had far exceeded expectations and is a shining model for adaptive reuse.





# PERTH GENERAL POST OFFICE

PERTH (1923)

Entered in the State Register of Heritage Places in 1992

Perth's General Post Office has held a special place in the hearts of Western Australians since its opening in 1923.

At the time of its construction it was the tallest and most grandiose building in Perth, helping to establish the identity of our capital city, and designed to reflect a new sense of importance and civic pride in Perth.

Its monumental scale and symmetrical façade, decorated with classic motifs, Donnybrook freestone and Mahogany Creek granite, was only equalled by the magnificent interior with its extensive use of Western Australian jarrah in the two storey high postal hall.

Today, the Perth GPO is once again at the forefront of design, as an excellent example of how heritage buildings can be adapted for new uses.

The project team faced many challenges with a building of this size and age, and far exceeded its goal to preserve and enhance the building's heritage characteristics while incorporating contemporary commercial and retail uses, all within a civic precinct.

The overriding design strategy throughout the entire redevelopment was to remove extraneous fabric and highlight the original features, and to make it as environmentally sustainable as possible.

The original level 2 skylight structure was removed and replaced with a new roof level lantern skylight allowing more natural light into the historic building while atrium bridges provide a link across to levels 2 and 6.

The ground floor was redesigned to connect through to one40william and the Perth underground railway station, reinforcing the building's role as a civic hub. Within the seven floors of commercial office space, the design referenced the building's heritage by exposing the original unique concrete ceiling structure and introducing services in panelled ceiling sections. Interpretative artwork is cleverly used to tell the story of the building's history.

The biggest challenge was inserting the dropped ceiling panels which incorporated the chilled beam air-conditioning system – believed to be the first use of this technology in a commercial building in WA.

The GPO was the first heritage refurbishment to achieve a Green Star rating in WA and it also achieved a National Australian Built Environment 5 Star Rating.

The project won the 2010 Western Australian Heritage Award for outstanding conservation to a non-residential place.

The WA Heritage Award judges said the project team faced many challenges with a building of this size and age, and far exceeded its goal to preserve and enhance the building's heritage characteristics while incorporating contemporary commercial and retail uses, all within a civic precinct.

The successful conservation and adaptation project has reinstated this magnificent building in Forrest Place to the landmark it was designed to be.





# CLONTARF HANDBALL COURTS

MANNING (1940-54)

Entered in the State Register of Heritage Places in 2000

Marr Mooditj Training came up with a game-changing solution when they needed space for a new training facility.

With limited space available for development at Clontarf, Marr Mooditj decided to construct the new building within four existing handball courts.

Clontarf was established by the Christian Brothers in 1901 and operated as an orphanage, farm and school. Since 1986, it has been the home of a range of Aboriginal corporations including Marr Mooditj which moved to the site in 1991. Marr Mooditj was established by Dr Joan Winch to train Aboriginal and Torres Strait Islander people in health care and community services.

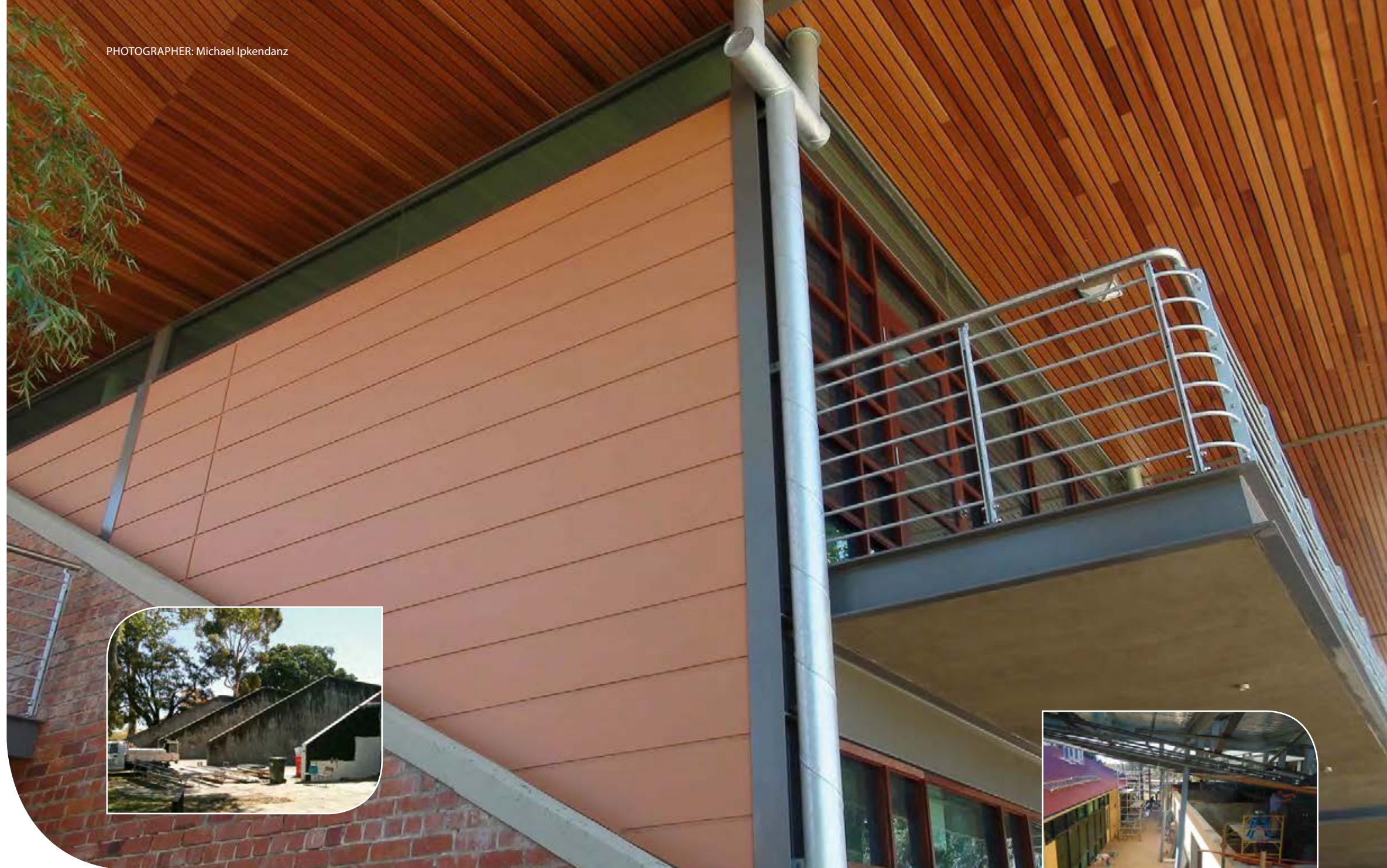
The handball courts, built between 1940 and 1954, were buried four metres into the earth bank on the Canning River foreshore. For years, it had been used for storage and rubbish collection. The wall surfaces were degraded and fire damaged, and there was evidence of some large structural cracking.

However the robustness of the handball court structure, which is essentially a 4.2 x 31 metre long mass retaining wall, was ideal for adaptation and a more economically viable option than demolition and replacement.

The existing 300 to 900mm thick walls also had the added bonus of reducing the embodied energy consumption of the project and providing significant thermal mass to regulate heating and cooling loads throughout the year.

The new building, which includes four classrooms, library and administration facilities was designed to fit between and over the walls of the handball courts. The steel framed structure is independently supported and

PHOTOGRAPHER: Michael Ipkendanz



provides lateral structural bracing for the original walls, ensuring that they are visible externally and from within the spaces and internal courtyards. The new structure can also be deconstructed and reused if necessary.

Cracks were repaired and walls were finished with mineral silicate paint to allow moisture to migrate. A sub-soil drainage system was also designed to deflect rising moisture and assist underground moisture transfer. Significant trees including Peppermints and Moreton Bay Figs were retained on the river embankment and the building's eaves cut in around a majestic Ghost Gum.

The finished project, constructed within 12 months, resulted in 775sqm of enclosed space and 470sqm of semi-enclosed space. In 2000, Marr Mooditj also constructed a training and administration building

adjoining the former Technical Trades building and water tower, and adapted the Technical Trades building in to a clinical skills training room.

The project was highly commended in the 2012 Western Australian Heritage Awards for Excellence in Adaptive Reuse: The Gerry Gauntlett Award.

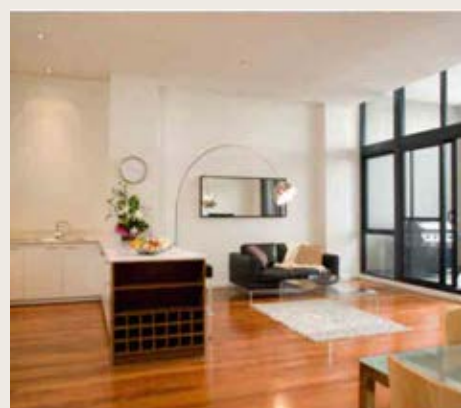
The Heritage Award judges said it was a sensitive and innovative approach to adaptive reuse: a modern, energy efficient training facility slotted into once derelict handball courts, ensuring the historic fabric was conserved and restored.







LEFT TO RIGHT: Mackays Aerated Waters Factory, Perth (1928).  
Photographer Johnathan Trask, Trasku Industrial Photographs.  
W.D. and H.O. Wills Warehouse Perth (1927).  
Image supplied by Match



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FRONT COVER: B Shed, Fremantle (1902, 1925)  
Photographer Adrian Lambert, Acorn Photography

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