

Abandonment Issues: An Assessment of Military Vessel Discard Trends Derived from Australasia's Torpedo Boat Defences, 1884-1924

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Abstract

Between 1884 and 1924, a total of fourteen torpedo boats served in the naval defence of Australia and New Zealand. Australasia's colonial governments purchased these vessels as a consequence of fears of seaborne invasion by Imperial Russia and other foreign powers during the 1870s and 1880s. All were eventually decommissioned, put up for sale, stripped of their most valuable components, and abandoned. Archaeological investigation of four of these discard sites has revealed abandonment attributes distinctly different from documented disposal trends associated with commercial watercraft of the period. This paper will highlight these unique discard trends, and explore tentative explanations for their presence through the filter of site formation process.

Archaeology and Watercraft Discard

Abandoned watercraft have been addressed extensively in archaeological literature; however, recent research conducted by Nathan Richards (1997, 1998, 2002, 2008, 2011) constitutes the first concerted effort to identify, evaluate and define cultural mechanisms associated with ship discard. These studies have demonstrated the utility of cultural site formation theory—as advocated by scholars such as Michael Schiffer (1972, 1983, 1995, 1996; see also LaMotta and Schiffer 2005; Skibo and Schiffer 2008) Keith Muckelroy (1975, 1976, 1978), and Martin Gibbs (2005, 2006)—within maritime contexts, and builds upon existing models by incorporating terms and definitions that apply exclusively to archaeological signatures of watercraft use and abandonment. Richards addresses some discard behaviours specific to military vessels, including the intentional destruction of warships for offensive or defensive tactical purposes (i.e. block ships and fire ships) but gives relatively little attention to their abandonment in non-combat contexts. This is countered somewhat by his acknowledgement that many potential research themes have emerged, "from the need to refine the abandoned vessel data set and more comprehensively establish, dismiss, and discuss any number of discard trend correlates", including the intentional peacetime disposal of decommissioned military vessels (Richards 2008:183).

Richards (2008:145-147) identifies archaeological signatures of use and discard that operate as indicators of a vessel's functional utilisation in a pre- and post-abandonment capacity. Although the bulk of his explanatory model is applied to commercial watercraft, many—if not all—of the behaviours he describes were also common in military contexts and can therefore be applied to the torpedo boats addressed in this paper. Relevant archaeological signatures of

use as they apply to watercraft include their conversion and modification to secondary functional roles, transition to specialised support vessels, and functional post-abandonment use. Similarly, abandoned watercraft may exhibit one or more specific signatures of discard including: structural minimisation, a variety of pre- and post-depositional salvage and scrapping behaviours, methods of preventing a vessel's movement once abandoned, as well as the overall discard environment and abandoned vessel's orientation within it. A particularly noteworthy and common archaeological signature associated with abandoned ships is their inclusion within officially designated discard areas such as ships' graveyards.

Discard Attributes of Australasia's Torpedo Boats

Of the fourteen torpedo vessels that participated in the naval defence of Australia and New Zealand, four have been the subject of archaeological investigation. Analysis of archaeological and archival data compiled during the aforementioned studies has highlighted abandonment processes unique to each vessel, as well as discard trends shared among the assemblage in its entirety.

HMVS Lonsdale

HMVS *Lonsdale* served in the colonial navy of Victoria from 1884 until 1901 at which point it transferred to Australia's Commonwealth Naval Forces (CNF). It was put up for auction the following year but failed to find a buyer and was subsequently transferred to the Royal Australian Navy (RAN) in 1911 (Cahill 2009:133-135; Gillett 1982:115-119). In 1914 *Lonsdale* was put up for sale a second time but was once again overlooked and ultimately ended up abandoned on the beach at Queenscliff, Victoria sometime after 1915 (Figure 1). Archival photographs of *Lonsdale* reveal the degree to which its hull still appears much as it did when in operational service (Hunter *in-prep*; see Figure1). Outwardly, the shell of the torpedo boat is clearly intact to the gunwales and various hull components are all still in their original positions. The only obvious exception is the steel plating that comprised the weather deck and armoured casemate. These architectural elements appear to have been either removed or cut open in an effort to facilitate removal of the torpedo boat's engine and internal machinery. The conning tower hatch cover and majority of external fittings are also absent, although at least one deck-mounted lifting lug is visible.

Data recovered during archaeological investigations of *Lonsdale's* abandonment site has proven useful in the development of general hypotheses regarding its discard (see Hewitt and Tucker 2009). When exposed and documented, the torpedo boat's conning tower and the hull beneath it were still largely intact and appeared much as they did when photographed during the early twentieth century (see Figure 1). The same can be said of the hull aft of the

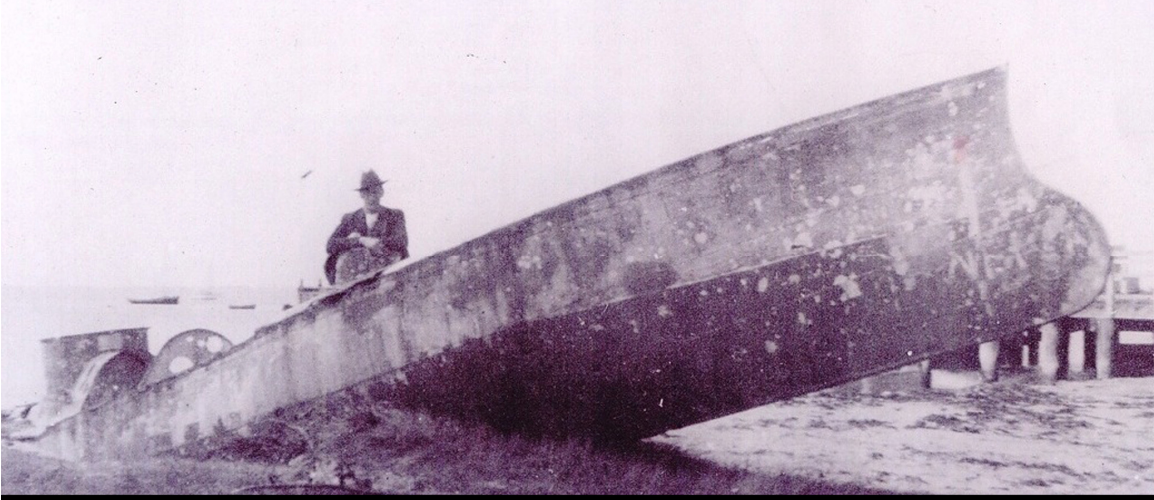


Figure 1. *Top*, HMVS *Lonsdale*'s hulked remnants at Queenscliff, Victoria ca. 1915; *bottom*, *Lonsdale*'s conning tower (centre) and disarticulated bow section (bottom right) as they appeared during the 2005-2006 investigation. Top photograph reproduced with kind permission of the Queenscliffe Maritime Museum. Bottom photograph by Geoffrey Hewitt, courtesy Terra Culture Heritage Consultants.

conning tower, which appears to have retained its overall structural integrity (D. Cahill, as cited in Hewitt and Tucker 2009:32). By contrast, the foreship and bow are no longer articulated with the remainder of the vessel (Figure 1). Indeed, the vast majority of *Lonsdale*'s forward section disintegrated into largely incoherent structure as a consequence of "gross corrosion" and collapse of the hull subsequent to its complete burial (Hewitt and Tucker 2009: 30-32).

Discovery of *Lonsdale's* disarticulated prow constitutes the only archaeological evidence of culturally manifested alteration of its discarded hull. However, as the prow was ultimately re-deposited on site, its removal almost certainly did not constitute salvage activity. To the contrary, its presence lends credence to local lore that states it was intentionally cut away and moved aside during boundary fence construction at Queenscliff's former Buoy Depot (Ferrier 1989).

Based on available information, *Lonsdale* does not appear to have been subject to any form of placement assurance. Strategies to neutralise the hull's buoyancy were not evident among its documented remains, nor were tidal variation or orientation of the vessel carefully considered factors in its disposal process. *Lonsdale* appears to have been discarded almost exactly perpendicular to the shoreline in a manner more common to larger watercraft (see Richards 1997: 89). Further, its orientation suggests it was originally abandoned with its midships positioned roughly at the interface between sea and land (Hewitt and Tucker 2009:30). This would seem to contradict contemporary practice which advocated that vessels be beached at high tide in order to leave them as high and dry as possible when the water receded (Cockroft 1983: 200).

HMVS Countess of Hopetoun

Like *Lonsdale*, *HMVS Countess of Hopetoun* was an asset of the Victorian colonial navy, entering service in 1891. The torpedo boat was transferred to both CNF and RAN control before being decommissioned in 1920. *Countess of Hopetoun* spent the next four years in ordinary before being purchased and stripped it of its engines and machinery. Ultimately, it ended up abandoned on a beach at Swan Island in Port Phillip Bay (Cahill n.d.; Gillett 1982:126-132; Gillett 1991). Archival evidence of its discarded hull is represented by a single photograph taken sometime between 1922 and 1932 (Figure 2). Architectural elements visible above water included all hull plating between the gunwale and the water, the entire deck structure forward of the conning tower, and the conning tower itself. Although certain deck fittings were removed prior to the torpedo boat's abandonment, the vast majority remained untouched and in their original positions. Save for isolated flash rusting of their steel fabric, the vessel's

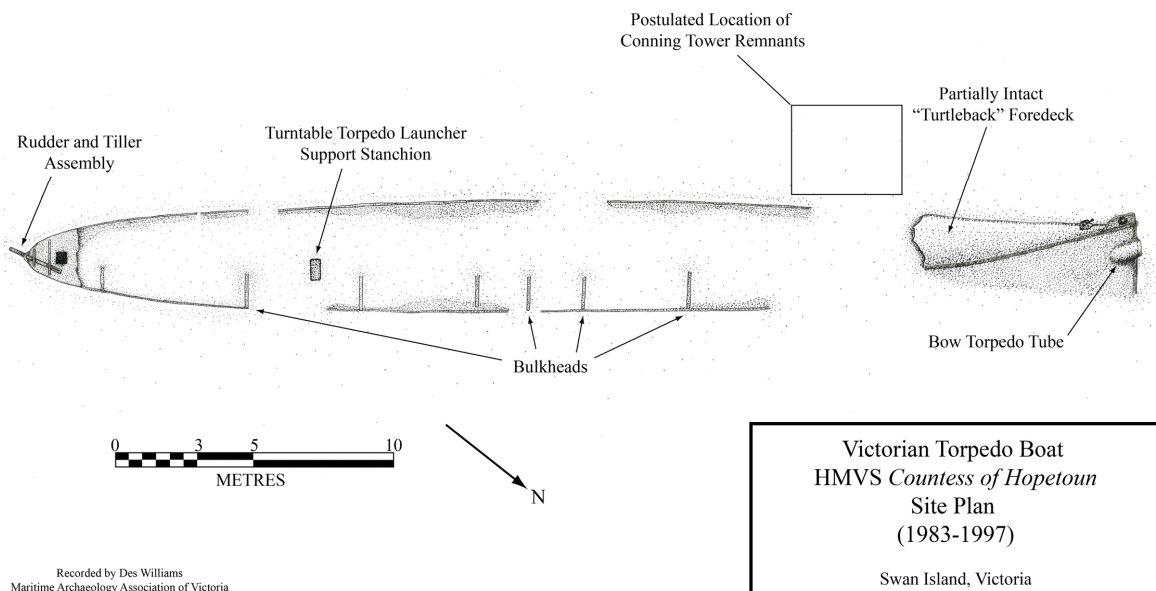


Figure 2. *Top*, HMVS *Countess of Hopetoun* hulked at Swan Island, Victoria ca. 1930; *bottom*, archaeological plan of the *Countess of Hopetoun* site as it appeared during the 1980s and 1990s. Photograph reproduced with kind permission of the Queenscliffe Historical Museum, Inc. Site plan produced by the author.

surviving architectural elements do not exhibit significant signs of corrosion or damage and appear to have been structurally sound at the time it was abandoned.

The photograph depicts a form of placement assurance in direct association with *Countess of Hopetoun*. A crude mooring line comprising a length of cable is shown extending shoreward from the torpedo boat's bow. A number of trees are present in the image along the shoreline and it is possible the mooring line was attached to one or more of these in an attempt to prevent *Countess of*

Hopetoun's movement after it was abandoned. Orientation does not appear to have played a role in the discard process, as the discarded hull was partially awash and oriented perpendicular to the shoreline when captured on film.

Archaeological investigations have revealed *Countess of Hopetoun's* hull is still largely intact and retains much of its articulated bow and stern structure (Figure 2). When documented between 1986 and 1996 the foredeck was complete for much of its original length (Anderson 1996; Heritage Victoria n.d.; Williams 1983; Williams 1986; Williams 1992). Most bow fittings were present and bore no indication of attempted salvage. The stern was also largely unaltered. Although *Countess of Hopetoun's* engines and boilers were removed prior to its abandonment. The steel propeller and propeller shaft did not share the same fate. Curiously, neither exhibited outward signs of wear or damage that would have precluded their removal and reuse.

Perhaps *Countess of Hopetoun's* most unexpected *in situ* features were its rudder and tiller. Both appeared largely complete and undamaged, save for degradation resulting from the site's surrounding marine environment. Richards (2008:149) observes that the rudder is the structural element most frequently missing from beached and abandoned watercraft, not only because of the ease with which it can be unshipped and transported but also its potentially lucrative resale value. He goes on to note that "it is even more common to find vessels without *in situ*...engines, prop shafts, or propellers" (Richards 2008:149). *Countess of Hopetoun* was stripped prior to its hull being put up for sale so it is surprising that these components were not salvaged for their reusability. Equally perplexing is that they were not later removed for their scrap value.

A length of steel cable was also observed in association with *Countess of Hopetoun's* stern structure (Williams 1992). Although tentatively identified as the remnants of a towline, its diameter appears to approximate that of the mooring cable visible in the archival photograph. The presence of the cable could account for the absence of other methods of anchoring the discarded hull in place. Alternate forms of placement assurance were not observed archaeologically and do not appear to have been utilised, even though their absence runs counter to Richards' (2008:172-177) discussion of what constitutes a logical vessel abandonment scenario in a beach environment.

The discard locations of both Victorian torpedo boats are situated a relatively short distance from the Barwon Heads Ships' Graveyard, which became the final resting place of a number of former Australian warships (Ryan *et al.* 2009). It is especially curious that *Countess of Hopetoun* did not join the increasing number of watercraft abandoned there during the early twentieth century. By 1924 five vessels had "officially" been scuttled in its waters; three years later it would become the final resting place for seven more watercraft, including four decommissioned J-Class submarines (Beringer-Pooley, 2005; McCarthy, 2009; Ryan *et al.* 2009).

New Zealand Torpedo Boat Defender

Defender was one of four torpedo boats purchased for the naval defence of New Zealand during the Russian Scare. It arrived in the port city of Lyttelton in 1884

and remained in service until 1900, when a local steam launch operator purchased the vessel, stripped it of its engines and machinery, and abandoned the hull at Purau Beach on the southern shore of Lyttelton Harbour (Cooke 2000:129-130; Moffat 1996:5, 11-13, 35). During the 1930s the local county council broke the hull into two sections during an attempt to move it further away from the water (Ogilvie 1970:75). *Defender's* remnants were a distinct landmark at Purau Beach for several years until they were intentionally broken up and buried with heavy machinery in 1959.

A circa-1930 painting entitled *Purau Beach* depicts *Defender* in a secondary discard context, after its broken hull was removed from Purau Bay's foreshore (Figure 3). One particularly noteworthy aspect of the torpedo boat's remnants is that they were still largely intact approximately 30 years after being abandoned. Aside from obvious hull separation and isolated flash rusting, both the bow and stern sections are largely complete. The same can be said for the vessel's conning tower and adjacent casemate. Elements missing from *Defender* include the conning tower hatch cover and various deck fittings. By the 1940s and 1950s when the surviving hull was documented photographically some hull plating and casemate structure visible in the painting was noticeably absent, likely as a consequence of both natural and cultural processes.

Examination of the torpedo boat's existing architectural elements has confirmed a significant portion of the discarded hull survived up to its burial in 1959. This is particularly true of the bow and stern sections, which in their reconstructed form are approximately 65 to 75 percent intact (Figure 3). Most hull elements visible in historic renderings of *Defender's* remnants have survived to the present day, as have internal components such as framing and bulkheads (Hunter 2009: 6-9; Hunter 2010:152; Thornycroft Torpedo Boat Museum 2003). *Defender's* conning tower was not discovered among the site's buried components and its current whereabouts remain an open question, although at least one source claims it was acquired by the Lyttelton Museum and later accidentally sold to a scrap merchant (Cooke 2000: 132).

Forms of placement assurance neither appear in archival images of *Defender's* hull nor were any observed during the excavation, suggesting they

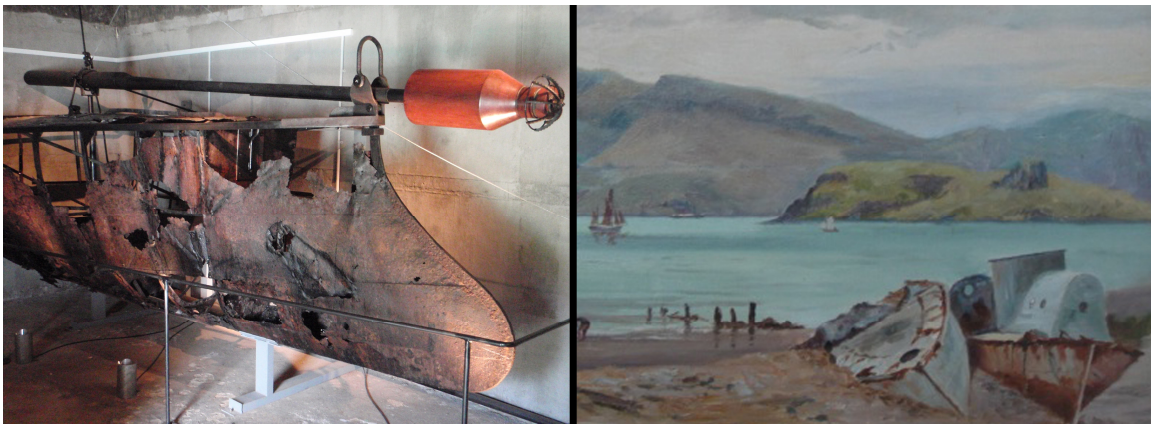


Figure 3. *Left*, reconstructed bow section of New Zealand torpedo boat *Defender*, as exhibited today at the Thornycroft Torpedo Boat Museum, Lyttelton; *right*, ca. 1930 painting *Purau Beach*, showing *Defender's* broken and disarticulated hull. Photographs by the author.

were not utilised during the initial abandonment episode. There is neither archaeological evidence of fill material within the hull nor is there damage consistent with intentional hull breaching methods. To the contrary, it appears little or no consideration was given to scuttling *Defender*, based on the discovery of a pair of wooden bungs in association with its screw aperture. These were hammered into both ends of the aperture in an attempt to keep the hull watertight and afloat during transport to its disposal site. As they were still *in situ* when found, it appears no effort was made to remove them and compromise the hull's ability to float away before abandoning it to its fate (Hunter *in-prep*).

Defender's discard locale is situated a mere 1.1 kilometres southwest of Wreck Bay, a small cove within Purau Bay that functioned as a ships' graveyard during the late nineteenth century. Although it is unclear whether the ships' graveyard was inactive by the time *Defender* was discarded in 1900, it is surprising a known discard area would be overlooked for what appears to be a randomly chosen abandonment site in such relatively close proximity to it.

HMQS Mosquito

Queensland's colonial navy acquired HMQS *Mosquito* in 1884. It remained on the active roster—subsequently serving the CNF and RAN—until 1913 when it was purchased, stripped of its engines and machinery, and abandoned in a tributary of the Brisbane River (Adlam 1981: 29; Foote 2001: 2; Gillett 1982: 33-36). In 1966 *Mosquito's* discarded hull was photographed and revealed to still be largely intact (Hunter 2011:379; Figure 4). The bow and stern sections, in particular, were articulated and in an upright position (see Figure 4). As with *Lonsdale*, steel plating that comprised the weather deck appears to have remained largely *in situ*, but only in areas where it did not restrict access to the vessel's engines and internal machinery.

By contrast, the sides of the hull, all but one bulkhead, and the remaining upperworks had collapsed either within or outside the hull and become partially or completely buried in mud by 1966. A single articulated bulkhead visible in the photographs seems to have played a significant role in holding the torpedo boat's surviving stern structure together. The vessel's conning tower, which by the 1960s was disarticulated from the rest of the hull and lying on its side, was still almost completely intact as an architectural element. Attached to the conning tower was a surviving—but heavily corroded—section of its hatch cover (Hunter 2011: 379-382).

Archaeological investigation of *Mosquito's* discard site has confirmed most of the exposed hull collapsed and subsequently settled into the mud and silt of the swamp floor (Hunter 2011:381-384). By contrast, *Mosquito's* stern, already largely buried at the time of the 1966 photographs, appears to have retained its structural integrity. This is best evidenced by results of a probe survey, which detected contiguous metal contacts along the hull's projected stern centreline. A

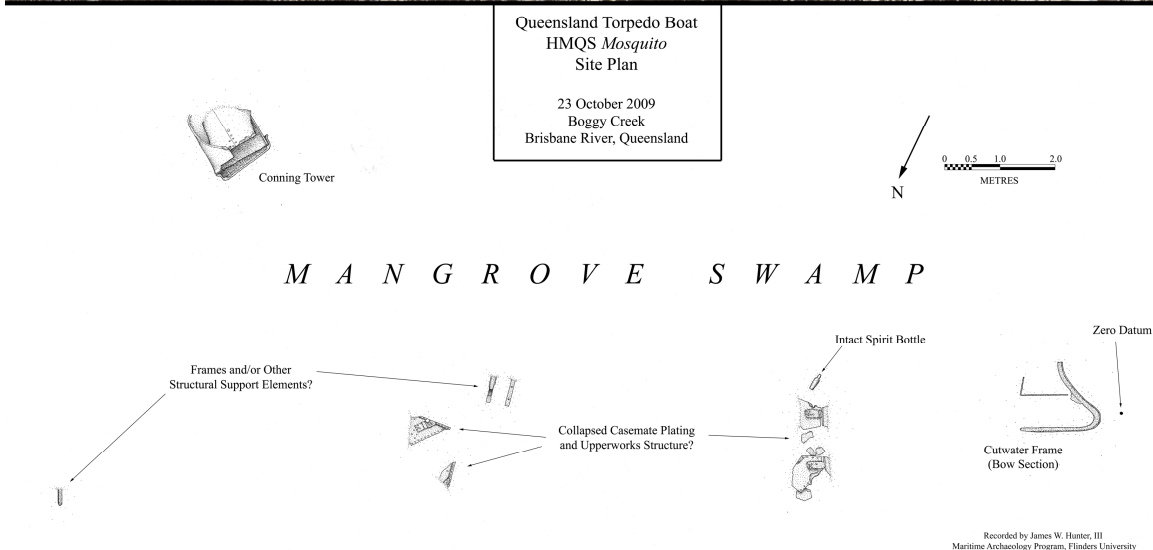


Figure 4. *Top*, starboard bow section of HMQS *Mosquito*'s discarded hull, as photographed in 1966; *bottom*, archaeological plan of the *Mosquito* site as it appeared during the 2009 survey. Photograph by S. Prior, courtesy Queensland Maritime Museum collection. Site plan produced by the author.

series of similar contacts were encountered during an athwartships probe transect in the same area (Valis 2010: 1).

Based on available evidence, human alteration of *Mosquito*'s hull prior to 1966 seems to have been restricted to the conning tower, which was removed and re-deposited at some point between the boat's disposal at Boggy Creek and when it was captured on film (Hunter 2011:381). Individual artefacts, including the complete stern section of its casemate, were removed between 1966 and 1972. All were eventually donated to the Queensland Museum and later accessed and analysed by the author (Hunter 2011: 382). A notable feature of these objects is their relatively good state of preservation. For example, the casemate section is intact, ductile, largely free of corrosion and still retains paint over much of its exterior surface. If these attributes are indicative of the overall condition of *Mosquito*'s hull at the time it was discarded, it is surprising the majority of its metal constituents weren't targeted for salvage.

With the possible exception of the mud and silt substrate in which the hull was embedded, placement assurance strategies do not appear to have played a role in *Mosquito*'s abandonment. Inspection of the site's visible components neither reveal evidence of treatments such as filling or induced perforation of the hull nor are indicators of these techniques apparent in the 1966 photographs. As

happened with *Lonsdale* and *Countess of Hopetoun*, *Mosquito* was beached roughly perpendicular to the existing shoreline, with its bow facing away from Boggy Creek.

Mosquito's discard site is located a short distance from Bishop Island Ships' Graveyard. Bishop Island functioned as Brisbane's "official" ship abandonment site from approximately 1912 until it was buried beneath land reclamation and the city's modern port facilities. Included among the many vessels discarded along its foreshore was the colonial government steamer *Miner*, which tended submarine mine fields in Moreton Bay and frequently participated in naval exercises with *Mosquito* (Gillett 1982: 55; McLeod 1973: 23-26).

Conclusion

Australasia's torpedo boats exhibit reuse and discard attributes distinctly different from those of commercial watercraft. None of the examples discussed above underwent conversion or modification, nor were they adapted to roles in either a specialised secondary or functional post-abandonment capacity. Archival and archaeological evidence indicates that *Lonsdale*, *Countess of Hopetoun*, *Defender* and *Mosquito* were not subject to structure minimisation or hull reduction activities and that placement assurance strategies and environmental considerations played little, if any, role in their abandonment. *Defender* and *Mosquito* were both subject to limited salvage but this appears to have been more for the purposes of collecting historical keepsakes than intentional removal of hull components for reuse or resale.

An explanation for these trends may lie in Richard Gould's (1990:160-223; 2000:265-298) discussion of "trend innovation" and "tactical indecision". These tendencies were the result of an Industrial-era arms race among nineteenth-century navies to acquire and use rapidly evolving military technology. The specialised construction and tactical application of torpedo boats meant they were uniquely unsuited for other military roles; this problem was further compounded by their general obsolescence at the time of discard. The small size and relatively light construction of these watercraft precluded their use in secondary military functions and likely reduced the value of their constituent parts to such an extent that they simply weren't worth the time, money and effort to dismantle or dispose of properly. Further, it would appear that these military prejudices against torpedo boats may have carried over to contemporary civilian populations and explain—in whole or in part—why their stripped hulls were not reused in a functional non-military capacity and ultimately abandoned largely intact.

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