

Managing floating heritage: a decade of managing a fleet of historic vessels at the Australian National Maritime Museum

Steven Adams
Australian National Maritime Museum

Abstract: *The acquisition of a fleet of ships allows a museum exciting opportunities for the presentation and interpretation of maritime heritage. It also poses many questions beyond traditional museum disciplines. What is the best way to maintain such a fleet and how many is enough? Given that museums acquire objects to be retained in perpetuity, how long should vessels be kept, and what of the question of use? In these days of limited funding, what is feasible: how should we determine acceptable loss of historic fabric, and how can this be accommodated, reduced and documented?*

These questions were embraced by the Australian National Maritime Museum and have come a long way to being answered by the Museum in its 12 year experience presenting floating maritime heritage at its purpose-built site on Sydney Harbour. The fleet currently includes large steel warships, a number of timber boat, yachts, and Asian vessels with linkages to Australia – a curiously diverse fleet in a national collecting institution context.

A model for vessel conservation has been drawn up to control all aspects of vessel management including the development of a philosophical framework to underpin all conservation work. Based upon the Australia ICOMOS Burra Charter, 1999 (the Burra Charter) and other heritage protocols essentially written for built heritage, it has been successfully adapted to support conservation

of the fleet and has the potential to provide guidance for any item of moveable cultural heritage.

Museum staff with artisan trade backgrounds, and additional training in heritage management, carry out all specialised conservation work. A strategic approach has been taken to staffing with the development of a heritage trade training scheme, now with 6 graduates over ten years. This has been most successful and may provide continuity and leadership for the future conservation of the ships in the National Collection.

1 Introduction

This paper seeks to demonstrate an approach to the management of historic vessels based upon a framework contained in individual conservation management plans, a system which has shown some promise at the Australian National Maritime Museum (ANMM). The twin roles of conservation and management of functional objects are combined in these plans where the assessment of significance and recommended conservation treatments are seen as enabling policies to allow the management of the vessel to proceed to action.

For illustrative purposes use is made throughout the paper of the conservation management plan (CMP) drawn up for the *Krait*, a fishing vessel used by Allied commandos for a daring canoe raid on occupied Singapore in 1943.

2 A National Maritime Museum for Australia

The ANMM first appeared as a recommendation from the 1975 Pigott Report into cultural institutions. Nothing happened until the mid-eighties when a small secretariat was established and a site became available in Darling Harbour, a semi-derelict former industrial precinct of Sydney's docklands, flagged for redevelopment under a master plan for urban renewal. The area was not without heritage significance as it was here that the early port facilities for Sydney were consolidated in the century, serviced

by a surviving railway siding dating from 1855 and the birth of railways in New South Wales.

Construction of the new museum building commenced in 1986 and completion occurred four years later with the official opening by the Prime Minister Bob Hawke in November 1991. Directions for the architect Philip Cox included the need for a ceiling height sufficient to house the Americas Cup winner *Australia II* and as two finger wharves were included, an expectation of floating exhibits was established.

Founding a national maritime museum in the post-industrial era, with little legacy of inherited collections, gave creators of the Museum some challenges. Order was established with the objects collected displayed in galleries along thematic lines; Discovery, Immigration, Commerce, Navy, Leisure and a US Gallery, a Bicentennial gift from the people of the United States.

What should be displayed and the question of a floating collection were matters addressed by Professor Peter Spearitt and Mr Vaughan Evans, who were commissioned to develop a collection policy for the new museum. They reported, in October 1985, that a relationship should be entered into with the then Sydney Maritime Museum, a community-funded volunteer run entity, for their fleet of floating craft to be moored at the wharves and be a major adjunct to the ANMM. In particular they strongly recommended against the ANMM becoming directly involved in the running of historic floating craft, based largely upon cost.

2.1 A floating collection

Following the failure of the two museums to agree on these arrangements the proposal lapsed and the new ANMM set about collecting a fleet of vessels. A former lightship, *CLS 4* was the first vessel acquired by the museum in 1987 with *HMAS Advance* (patrol boat), *Akarana* (1888 cutter and a bicentennial gift from New Zealand), *John Louis* (pearling lugger), *Krait* (commando raider and on loan from the Australian War Memorial), *Hong Hai*

(a Vietnamese refugee boat and on loan from the National Museum of Australia [NMA]) and *Sekar Aman* (a Maduran lete lete) following in early 1988.

At this time the collection stood at seven (7) vessels, though *Hong Hai* was returned to the NMA and *TuDo* (another Vietnamese refugee boat) purchased in its place. By the time of opening in November 1991 this had grown to 12, with the addition of *Thistle* (a 1903 sailing fishing boat), *Kathleen* (early offshore racer and bicentennial gift from Norway), *HMAS Vampire* (Daring class destroyer), *Bareki* (wooden harbour tug) and *Epic Lass* (naval officers' launch) in 1990. The former submarine *HMAS Onslow* followed in June 1999, completing the current fleet.

By any objective measurement, the floating collection is one of the largest of any museum in Australia and possibly the most diverse anywhere. Its establishment owed more to circumstance and serendipity than any systematic and integrated approach. Some have said there are too many yachts, others that the navy is over-represented, while still others cry too few commercial craft. Choice was limited to what was practical and available in the circumstances then there prevailing, though at the time, the museum demonstrated courage in collecting 'unfashionable' vessels such as the lateen-rigged Maduran lete lete and the Vietnamese refugee boat.

The number of vessels peaked as a function of the resources available to maintain and care for them as a collection. The knowledge gained over the first ten years has acted as a corrective for the initial estimates of resources needed, while the attitude in the intervening years has been to resist any further increase in the size of the fleet. While acquisition of an object into a museum collection traditionally has a connotation of perpetuity, the reality of such an aim, in the context of the recurrent funding demanded by an operational vessel, suggests that a 'sunset' may need to be at least contemplated as part of the forward planning process. A recent exercise has been the production of a five-year plan with costing for the whole fleet, to enable long-term decision making and resource allocation.

Should decisions be made on the retention or otherwise of specific vessels, a means of determining their relative importance to the collection is needed. As functional objects it is recognised that there will be progressive loss of fabric through use, where the desire to display and interpret the vessels will need to be traded off against the long-term consequences of loss. The identification of significance is of great importance in this context.

3 Vessel conservation at the ANMM

The acquisition of a collection immediately demanded resources, skills and infrastructure. Staff were recruited from suitable candidates with marine trade backgrounds, using an approach to conservation little different from good commercial practice, where applicable, traditional techniques were applied with not too many compromises. Initially this seemed to work well for Western craft, but what of the Asian vessels in the collection about which very little was known and even less documented? It was understandable that these vessels would provide challenges, but it wasn't long before issues arose on even those vessels that were well known.

What approach should be taken with a pearling lugger from Northwest Australia, changed significantly from new with a raised forecastle and a cut-down rig? Should we remove the former and reinstate the latter? What of the most recent modifications (some very rudimentary) reflecting the change in trade from pearling to shell harvesting. Is this important in telling the story of this vessel?

Eventually it became obvious that a clear and logical framework was needed to guide staff on the best way to deal with all vessels. Additionally, any framework had to be practical, effective and, if possible, have recognition within the museum profession as a legitimate approach.

The demands placed upon a vessel in the Fleet, as the collection of vessels in the museum came to be known, were far more onerous than was the case with other collection objects. While most museum professionals are content with the idea of displaying

collection objects in a completely passive way in a controlled environment, there was a clear expectation from all that a vessel (normally afloat) needed to be kept afloat, and preferably operational, to deserve a place in the collection.

4 Conservation standards for floating vessels

What standards were available to guide those staff working with the Fleet? An examination of existing maritime museums in Australia with floating collections demonstrated that most were in the hands of volunteer run, community funded groups, many based around a single ship. These ships tended to be either naval or small commercial ships of steel or timber construction, generally with steam propulsion. Resources were scarce, work being carried out using skilled and semi-skilled volunteer labour and traditional techniques. No particular approach to collection management and preservation seems to have been consistently applied and the results were mixed.

The ANMM as a national collecting institution possessed a conservation laboratory complete with highly skilled staff and recourse was initially made to this area. The conservators were organised along generic materials lines, with practitioners demonstrating specialised skills in textiles, metals, paper and other media. Their work, in the traditional museum context, was preservation and involved treating objects that remain in tightly controlled environmental conditions of temperature, humidity and light levels. They were understandably reluctant to become too deeply involved in collection vessels as functional objects, which survive in a hostile environment with no control over these cardinal variables and others such as wind, waves, precipitation, extreme UV, mechanical damage and wear.

Likewise the ANMM collection management system, as sophisticated as it was, could not adequately deal with an object as complex as an operational vessel. In the absence of established guidelines for preserving vessels from the traditional museum disciplines, other avenues had to be explored. What was needed was more than an inventory of useful practices or standardised

terminology such as those produced by the US National Park Service - given the national status of this collection, it deserved an integrated approach beginning with a philosophical perspective.

5 Conservation management in Australia

The conservation management of historic buildings in Australia is now a mature discipline, with professionals working along documented guidelines within recognised protocols. Countless examples exist of both good and bad outcomes in building conservation, with a lively literature of papers and publications. A vessel, as a functional object, shares a great deal in common with a building; it is designed and built for a certain purpose, may undergo alteration over the years, possibly become obsolete for that original purpose and needs to be adaptively reused, often with great creativity to provide for itself a viable future.

The conservation planning process for historic buildings in Australia is based upon guidance provided by the Burra Charter and other heritage protocols promulgated by the New South Wales Heritage Office and similar government agencies. The phenomenon of the Conservation Plan has come to be most widely known through the writings of James Semple Kerr and his seminal work of the same name, now highly developed and in its fifth edition. Though essentially written for built heritage, the conservation planning process lends itself successfully to support conservation of the Fleet and has the potential to provide guidance for any item of moveable cultural heritage.

The conservation planning process provides a philosophical framework to underpin all conservation work. At the heart is the identification of significance: what is important about the vessel and how to ensure the sustainability of this significance in the face of constraints, to allow interpretation and access. The process has the capacity not only to cover adequately the conservation of vessels, but immediately place this work on a recognised heritage industry platform.

In spite of the maturity of the conservation planning process, particularly in Australia through the work of James Kerr, it is not well known within the museum profession.

6 Conservation management plans (CMPs) and the Fleet

For some years statements of significance existed for most vessels in the Fleet, and though development had hardly progressed beyond this point, there was a clear understanding of the concept of significance and its intrinsic physical location. This had prompted staff to identify those areas that were significant and vulnerable before deciding on any work required. The adoption of the CMP model allowed a seamless link to develop between the established significance and the proposed conservation treatments and actions. This flow incorporated existing reporting systems, gave a documented basis for decision making and provided an excellent didactic tool for training of staff in heritage management.

6.1 The *Krait* CMP

An example of the CMP was that written for the *Krait*. As previously mentioned this vessel served during the Second World War and was used to insert commandos who successfully prosecuted a canoe raid on shipping in occupied Singapore in October 1943. The vessel is part of the collection of the Australian War Memorial and on loan to the ANMM.

The CMP follows the structure set out in Kerr (2000) and is consistent with the guidelines in the Burra Charter. The very much simplified flowchart of work adopted is illustrated in Figure 1.

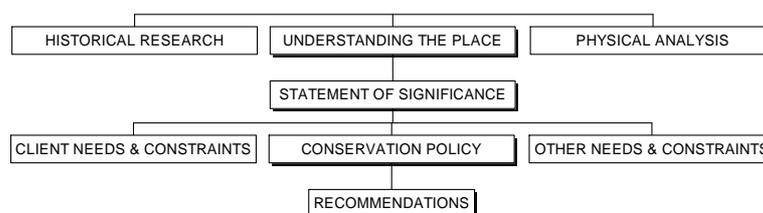


Figure 1: Diagram of the conservation plan process (abridged) from the Burra Charter (p.10).

The CMP was prepared in house, for internal use. The identified users of the CMP were primarily Fleet staff responsible for the maintenance of the vessel. The CMP does however have the potential for use by anyone with a need to know more of this vessel and its story.

Useful definitions are stated early, to ensure comparability and understanding where, again, the Burra Charter is used as the source.

Fabric means all the physical material of the place.

Conservation means all the processes of looking after a place so as to retain its cultural significance. It includes maintenance and may according to circumstance include preservation, restoration and adaptation and will commonly be a combination of more than one of these.

Maintenance means the continuous protective care of the fabric, contents and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction and should be treated accordingly.

Preservation means maintaining the fabric of a place in its existing state and retarding deterioration.

Restoration means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

Reconstruction means returning a place as nearly as possible to a known earlier state and is distinguished by the introduction of materials (new or old) into the fabric. This is not to be confused with either re-creation or conjectural reconstruction which are outside the scope of the charter.

Adaptation means modifying a place to suit proposed compatible uses.

Compatible use means a use involving no change to the culturally significant fabric, changes that are substantially reversible, or changes requiring minimal impact.

It is in terminology that immediate distinctions can be made between the treatment of vessels at the ANMM and accepted practice elsewhere. This point is made by examining the word 'restoration'. An article in the popular 'wooden boat' press in the UK some years ago spoke of the superb 'restoration' of an 1890s cutter. On closer examination it was clear that, with the exception of some cabin fittings and a few timbers, nothing of the 1890s fabric survived – only the silhouette and volume of the original vessel was restored. Yet this is a common misunderstanding of the process of restoration and a widely accepted outcome for any vessel so treated.

6.2 The *Krait* – identification of significance and understanding the vessel

Following historical research, which revealed a more complete picture of the vessel, a detailed process of inspection and documentation of the fabric was undertaken. The combination of these two activities, and the chronology of changes, led to an ability to identify phases in the life of the vessel and thus an evaluation of the significance of these periods. The concept of significance is nebulous and, though perhaps a bit too rigid and mechanical, the categories given by the various guiding documents provide a sound basis for identifying what it is that makes the vessel important and worthy of retention.

Table 2. Categories of significance from NSW Heritage Office guidelines.

CATEGORY	NATURE OF SIGNIFICANCE
HISTORIC	concerned with the range of historical context
HISTORIC ASSOCIATION	concerned with association with persons or events
SOCIAL	concerned with community regard or esteem
AESTHETIC	Concerned with creative accomplishments or visual impacts
TECHNICAL/ RESEARCH	concerned with technical accomplishment and research potential
RARITY	concerned with uncommon
REPRESENTATIVENESS	concerned with representativeness of a type or technique

The significance of the vessel however goes beyond the intrinsic physical fabric with the categories of social and aesthetic significance providing potential to address wider values and linkages to the community. The esteem in which this particular vessel is currently held is due in part to, and reinforced by, its acquisition into the collection of the Australian War Memorial, an institution with a commemorative as well as a cultural role. In the same way, the support of the community funded its repatriation to Australia forty years ago. It appears that this support has been sustained during that period, the challenge now being to maintain support into the future. More community involvement in the conservation and planning for the *Krait* may be a strategy to assist this process.

6.3 The *Krait* - Statement of Significance

A Statement of Significance was written which embodied the significance arising from those categories previously identified.

The fishing boat *Krait* has considerable significance to the military history of special forces in Australia. The ship is a remarkable survivor of Operation Jaywick, and is the only extant vessel which was used by Special Operations Australia during the Second World War and one of few tangible links with this area of military operations during the war, when these operations were in their infancy. The *Krait* has social significance to the community which drove and largely funded a campaign for its purchase, repatriation and, maintenance and which lobbied for it to be acquired by the Australian War Memorial. As a floating war memorial, the *Krait* has assumed a status as a kind of sacred relic, enjoying a place in the national psyche as part of the 'civil religion' of the ANZAC tradition.

6.4 The *Krait* – conservation policy

Imperatives from the established significance inform policies for future conservation treatments. These need to recognise the various phases of the vessel's life and the significance of each, postulating treatments which may see some removal or restoration of fabric, previously removed, to helpfully liberate that significance. Likewise at a material level, intrusive elements would be removed if these were damaging, such as rusted fastenings.

Ethically, it is recognised that these treatments involve trade-offs, in some cases presenting one phase of the life of the vessel over others and indeed the destruction of evidence through removal of fabric or wear and degradation. As an iterative process the CMP suggests consultation to help refine and decide upon outcomes, and to prevent discussion of issues becoming unnecessarily circular or repetitive. In this way, further and wider consultation may be helpful in the case of the *Krait* to ensure input from constituencies of support from sections of the community, including for example, personnel in Special Operations, who have a continuing interest in the vessel. It is in this area of community support that the

sustainability of the vessel and its role in telling of the past will be maintained.

These elements have been aggregated in separate inventory sheets prepared for each identifiable space on the vessel. For illustration the sheet for the *Krait*'s engine room is presented to demonstrate the working documents in the hands of staff maintaining the vessel.

Table 1 Example of Inventory sheet – *Krait* CMP

6.4 ENGINE ROOM

SPACE	ENGINE ROOM	
CURRENT USE	ENGINE ROOM	
PREVIOUS USE(S)	ENGINE ROOM	

DESCRIPTION

Engine room, circa late 1934, originally fitted with a Deutz diesel engine, this was replaced in 1943 with a Gardner diesel of British manufacture. At this time three auxiliary machines: petrol engine, air compressor and generator were also fitted with associated pipework and electrical systems.

DECKHEAD

- longitudinal oregon boarding laid over transverse beams with hatch and hinged hatch cover on port side aft
- very thick paint system, flaking in parts
- engine room deckhouse, timber boarding with sliding glazed clerestory windows, some glazed with perspex.

BULKHEADS

FORWARD

- timber boarding (plywood) behind transverse stainless steel fuel tank with sight glass and filling pipe.

AFT

- built-in timber bench, for stowage
- sliding hatch in timber on centreline
- vertical boarding.

PORT

- engine room telegraph fitted to forward side of hatch
- sawn frames on close centres, sistered with through steel fastenings and roves

- heavy continuous stringers shaped and fastened with steel fastenings.

STARBOARD

- sawn frames on close centres, sistered with through steel fastenings and roves
- heavy continuous stringers shaped and fastened with steel fastenings
- piping associated with engine cooling system with shipside valves
- electrical switchboard fitted forward in way wheelhouse deck.

DECK

- Gardner 6L3 oil engine fitted with gearbox and associated plumbing and exhaust system
- Lister air-cooled generator fitted forward on centreline with associated wiring
- battery box fitted forward
- plywood deck plates painted green.

CANOPY

- awning (plywood, hardwood frames) erected over engine room deckhouse. GRP mat laid over edges and butts. Penetrations (2) for main and auxiliary engine exhaust. Grey paint system on top, white gloss below.

MOVEABLE ITEMS

- two starting handles for the main engine are stowed in the engine room
- spanners (2) open ended to take up stuffing box.

SIGNIFICANCE

The Gardner engine is of **exceptional significance**. It is well documented as the engine that took the raiding party to Singapore for Operation Jaywick. Various components are missing, the air start mechanism in particular. Missing components should be acquired and fitted. Some parts have the name 'Gardner' obliterated and these are of interest, having been allegedly so

treated by Major Lyon in pursuit of the covert nature of the raid (Silver, 1992, p.65).

All early fabric is of **high significance**. This includes but is not necessarily limited to the following elements: structural members of the engine room, particularly the transverse framing and longitudinal stringers and the cabin sole. The engine room deckhouse and associated panelling may date from the period in service with River Estates. Electrical switch board.

Fabric of **moderate significance**: Glazing, engine room telegraph: the telegraph is of post-raid fitting, has been on the vessel for many years and, though intrusive, can be justified on operational grounds and should not be removed. The telegraph repeat in the wheelhouse is also intrusive but should remain. In both cases a small box or cover should be placed over these items when not in use. Communication between wheelhouse and engine room was by voice through the hatch in the aft engine room. Aft built-in shelf.

Low significance fabric: fire extinguisher, plywood deck plates, perspex glazing, and stainless fuel tank. Lister diesel engine and generator.

PROPOSED CONSERVATION TREATMENT

1. Continue to use the engine room as part of the ship in accordance with the vessel operations policy and other relevant policies.
2. Comply with general conservation policy (Section 5) for the vessel as a whole and for the treatment of fabric under each level of significance.
3. Consider returning the engine room to the Operation Jaywick configuration with the installation of the original pattern of petrol engine, compressor and generator. Additionally, refit air receiver and associated high pressure piping for engine starting service. What remains of the other machinery; diesel generator, switchboard and wiring loom have been fitted since arrival in Australia in 1963. The opportunity exists to refit the auxiliary machinery from the time of the raid as appropriate machines

have been procured; a Ruston generator, air compressor and air bottle. These items should be fitted at an appropriate time.

4. Replace plywood floor plates with traditional timber boarding laid transversely.
5. This tank is of recent construction from stainless steel. Sited under the wheelhouse in the upper forward end of the engine room, the tank is intrusive but practical for operational purposes. It should remain, but its high lustre and appearance should be subdued by being enclosed behind panelling. A modification was fitted to allow easier access for fuelling.
6. Though post raid, the deckhouse is of venerable age and demonstrates some interesting joinery. Documentation suggests that it was fitted after the war and has survived substantially intact. This construction should be retained, though where glazing is in perspex, glass should be substituted when possible.
7. The tailshaft was replaced by a modern stainless steel (Aquamet 17) shaft in 1996 to wear and tear. It has been retained and stored.
8. The canopy is a recent (post 1982) fabrication, constructed from marine plywood over a softwood frame. The previous configuration during the raid is not known with any certainty, though it may have been planked with a canvas deck overlay. It should be replaced with a more appropriate canopy when funding allows.

This inventory sheet documents the vessel fabric, then establishes, identifies and grades significance. A more detailed sheet is prepared which documents the fabric down to a component level, and in tabular form states significance and proposed treatment.

Documentation of work carried out, traditionally a poorly executed part of the process, has been improved with report writing skills included in in-house training sessions. Early results are pleasing, with the whole process set to be further enhanced with proposed integration into the new ANMM collection management system, giving increased access to vessel records.

7 Staffing of Fleet Section

A significant difference to the way in which conservation planning operates with built heritage is that, as owners of heritage vessels, the ANMM employs its own staff of marine artisans to carry out conservation treatments. This has been necessary as sources of workers have contracted in Sydney with the increased rate of traditional boat yard closures, changed technology, the reduction in craft-based training and waterfront redevelopment. These factors have resulted in the dispersal and disappearance of a large class of skilled labour. In the past the ANMM has been able to capitalise on this pool of expertise, however increasingly with these and other facilities gone the Fleet Section has had to increasingly look to itself to perform the work required to maintain the fleet.

In light of this and the increased sophistication of approach to vessel conservation, the ANMM commenced a program of training artisans, using the traditional craft-based apprenticeship as a model. This has proven most successful with six graduates of the program in ten years and two currently in training. Trainees attend classes on day release at college in the boatbuilding course where they are exposed to both contemporary and traditional techniques. The training is supplemented with heritage training sessions, and short courses conducted in-house at the ANMM. Recent developments have seen the trainees placed with other 'host' employers noted for offering specific services such as decorative painting and brightwork techniques. These activities, in addition to secondment

to senior artisans on ANMM staff have led to a very high level of achievement in recent graduates.

8 Conclusions and the future

Following early promise, conservation management plans are to be drawn up for all vessels, both floating and stored dry in the ANMM. This will provide guidance to all involved with conservation procedures and to allow decision making at a strategic level for allocation of scarce funding and resources.

Investigation suggests that for the significance of vessels to be sustained, support also needs to be garnered among those constituencies that have a stake in the vessel. The CMP, then, should be drawn up using a collegiate approach from museum professionals, ideally in consultation with stakeholder interest groups to refine and develop the document, as a continuous process.

At an operational level the ANMM has a site master plan in place to develop its site to more adequately protect, manage, maintain and display its fleet to visitors. This, coupled with the conservation management planning process and staffing initiatives should place the management of the Fleet at the ANMM on a firmer footing for the future, and ensure the continuation of a traditional ship repair skills base in floating maritime heritage.

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