

2011/2012

PROGRAM ACHIEVEMENTS

NSW Public Works Minister's Stonework Program



Public Works





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NSW Public Works

Department of Finance & Services

McKell Building, 2-24 Rawson Place, SYDNEY NSW 2000

Tel: 02 9372 8877 Web: [www.services.nsw.gov.au](http://www.services.nsw.gov.au)

**editor** - Sue Brennan, Angus Donald, Joy Singh

**photographer** - Michael Nicholson

**graphic designer** - Marietta Buikerna

**cover image** - Thomas Walker Hospital, Concord

**this page** - Thomas Walker Hospital, Concord





## PROGRAM SUMMARY

In 2011-12 the re-named NSW Public Works Minister's Stonework Program, lead by Sue Brennan, strengthened its partnerships with state government agencies. We expanded our technical knowledge through research and continued to target projects state-wide with the greatest demonstrable maintenance needs.

The 2011/12 Program received \$ 5,901,978 from Treasury. An additional \$4,004,169 partnership funding was received by State agencies increasing our total program to \$9,906,147. In what has proved to be a very productive year we undertook over 45 stonework conservation projects, of which 17 were in construction phase and 7 properties were 'made safe' by the rapid response of our team through the removal of potentially dangerous stone.

We were delighted to receive two highly commended National Trust awards in April. We took a number of steps to improve our risk management planning and procedures by means of reviews and workshops.

We continued our support for heritage trades and training with up to 5 apprentices and junior heritage officers working with our multidisciplinary team of heritage roofers, stonemasons, scaffolders, architects and engineers. As ever we are very grateful for the support of our agency partners, stakeholders and team for their determination and efforts in delivering another successful year.





Stonemason at the NSW Public Works  
Stoneyard at Alexandria, carving a finial for  
Dulwich High School of Visual Arts and Design.



## PARTNERSHIP PROJECTS

State Government agencies contributed \$4,004,169 towards the Minister's Stonework Program this year. Co contributions fund facade repairs in addition to stonework such as roofing, painting and seismic stabilisation. Partnership funding and coordination of site works has resulted in cost and time efficiencies.

In 2011/12 the Minister's Program worked on 10 building sites where partnership funding occurred, these include Royal Botanic Gardens projects, DEC schools, Central Local Court, Thomas Walker Hospital, Goat Island and the Powerhouse Museum.

By collaborating with other State agencies the value and benefits of the Program is significantly enhanced through the co-ordination of works as well as cost efficiencies. This is further enhanced by the do & charge non-profit method of work procurement.







Bourke Street Public School, Surry Hills. The curved stone cornice and frieze is new and demonstrates the excellent match with original stone, shown in the columns.





## PARTNERSHIP PROJECTS

The Minister's Stonework Program prepared a 'Schools Stonework Strategy' report in 2008. In response to back-log maintenance and the priorities set out in the report, the Department of Education & Communities and the Stone Program have worked together to complete school projects. Eight schools have been 'made-safe' and completed facade repairs over the last three years. Three schools had conservation works carried out this year, Bourke St Public School, Dulwich High School of Visual Arts and Design and Newtown Performing Arts High School.



## INITIATIVES IN 2011/2012

### Research – Repointing Mortar Sands

The process of replacing defective mortar in the joints between stone blocks is known as repointing and is a common activity on all our projects. In response to the diminishing supply of available Sydney sands used by the building industry, this year we worked with specialist consultants to develop a best practice sand specification for repointing mortars and sourced appropriate supplies of sands that meet the specification.

Briefs for laboratory and petrography tests were developed to assist in understanding both historic and new mortars. We developed a sand library that responds to the variety of repointing requirements. The next phase of this work will involve construction of a sandstone wall at the Department's Stoneyard to trial and monitor repointing mortars. The outcomes of this research will be available to the public on the Department's website.

### Research – Biological Growth

Biological growth on sandstone public buildings and monuments can increase the rate of deterioration and affect the appearance. Following trials in previous years of the use of biocides to retard biological growth, we took steps this year to review our current practices and available materials used as biocides.

### Research – Desalination

Salts enter the stonework through rainwater, air borne moisture and rising damp. Salt contamination is a major cause of sandstone deterioration and desalination is carried out on many of our projects. In 2011/12 we reviewed our previous results and design research projects that aim to improve understanding and practice in desalinating masonry materials.

Sand library for repointing mortars



### **Glossary of Stonemasonry Terms**

In response to a progressive loss of terminology and a shift in focus in stonemasonry trades training we undertook to prepare a glossary of architectural stonemasonry terms relevant to the state's public neo-classical buildings. The objective is to lead the industry by reinforcing a common language. This 'common language' is of primary importance in facilitating communication between architects, masons and specialists in the stonework conservation field.

### **Stonework Conservation Strategies**

An assessment of the condition of State owned heritage stonework assets is an essential process in identifying where the greatest need for funding lies. This year we developed Stonework Conservation Strategies to allow agencies to quantify and prioritise their maintenance needs. Strategy documents are a useful tool in applying for treasury funding. Stonework Conservation Strategies completed this year include; State Library NSW, Gladesville Hospital site, Hunter Region Schools, Central Western Region Schools, Royal Botanic Gardens Farmcove Seawall, Lands Titles Office.



## AWARDS

### The Comrie Memorial Fountain

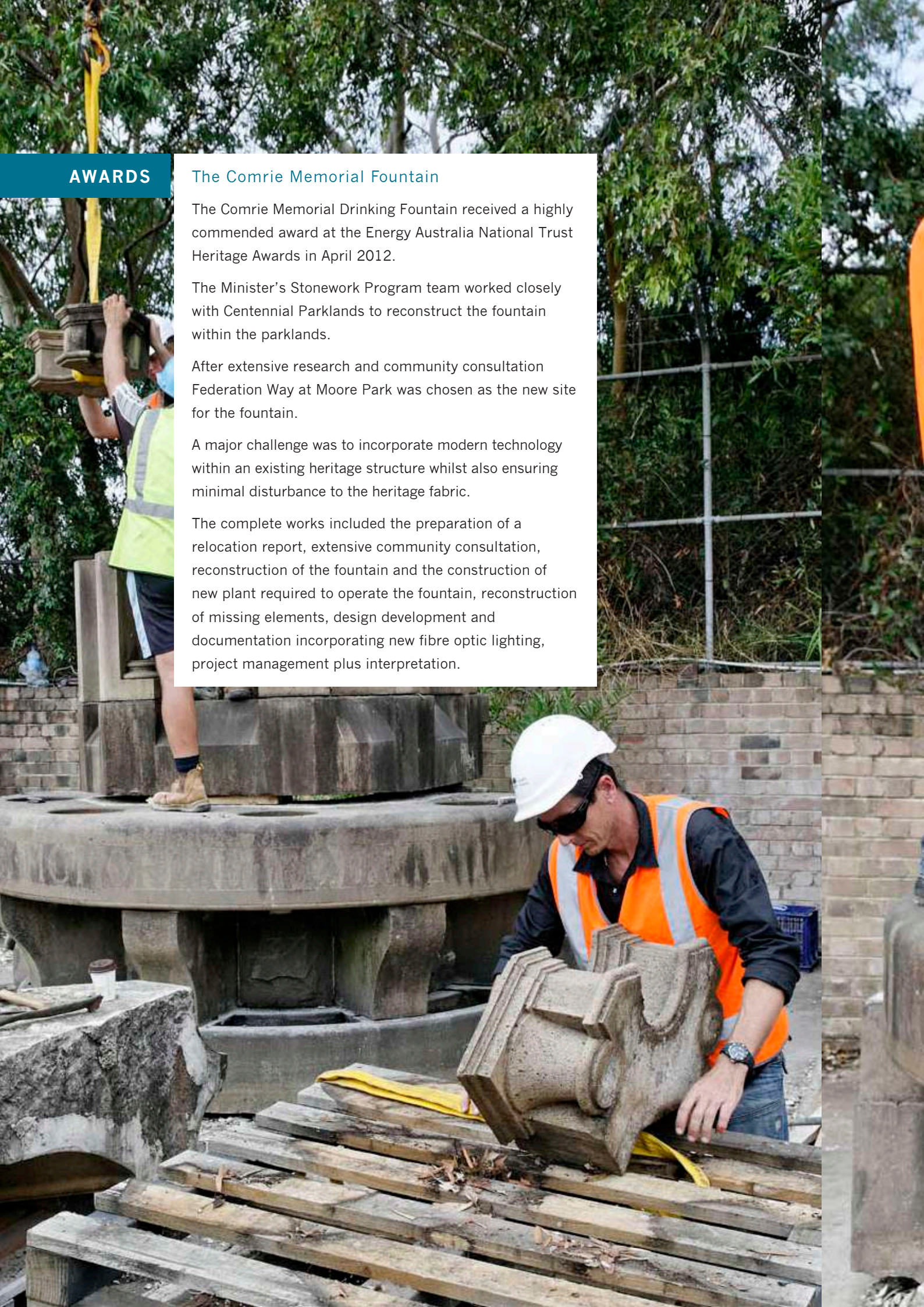
The Comrie Memorial Drinking Fountain received a highly commended award at the Energy Australia National Trust Heritage Awards in April 2012.

The Minister's Stonework Program team worked closely with Centennial Parklands to reconstruct the fountain within the parklands.

After extensive research and community consultation Federation Way at Moore Park was chosen as the new site for the fountain.

A major challenge was to incorporate modern technology within an existing heritage structure whilst also ensuring minimal disturbance to the heritage fabric.

The complete works included the preparation of a relocation report, extensive community consultation, reconstruction of the fountain and the construction of new plant required to operate the fountain, reconstruction of missing elements, design development and documentation incorporating new fibre optic lighting, project management plus interpretation.







### Parramatta Park Trust

The environmental rehabilitation and conservation of riverbanks of the Parramatta River in Parramatta Park was recognised by the Energy Australia National Trust Heritage awards winner in the conservation natural heritage category.

The GAO Landscape Architect's, Water Solutions and Heritage Group prepared design, documentation and technical advice for the conservation of the stone riverbank walls along the Parramatta River through Parramatta Park.

The work included an assessment of significance of the various types of riverbank walls and weirs and the preparation of a heritage impact statement. Heritage Services of NSW Public Works were Project Managers.

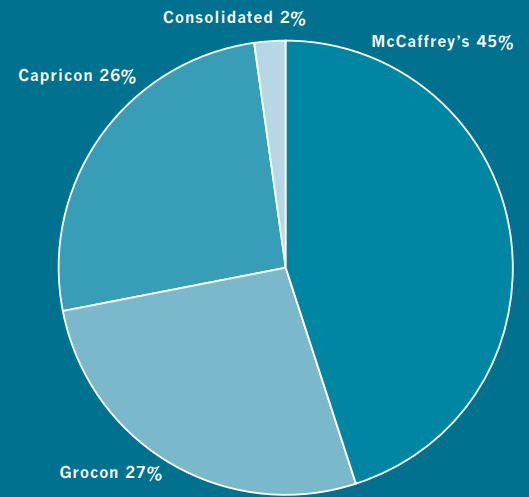
Stonemasons carried out a trial reconstruction as the Comrie fountain was stored, dismantled for many years.



## STOCKPILE

The Minister's stone stockpile is unique in Australia and contains approximately 2,700 cubic metres of sandstone for restoration. McCaffrey's 'yellow block' sandstone forms an important part of the stockpile and was quarried from a redevelopment site in Pyrmont in 2000. The stone, apart from being used for various projects, has been stored as quarry blocks at the Department's sandstone stockpile at Sandy Point, south of Sydney.

In total 295 cubic metres of raw quarry blocks were used in 2011/12 from the Minister's stockpile and the break-up of the stone types used this year is indicated.

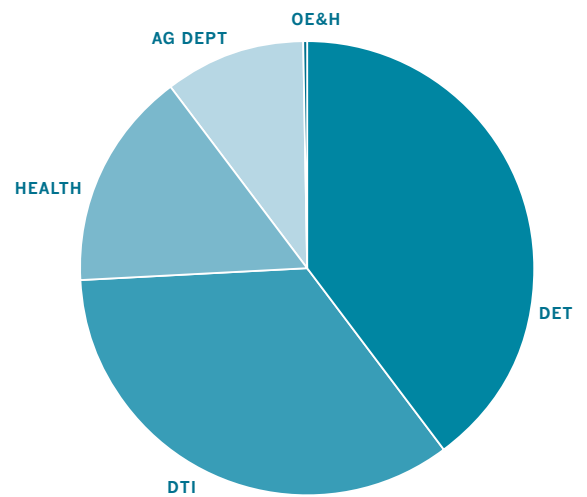


left: Henry Kendal Memorial Seat,  
Royal Botanical Gardens, Sydney  
right: Thomas Wlaker Hospital, Concord



## CLIENTS

### Indication of funding by client



#### Department of Trade and Investment 34.4%

- Powerhouse Museum

#### Department of Attorney Generals & Justice 10.16%

- Central Local Court

#### NSW Ministry of Health 15.4%

- Thomas Walker

#### Department of Education (DET) 40%

- Sydney Girls High School
- Bourke Street Public School
- Dulwich Hill Public School
- Newtown Performing Arts High School

#### Office of Environment and Heritage 0.04%

- NPWS Goat Island
- Royal Botanic Gardens





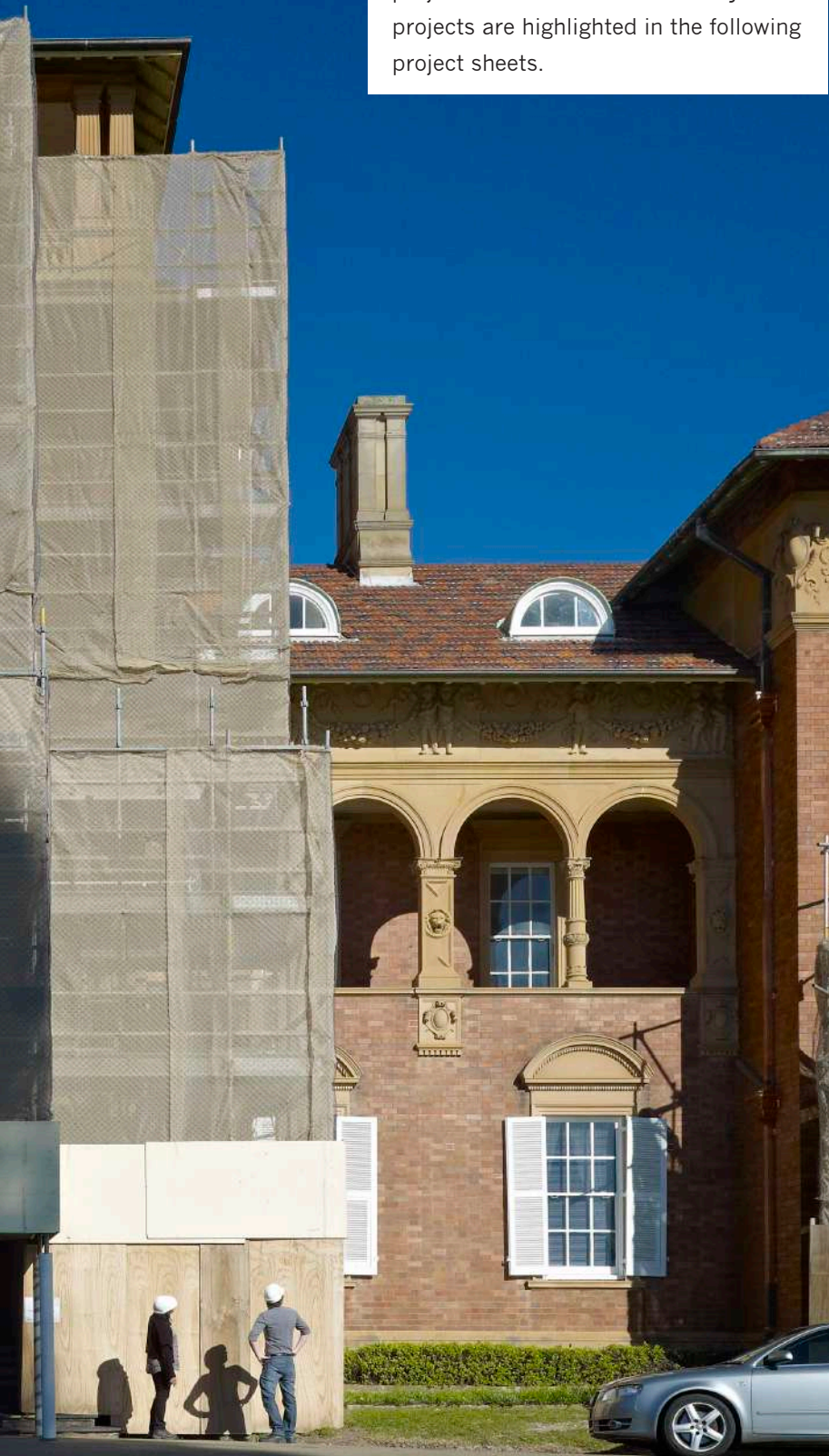
Administration Building,  
Thoams Walker Hospital,  
Concord



## PROJECT SHEETS

2011-2012 Stonework conservation projects in 2011-12. Selected key projects are highlighted in the following project sheets.

Banco Court  
Bourke Street Public School  
Balmain Public School  
Braidwood Courthouse Fence  
Central West Schools Strategy  
Concord Public School  
Canterbury Public School  
Database update  
Diana the Huntress  
Domain Cottage  
Dulwich High School of Visual Arts and Design  
Fort Denison  
Glossary of terms  
Goat Island  
Henry Kendall Seat  
Hunters Hill Public School  
Hunter Schools Strategy  
Liechardt Public School  
Lion Gate Piers  
Central Local Courthouse  
Mortar research  
Newtown Perform Arts High School  
Paddington Gates  
Powerhouse Museum  
Prince of Wales Hospital  
Redfern Community Health Centre  
State Library NSW  
Stone safety inspections  
Sydney Girls High School  
Thomas Walker Hospital  
Ultimo TAFE  
War Memorial Repair Guidelines







## BANCO COURT

### AGENCY

Department of Attorney General and Justice

### EXPENDITURE 2011 – 2012

\$ 57,018

### REPLACEMENT STONE SOURCE

Nil

Banco Court is part of the Sydney Supreme Courthouse complex. The building was designed by Government Architect Walter Liberty Vernon and constructed in 1895.

It is the only courthouse in the city built in the Federation Free Style. Constructed in face red brick and contrasting sandstone detailing, the building is listed on the State Heritage Register.

Two pediments with intricate sandstone carvings form the building entrances on St James Road, Sydney. Water and salts were causing the sandstone to deteriorate over these entrance ways and lead weatherings were installed to protect the stone and shed water away from the building. Conservation works also included stone cleaning of surface dirt and biological growth, application of a biocide and structural pinning of a cracked stone.





## BOURKE STREET PUBLIC SCHOOL

### AGENCY

Department of Education and Communities

### EXPENDITURE 2011 – 2012

\$970,905 (including \$ 250,000 Client contribution)

### REPLACEMENT STONE SOURCE

McCaffrey's (5.32m<sup>3</sup> raw quarry block)

Bourke Street Public School forms part of the "Palace Schools" designed by William Kemp in 1881 and constructed in 1884 in the Victorian Italianate style. The building is a prominent landmark in the streetscape. Symmetrical in plan and configuration, the two semi circular porticos separate the entrances for the boys and girls and the large bell tower defines the school's appearance.

The 'Sydney Schools with Stonework Conservation Strategy' prepared by NSW Public Works in 2009 identified Bourke Street Public School as a priority due to the poor condition of the stonework over the entryways.

Works included replacement of the 'Boys' and 'Girls' cornice and frieze with protective lead weatherings installed over the stones. The two highly detailed infant's gateways on Parkham and Mort Streets required dismantling and reconstruction. Stone window sills were in poor condition and replaced. Minor repairs were carried out to the leadwork inside the bell tower.





## DIANA, THE HUNTRESS

### AGENCY

Centennial and Moore Park Trust

### EXPENDITURE 2011 – 2012

\$ 76,421

### REPLACEMENT STONE SOURCE

Nil

An important element of Centennial Park was the use of landscape features, including statuary, to create gardens as works of art. In all, a total of 31 statues and figures were originally placed to create points of interest at key locations in the Park, but time and vandalism took their toll and by 1971, almost all had been broken, stolen or removed. One of these, Diana the Huntress, was among many which had been damaged by reckless vandalism and Diana was moved into storage for safe keeping.

This year a report was prepared that provided background information on the statue and presented options on the approach to repairs, including gaining a cast of the original Roman statue in the Paris Louvre. Repairs were carried out on the original Centennial Park statue and it was relocated in the Administration Building's courtyard. Repairs included marble cleaning, pinning of cracks, reinstatement of missing lead lettering and a new sandstone plinth.





## DULWICH HIGH SCHOOL OF VISUAL ARTS & DESIGN

### AGENCY

Department of Education and Communities

### EXPENDITURE 2011 – 2012

\$ 885,413 (including \$ 250,000 Client contribution)

### REPLACEMENT STONE SOURCE

McCaffrey's (11.83m<sup>3</sup> raw quarry block)

Dulwich High School of Visual Arts and Design is one of the “Palace Schools” designed by William Kemp. Constructed in 1885 in the Romanesque style, the two storey beige brick building has contrasting red brick string courses and window surrounds. The gables have terracotta patterned tiles and sandstone copings, string courses and a rock faced base.

‘The Sydney Schools with Stonework Conservation Strategy’, prepared by NSW Public Works in 2009, identified Dulwich High School of Visual Arts and Design as a priority due to the poor condition of stonework in upper areas of the facade.

Stage 1 stonework conservation works were carried out on the Seaview Street facade. Works included replacement of deteriorated stone, mortar repointing, desalination, façade cleaning, and bird-proofing and the painting of windows.







## GOAT ISLAND CONVICT WALL AND SENTRY BOX

### AGENCY

Department of Premier and Cabinet,  
Office of Environment and Heritage

### EXPENDITURE 2011 – 2012

\$ 183,665 (including \$ 100,000 Client contribution)

### REPLACEMENT STONE SOURCE

Appin (1m<sup>3</sup> raw quarry block)

The Fortified Convict Wall, Sentry Box and engravings are of exceptional significance as a crucial component of the Goat Island Powder Magazine complex, 1833-1839 and is the earliest powder magazine complex in Australia. The sentry box however was in very poor condition and the convict wall had defective and missing mortar pointing. The project objective was to retain as much of the original fabric as possible and prolong the life of the stonework.

Repointing mortar trials were an important aspect of the project. Stonework conservation works included repointing, cleaning, stone desalination, installation of protective lead weathering, indent replacement of deteriorated stones to sentry box.







## LOCAL CENTRAL COURT

### AGENCY

Department of Attorney General & Justice

### EXPENDITURE 2011 – 2012

\$ 477,336(including \$ 215,700 Client contribution)

### REPLACEMENT STONE SOURCE

McCaffrey's (1.6m<sup>3</sup> raw quarry block)

A stone safety inspection of the Liverpool Street elevation of the courthouse was undertaken in 2009 in which recommendations were prepared.

Based on these recommendations conservation works to the central areas were carried out in 2010/11. During these works a cast of the severely deteriorating coat of arms was also produced.


This financial year 2011/2012 saw the completion of facade areas on either side of the entrance, completing the Liverpool Street facade of the courthouse.

Lead weathering replaced defective lead weatherings to the cornice.

Minor stone replacement was undertaken to structurally unsound stones at the cornice and upper areas.

Open stone joints allowing water ingress were repointed and birdproofing was installed.

This financial year a team of stone carvers begun recarving the missing elements of the ornate coat of arms. Installation of these carvings are programmed for 2012/2013.







## NEWTOWN PERFORMING ARTS HIGH SCHOOL

### AGENCY

Department of Education and Communities

### EXPENDITURE 2011 – 2012

\$ 1,309,153

(including \$1,037,240 Client contribution)

### REPLACEMENT STONE SOURCE

McCaffrey's (20.09m<sup>3</sup> raw quarry block)

Newtown Performing Arts High School by George Mansfield and William Kemp in 1876 and 1892 respectively. A stone safety inspection of School was completed in May 2011 during which loose and potentially dangerous stone was removed from the facades.

Conservation works began in 2011/12 which will carry through to the next financial year. This year saw works commence on a new roof, gutters and downpipes for the building as well as seismic stabilisation of chimneys and gables. Some minor internal repairs were also completed to roof framing and the interior of the tower.

In preparation for conservation works in 2012/13 stone processing was also completed for works to the main King Street facade of the building.





## SCHOOLS STRATEGY

### AGENCY

Department of Education and Communities

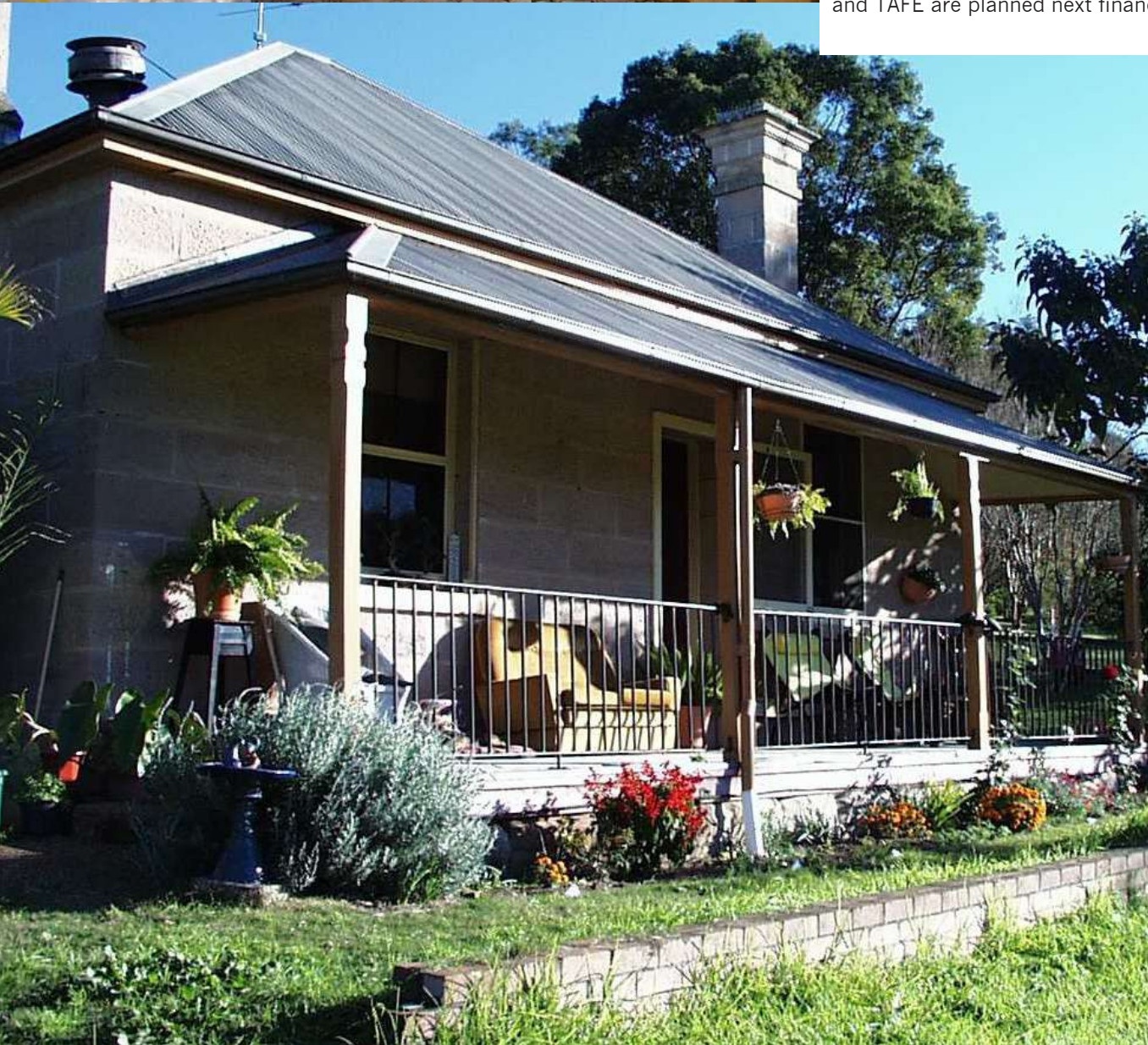
### EXPENDITURE 2011 – 2012

\$ 26,440

### REPLACEMENT STONE SOURCE

Nil

'Stonework Conservation Strategies' were prepared for two school regions this year, Hunter Region and Central West Region. The reports are an efficient tool in identifying the scope of facade catch-up maintenance required and developing a prioritised program of works. Based on the 2009 Strategy prepared for the Sydney Region schools, eight priority 1 schools have received facade repairs so far. Additional regional strategies for schools and TAFE are planned next financial year.







## REDFERN COMMUNITY HEALTH CENTRE

### AGENCY

NSW Ministry of Health

### EXPENDITURE 2011 – 2012

\$ 1,296,585

### REPLACEMENT STONE SOURCE

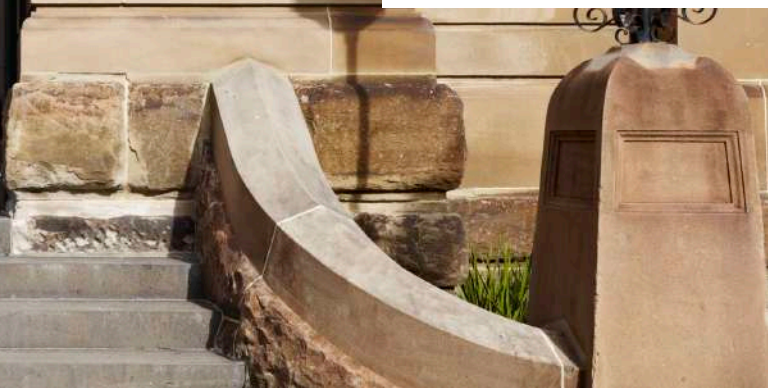
McCaffrey's (40.88m<sup>3</sup> raw quarry block)

The Redfern Community Health Centre (former Redfern Courthouse) was designed by the Government Architect W L Vernon and constructed in 1897. The building forms an important element in the civic precinct and streetscape of Redfern.

In 2008 NSW Public Works undertook a stone safety inspection of the building facades, roof and drainage. At this time loose or decaying stone that posed a risk to public safety was removed. The main areas of concern were open joints to the coping and cornice, which were allowing water to penetrate the wall below and also flow through the cornice; loss of the drip line to the cornice and subsequent deterioration of the undercut areas of the cornice; and missing drainage items that are causing water staining and also loss of surface to the stonework.

By 2009 the roof drainage elements and roof sheeting behind the parapet were stolen. The saturation of the stonework and subsequent drying out after the roof drainage items were re-installed caused salt build up to the front facade. This in turn caused damage to some of the finely carved details and smooth faced ashlar stonework of the front facade.

Works undertaken in 2011-12 were limited to the north (front) façade and included stone replacement, desalination, repointing and synthetic stone repair.







## SAFETY INSPECTIONS

### AGENCY

Department of Education and Communities

### EXPENDITURE 2011 – 2012

\$ 100,000

### REPLACEMENT STONE SOURCE

Deteriorated stone facades are at risk of falling stone and a priority of the Stonework Program is to carry out safety inspections. A visual inspection is undertaken by heritage architects, engineers and stonemasons. A 'make-safe' may occur where loose stone that poses a risk to public safety is carefully removed.

The 'make-safe' process is recorded in a report with an assessment of the condition of the facade and recommendations for repair. 7 Safety Inspections were carried out this year and all buildings had loose stone removed which was located over public access areas below.







## THOMAS WALKER HOSPITAL

### AGENCY

Department of Health

### EXPENDITURE 2011 – 2012

\$ 600,000 (including Client contribution)

### REPLACEMENT STONE SOURCE

Grocon (6.16m<sup>3</sup> raw quarry block)

Thomas Walker Hospital is currently occupied by the Rivendell Adolescent Unit and is managed by the Central Area Health Service. Located on Rocky Point peninsular, Concord, the hospital complex was designed by John Sulman as a convalescent hospital. The hospital was constructed in 1893, in fulfilment of a bequest by the well known philanthropic Thomas Walker at the time of his death in 1886. The complex is comprised of several buildings and structures including wards, administrative offices, a chapel, water-gate, gardener's cottage, gatehouse and mortuary.

The current project focuses on the Administration Building. The project is jointly funded, \$600,000 provided by Department of Health in 2011/12 and \$ 600,000 by the Minister's Stonework Program in 2012/13. The scope of works include stormwater repairs, stonework replacement, asbestos removal from pointing mortar, installation of protective leadweatherings and birdproofing. Cleaning and desalination





## THE CSP TEAM

### At the stoneyard

Lee Adamou, Mark Adamson, Kico Andonovski, Craig Bonnici, Paul Connell, Merinda Danks, Chris Daniels, Peter Dalley, Chris Daniels, Robert Dennis, Peter Fatseas, Kevin Godfrey, Fernando Ferreira, Sorin Gageanu, Ben Gardner, James Gardner, Ian Goulding, Ron Grady, Kyle Hall, Phil Hilder, Ian Hood, Ben Hunter, Darren Hurst, Sam Junghans, Bob Kavanagh, Sebastian Kirmaier, Steve Kinnaird, Jasper Luckhurst, Denis Mahboub, Peter Markatos, Luke McDermott, Craig Miller, David Munson, Sonny Oliveri, Phillip Parsons, Greg Paul, Lachlan Pearce, Warren Pearson, Adrian Postill, Gary Rimmer, Mark Scorzelli, Andrew Seeto, Keith Shaw, Paul Sherring, Mark Stevens, Josh Tilden, Alec Tundervary, Paul Thurloe, Tyrone Toby, Peter Trick, Patrick Tunny, Ruben Varfi, Bunito Wangsa, Howard West, John Wilcock, Louke Witjes.

### At McKell

Sue Brennan, Phil Chamberlain, Amy Chew, Desmond Corby, Milena Crawford, Matthew Devine, Katie Hicks, Angus Donald, Anita Krivickas, Bruce Pettman, Joy Singh, Vivian Sioutas.





Henry Kendal Memorial Seat,  
Royal Botanic Gardens, Sydney.  
Replacement stone is an excellent colour  
match to the existing store.

back cover:  
Thomas Walker Hospital, Concord.  
New copper rainwater head to original details.





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