CONSERVING THE SYDNEY HARBOUR BRIDGE ARCH MAINTENANCE UNITS

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Movable Heritage:  
Decision-making in a challenging space

Moving Forward ...

The resolution on conserving the AMUs

- Conserve one AMU for the purpose of external display to the public, preferably adjacent to the Sydney Harbour Bridge.
- Performance criteria established for the long-term display.
- Donate one AMU to a major collecting institution.
- National Museum of Australia expressed interest in receiving the AMU. The NMA indicated their desire that all aspects of the AMU fabric remain without change where feasible.
**Issues:**
Hazardous Materials

- **Display AMU**
  - Long-term external exposure in public area
  - Risk minimisation = removal

- **Stabilisation AMU**
  - Long-term storage in museum facility
  - Risk minimisation = removal of loose and flaking material only

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**Solutions:**
Hazardous Materials

- AMUs stored in sensitive locations
- Relocation preferred
- Wrapped all elements in plastic sheet
- Transported to industrial painting yard with capacity to handle lead-containing paint removal
- All waste disposed of in accordance with statutory requirements
Solutions:
Preparation for display

- Blast-clean to remove all lead-containing paint
- Repaint with paint system with validated durability – used same system as currently being used on the SHB itself
- Replace plywood machine covers with painted steel sheet replicas
- Waterproof membrane applied to roof
Before Treatment

After Treatment

Courtesy of State Records NSW
**Issues:**

Structural repairs

- Jibs cut off (very roughly) to facilitate removal from SHB
- One fragment of original jib pin located
- Could not install replicas without substantial dismantling of AMU
- Engineered solution comprised 3-part pin
- Fishplates to rejoin cut straps and ties
Issues:
Display – performance criteria

☐ OHS – consider implications, including trips, slips, falls
☐ Durability – minimise maintenance in exposed marine environment at SHB
☐ Security – prevent climbing on structure and access to stages
☐ Functionality – non-operating
☐ Heritage – minimise heritage impact
Solutions:
Stabilisation

- Water blast to remove loose and flaking paint
- Corrosion conversion treatment to exposed areas of visible corrosion
- Provided supports for original fabric of deteriorated machine covers
- Fabricated storage trolley and soft covers
Acknowledgements:

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