



# The Custodian

Volume 1, Issue 8

Special Edition 2015

## FORT LYTTON HISTORICAL ASSOCIATION

Welcome to this SPECIAL edition of “*The Custodian*”. In this issue we will concentrate on the Magazine/Black Powder Rooms renovation, including - The Nomination for the 2015 National Trust Queensland Heritage Awards in the Category: Agency Conservation Program and then receiving a Gold Award in Conservation awarded by The National Trust of Queensland. Roland Dowling, Head Ranger, was the author of the submission that fills up most of this issue. Fort Lytton National Park, Mark Callanan, and Maurice Potrzeba were awarded Gold Certificates for their participation in this renovation.

*Harry Lynas (Editor)*

## FORT LYTTON HISTORICAL ASSOCIATION INCORPORATED

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## COMING EVENTS

64 Pounder and 6 Pounder Cannon Firings – 4<sup>th</sup> October & 6<sup>th</sup> December (this will be our last Firing for 2015.)

## INSIDE THIS ISSUE

President’s Report – Page 1

Fort Lytton National Park Magazine Conservation Project 2015 – Page 2

The National Trust Queensland Heritage Awards for 2015 – Gold Award – Page 19

## PRESIDENT’S REPORT

The news of the Gold Certificate was passed on to Karen Jones, location manager for the *Unbroken* film and the use of their \$25, 000 grant/donation towards the cost of the conservation project. Karen was thrilled at the advice and will pass on the information to the film producers.

*Ubique*

*Maurrie McGuire, OAM*

# Fort Lytton National Park Magazine Conservation Project 2015



## Nomination 2015 National Trust Queensland Heritage Awards Category: Agency Conservation Program

**Fort Lytton Historical Association in conjunction with the Heritage Parks Unit, Queensland Parks and Wildlife Service**

### **Fort Lytton National Park:**

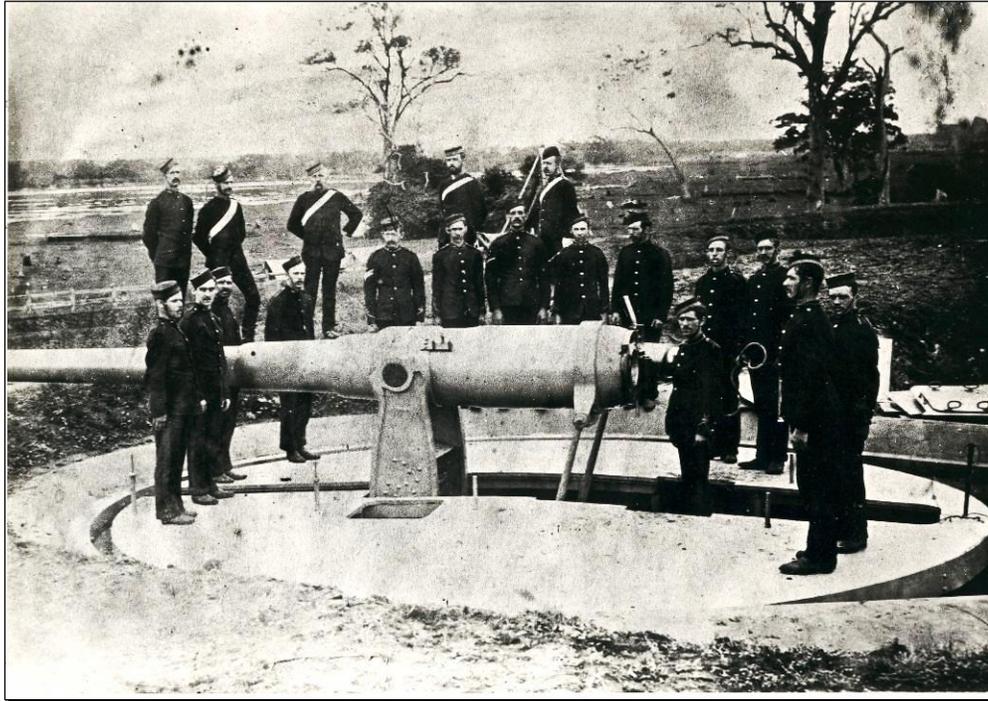
Fort Lytton National Park is located 15km from central Brisbane at Lytton on the southern bank of the Brisbane River. The park incorporates both the remains of the historic Fort and the Lytton Quarantine Station.

Fort Lytton, a pentagonal earthwork fortification, was constructed in 1880-82 by the Queensland Government on advice from British Military engineers, Col. Sir WFD Jervois and Lt. Col. PH Scratchley. The Fort contributed to the coastal defence of Queensland until the end of the Second World War. The site was declared a national park for its cultural and historical values in 1989.

### **Partnership**

This project was undertaken by the Queensland Parks and Wildlife Service (QPWS) and the Fort Lytton Historical Association (FLHA). The FLHA successfully applied to the Department of Environment and Heritage Protection for a grant of \$33, 900 and contributed another \$25, 000 into the project. The QPWS assisted in managing the project and undertook many of the actual conservation tasks. Another community volunteer

group associated with Fort Lytton, the Queensland Colonial Defence Forces Study Group (QCDFS), provided invaluable research support.



*Fort Lytton Disappearing Gun 1890's*

*John Oxley Library*

### **Objectives of the Project**

The project was to undertake conservation works to two key historical features of the Fort Lytton complex. These were Magazine No.10 and the Black Powder Rooms. Magazine No.10 had been closed off for over 20 years due to a protruding block high in its arch. There was also a major crack from floor to ceiling threatening its structural integrity.

The Black Powder Rooms were significantly degraded from a buildup of salts, loss of subsequent pointing, and timber door jambs suffering from dry rot. A ceiling vent was also largely lost due to corrosion; the brick vents, lantern recesses were missing, as well as the original door frames and windows from the arched entrances. The guttering, lead flashing and downpipes were also missing off the awning.

The project would address all of these issues, stabilize the sites, remove the salts, repoint the masonry and replace missing components to enable better weather proofing and interpretation of the site.

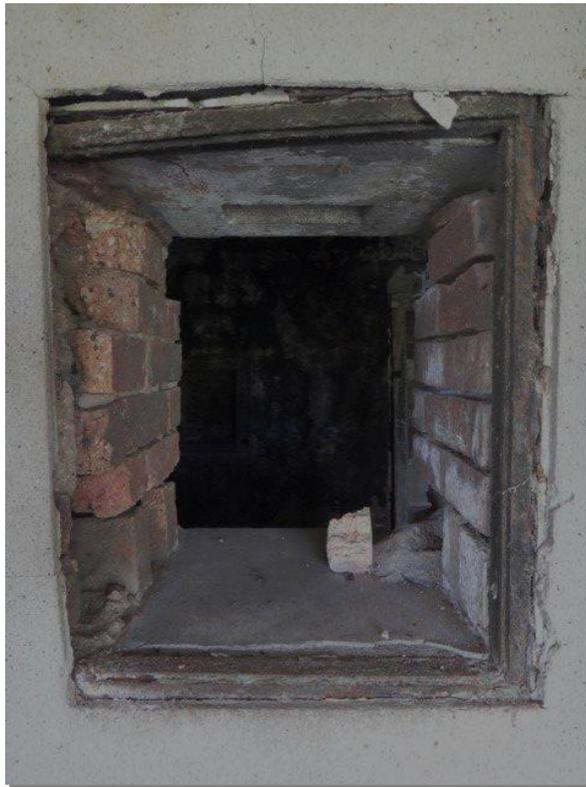
A more detailed report of the works is included at the end of this application.



*Black Powder Rooms with awning – drainage was missing prior to conservation works*



*Black Powder Room deterioration of doorframe*



*Lantern recess showing remnant damaged window frame*



*Ceiling vent badly deteriorated*



*Corrosion of ceiling vent grate and deterioration of rendering from salts*



*Salt build up in brickwork Room Two*



*Eroded Lintel between Rooms*



*Major cracks in brickwork Magazine No 10*



*Major Crack in Archway of Magazine No.10*



*Fort Lytton casemates (Black Powder Room with awning) c1936*

## **Understanding the site**

The principle reference and guide to the proposed works was the Fort Lytton Conservation Plan. This detailed both recommended works and the values of the particular components. However meetings were held with key interest groups to also ascertain contemporary perspectives and concepts as to how the structures should be approached and utilized once completed.

Brian Rough, a historian with the QCFSG, undertook to research and source photographic evidence on the design of the original door frames in the Black Powder Room archways. Discovery of a close-up photo from 1963 revealed further detail not evident in the original site plans. Brian Rough's research also confirmed some of the design features still in situ with other coastal fortifications around Australia.

Maurice and Alek Potrzeba (Mozbiz P/L) took samples of the original remnant mortar and had it analyzed to better understand the chemical makeup and allow for a more appropriate mortar mix to be used when undertaking works to the masonry components.

## **Works Undertaken**

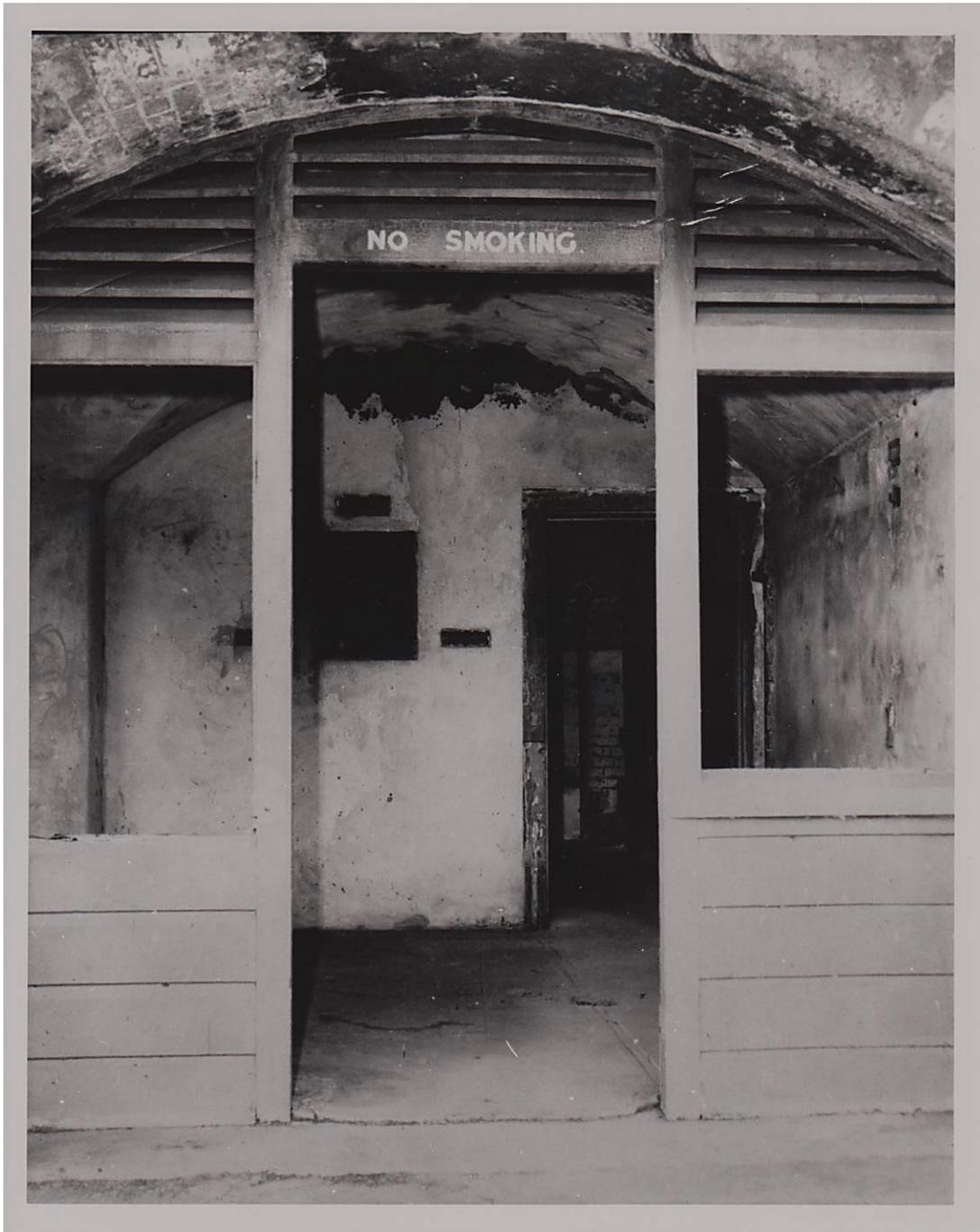
As there was some reconstruction of components being undertaken, all the designs were based on as much evidence as was available. This included some remnants on site and the research undertaken by Brian Rough. All works conformed to the Burra Charter and the Fort Lytton Conservation Plan.

The project required key technical skills to ensure that the works were undertaken appropriately. Maurice and Alek Potrzeba utilized traditional masonry skills to repoint and secure the brickwork and lantern recesses. Ross Graham (contracted plumber) fitted the missing lead flashing, guttering and downpipes.

Mark Callanan, QPWS ranger, managed the timber components of the project and liaised with the door (RWD Joinery) and metal fabricators (JD Marine Welding). He also utilized his own specific carpentry skills to both create the template for the door frames and also fitted them into place once they had been delivered. This required very accurate measurements as the curved roof and confined space left no room for error.

As there was little evidence left of the lantern recess windows, Mark Callanan worked with Brian Rough to finalize a design that the fabricators could use. Mark Callanan also designed the replacement roof vent for subsequent fabrication. He then led the team in removing the remaining door jambs and undertaking preservation works before returning them back into place.

Westox Cocoon applications were applied twice to remove the buildup of salts. Fitting and securing the new ceiling vent, middle awning bracket and lantern recesses windows also required the hand cutting of bricks before they could be fixed into place.



*Black Powder Room 1963*

*State Library of Queensland 60785*



*Rangers manoeuvring heavy door frames into place*



*Ranger Mark Callanan undertaking repairs to awning fascia*



*Newly constructed ceiling vent*



*Vent being fitted*



*Lantern recess windows being installed (above) and with brick vents installed (below)*



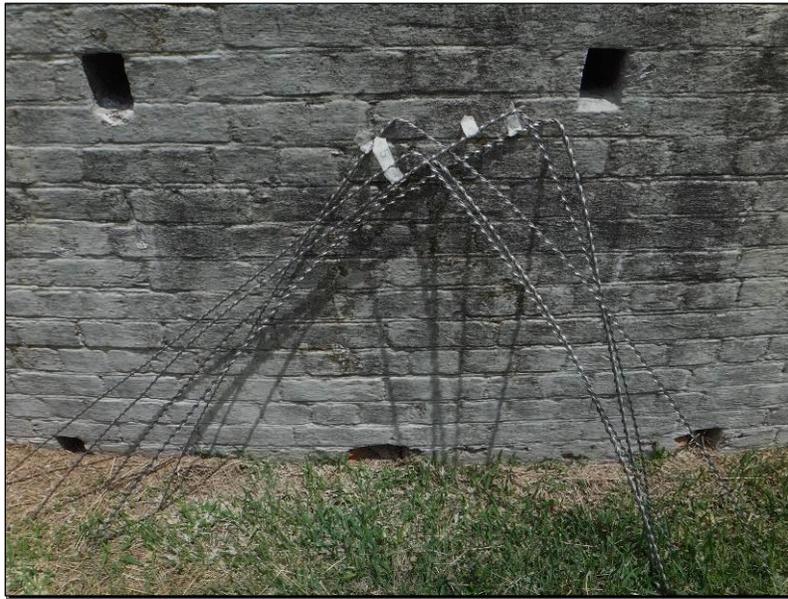


*Ranger Mette Juel sanding door frame (above) and door frame installed (below)*



The physical deterioration to Magazine No.10 required an innovative approach. The cracking initially indicated that the wall would have to be deconstructed and the earth behind removed before it could be rebuilt. This would have been costly and well outside the available budget. Maurice and Alek Potrzeba undertook a new technique for the site by utilizing Helifix bars.

They initially only removed soil from behind the protruding arch and levered the block back into position. They then cut out and drilled mortar joints and stitched the entire wall back with Helifix (glued and mortared back into position). The mortar joints were then re-pointed and the internal vertical crack also filled with mortar. This has successfully secured the archway and preserved it indefinitely.



*Helifix bars (above) used to stitch brickwork together (below)*



### **Long Term Outcomes**

All the principle objectives set out in the project were met. It has secured and preserved two of the oldest and most important components of the fortifications. The Black Powder Rooms are key components to understand and interpret the overall site. Now that they have been stabilized, it will allow the spaces to once again be accessible for both tour groups, educational parties and other users of the site.

The stabilization of Magazine No.10 has allowed park managers to remove safety barriers that once protruded into the adjacent courtyard area. This improves both the aesthetics of the site and adaptability of the area for multi-use.



*Date stamp for new component- central awning bracket*

The stabilization of both structures is a major outcome for the long term preservation and management of the site. Some of the techniques utilized (the Helifix bars) have given us a template for future works that need to be undertaken on site when funds become available.

Overall the project is a great example of what can be achieved when government agencies and community groups work together to undertake conservation works to cultural heritage sites.

### **Report on Fort Lytton Black Powder Room Project and Magazine 10**

*Project undertaken from August 2014 to April 2015*

**Funding:** The project was funded from an EHP grant (\$33, 900) and the Fort Lytton Historical Association Guides. QPWS supplied considerable staffing time and some extra financial support. FLHA were the recipients of support from Universal Pictures. The movie *Unbroken* was shot on site in November 2013 and \$25, 000 of their user fees were given to the FLHA for conservation projects on the park.

**Note:** Peter Gore (FLHA) managed the reporting and the grant funding. Mark Callanan (QPWS) undertook a key role in the project by managing the fabricators and providing expert carpentry skills.

### **Objectives:**

**Black powder rooms** – The magazines (black powder rooms) were missing the original external door frames, windows and doors. The lantern recesses were largely gone and one ceiling vent was missing. The internal door jambs were in very poor condition from dry rot and the masonry had a visible build-up of salts and much of the pointing was missing or in very poor condition. The external awning was also missing lead flashing, guttering and a downpipe. The middle awning bracket was also in a poor condition from corrosion. The stone lintels were examined further and it was decided that they were still in good enough condition to retain and thus minimise any unnecessary intervention.



*Before conservation works to the Black Powder Rooms*



*After conservation works to the Black Powder Rooms*



*Before conservation works to Magazine No. 10*



*After conservation works to Magazine No. 10*

### **Black powder rooms (Cont) –**

RWD Joinery manufactured the door frames and attached French doors and windows. Cost: \$11, 440.

Mark Callanan (QPWS Ranger) constructed templates for both frames to ensure correct fitting. Mark also fitted the door frames into place. This required manhandling into place with a number of other staff. Brian Rough (volunteer) undertook research and acquired a historic photograph that gave us enough detail to replicate the design of the original frames.

Ross Grahams Plumbing Service undertook the replacement of the missing flashing, guttering and downpipe. Cost: \$1, 580.

JD Marine Welding were engaged to fabricate the middle awning bracket from steel flat bar. They also fabricated four sets of window frames for the lantern recesses and also the ceiling vent. Mark Callanan managed this aspect by finalizing design and negotiating with the manufacturer to ensure correct size etc. The design of the rebuilt lantern recesses was taken from the remnants of the frames and photographs of lantern recesses from other Australian Scratchley designed forts. All the metal was galvanised. Total cost: \$2,800.

The internal door jambs were removed and treated for dry rot. Affected timber was wire brushed and chiselled out before wood preserver was applied (epoxy and timber preserver). Some affected areas were scarfed in at the bottom. QPWS rangers (managed by Mark Callanan) undertook this work and refitted them back into place.

Maurice Potrzeba (Mozbiz P/L) undertook all of the masonry works. They applied two coats of Westox Cocoon to remove the salt. They then rebuilt and fitted the new lantern recesses into place. They also bricked in the new ceiling vent. This required hand cutting bricks and wedging them into place. The internal brickwork was repointed with some extra areas outside the rooms (tunnel side) being undertaken in lieu of replacing the stone lintels. The middle awning support bracket was also fitted into the original brickwork. This required chiselling out some of the original bricks and replacing them. Mozbiz team was Maurice Potrzeba, Greg Potrzeba, Alek Potrzeba and Klaus Sietas. Overall cost: \$29, 700.

New materials were date stamped where possible (middle awning support and ceiling vent). Paint colours chosen were Pascal Manila and Indian Red (Wattyl solar guard) Primer/undercoat was applied initially. There were no original paint remaining to undertake a scraping and there were no historic photographs or written records to determine colours. The colours chosen were general “heritage” colours that were also used in an earlier project at the fort (Casemate windows).

The formula for the mortar mix that was used by Mozbiz is as follows: 3 parts clean sharp sand, 1 part fatty lime, 1 part lime (NHL3.5) and half part grey cement.

**Magazine No. 10** – The masonry had a very large crack coming from the floor right through to the top of the masonry archway. A large section of the archway was protruding out with the potential of it eventually falling. The area had been permanently roped off for safety purposes. The bollards extended into the courtyard area and had visual impact upon the immediate surrounds.

The objective was to stabilise the archway and secure the protruding block back into its original position. This would also allow the bollards to be removed.

Maurice Potrzeba (Mozbiz P/L) undertook the works. They removed soil from behind the protruding arch and levered the block back into position. They then cut out and drilled mortar joints and stitched the entire wall back with Helifix (glued and mortared back into position). The mortar joints were then re-pointed and the internal vertical crack also filled with mortar. Total cost: \$11,913

**Outcome** – The finished works have now stabilised the archway and secured the protruding block, making the site safe enough to allow the removal of the safety bollards and chain.

**Overall cost for the entire project was \$57,433.**

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## **NATIONAL TRUST QUEENSLAND HERITAGE AWARDS 2015**

### **Gold Award in Conservation - Fort Lytton Magazine**

The Fort Lytton Historical Association received this award for the repairs in the heritage-listed Fort Lytton's Black Powder and Magazine.

Citation reads as follows:- For the conservation of Fort Lytton's Black Powder Rooms and Magazine No. 10. In the former, conservation work encompassed ceiling vents, lantern recesses, door frames and guttering; in the brickwork for the latter, the wall was levered back into position before gluing, mortaring and repointing.

This very impressive, gentle project addressed serious problems in a thoughtful manner, using good techniques and resisting the temptation to over restore.

The project has also resulted in increased access and a more multifunctional courtyard area.

These awards were held on Thursday 20<sup>th</sup> August. Peter Gore (FLHA Treasurer) and his wife Anne attended along with Roland Dowling and Mette Juel. Peter had prepared a speech, however due to time constraints he did not get a chance to speak during the Awards Ceremony; so here are a couple of excerpts. "This Award recognizes the collaboration of many contributors: they included the Head Ranger and Staff of Fort Lytton National Park, Brian Rough of QCFSG, members of FLHA and the project contractor, Mr Maurice and Alek Potrzeba, Morbiz Pty Ltd. Our vision is to ensure that Fort Lytton continues to be an important source of Military and social history of South East Queensland for many future generations."

Fort Lytton National Park, Mark Callanan and Maurice and Alex Potrzeba were also awarded Gold Certificates for their participation in this project.



Roland Dowling, Peter Gore and Dr. Steven Miles, the Minister for Environment and Heritage Protection and the Minister for National Parks and the Great Barrier Reef.

# 2015 NATIONAL TRUST QUEENSLAND HERITAGE AWARDS

*Gold*

Conservation Works

*Presented to:*  
Fort Lytton Historical Association

*For:*  
Fort Lytton Magazine  
Conservation Project

