

**DREDGE WRECKS IN LOCH Mc NESS/ WAGARDU LAKE,
YANCHEP NATIONAL PARK**



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**Report No.229
Department of Maritime Archaeology, Western Australian Museum
&
Maritime Archaeology Association of Western Australia (MAAWA)**



Acknowledgements

The WA Museum and MAAWA are grateful to John Clarke who first raised concerns for the preservation of the barges and their associated history with the Department of Maritime Archaeology/ MAAWA, and made the necessary arrangements with Department of Environment and Conservation (DEC) Yanchep National Park staff to undertake the survey. John also researched historical records and photographs in Yanchep National Park and Wanneroo Museum archives, was involved in the maritime archaeological surveys and provided encouragement and assistance for the final production of this report.

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Cover images

Top: Grab dredging Loch Mc Ness/ Wagardu Lake in September 1936 (City of Wanneroo Museum and Heritage Collection)

Bottom: Brunhilde Prince (MAAWA) and Matt Gainsford (WA Museum) surveying grab dredge wrecksite (Site 2 - southern site) (Ross Anderson/ WA Museum)

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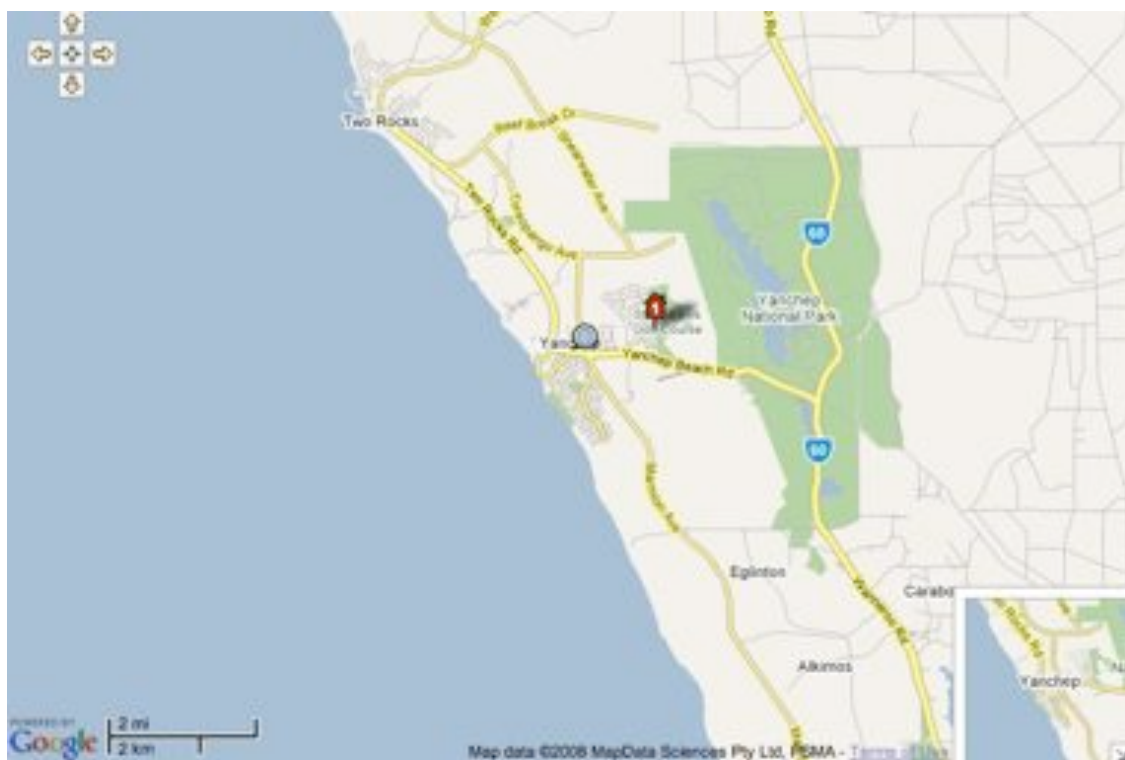


Figure 1: Location of Yanchep National Park east of Yanchep, 50km north of Perth

1.0 Background

On the 6th and 27th August 2005 the wrecks of two small wooden dredges in Loch Mc Ness/ Lake Wagardu, Yanchep National Park were investigated by members of the Maritime Archaeology Association of Western Australia (MAAWA) & staff from the Department of Maritime Archaeology, Western Australian Museum. One wreck lies at the northern edge of the lake and the other at the south end. The northern site was affected by a bushfire that burnt down the superstructure of the wreck as well as a pedestrian wooden bridge that had previously been built over the wreck. Concerns about the wreck and possible impacts arising from any new bridge reconstruction were discussed with Yanchep National Park staff. Yanchep National Park staff supported the site survey by providing free entry and use of rowboats to access the sites. The purpose of the visit was to record the sites in order to provide further information to the Department of Conservation and Land Management on the sites' extent, integrity and significance.

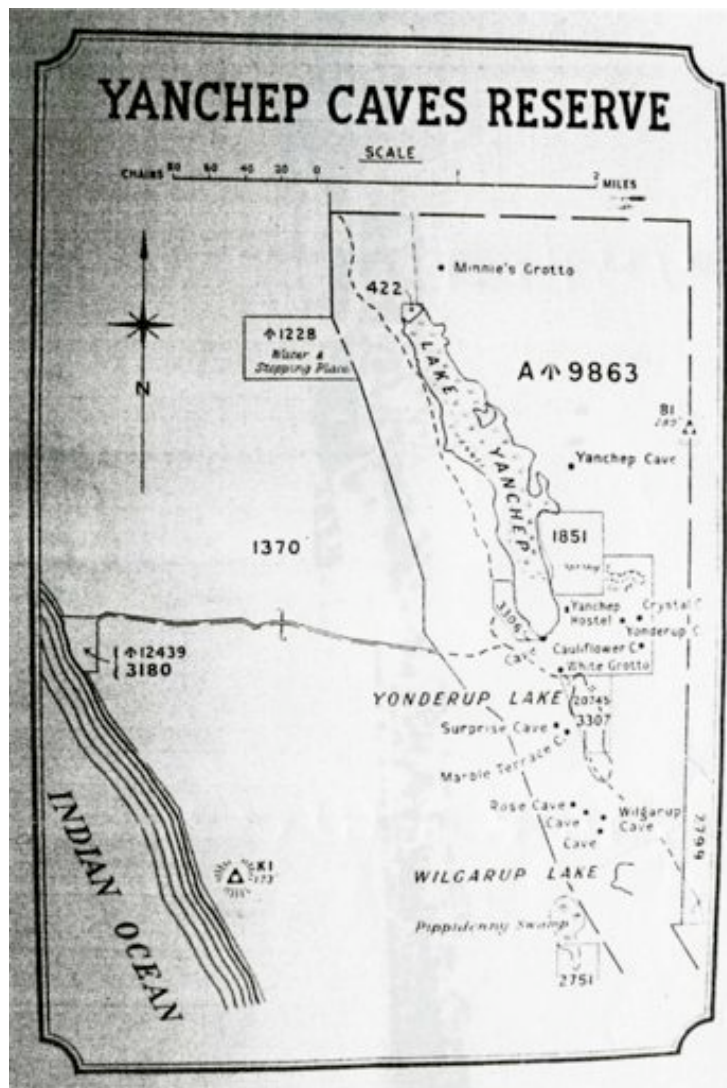


Figure 2: Yanchep Caves Reserve area plan circa 1930s. Dredging substantially modified and deepened the southern end of Lake Yanchep (shown on this plan as a swamp) and created man-made islands with the dredge spoil to provide an aesthetically pleasing lake with recreational boating opportunities.



Figure 3: Map of Loch Mc Ness/ Wagardu Lake and dredge wreck sites.



Figure 4: Site 1 suction dredge wreck (northern site) (MAAWA)

History

Lake Yanchep (after the Aboriginal word ‘yandjip’ relating to the reeds of the lake) was later renamed Loch Mc Ness, after Sir Charles Mc Ness who provided funds for the sustenance labour project that extensively modified the shallow, reedy swamp. It is also called Wagardu Lake recognising the original Aboriginal name of the stream feeding the lake.

The Department of Conservation & Land Management’s *Yanchep National Park Management Plan 1989-1999* provides the following information on the background to the area’s Aboriginal and European history.

Aboriginal history

The area of Yanchep National Park, particularly around Loch Mc Ness, was occupied and hunted, and associated with this are areas of mythological, ritual and ceremonial significance.

Loch Mc Ness is a mythological site. According to Aboriginal tradition a Waugal inhabits the lake, and the spring (or stream) feeding into the lake (from the east of Lake Mc Ness), known as Wagardu Spring is central to the mythology (O’Connor et al., unpubl: Hallam 1974).

The tribal name for the Yanchep National Park area is Nyanyi-Yandjip which alludes to the reeds of the lake and Waugal’s hairy mane (O’Connor et al. unpubl)

European history

The first recorded visit by a European to the park area was in 1834, when a farmer, John Butler, searched for his lost cattle, and recorded the presence of lakes and abundant game.

Henry White was the first settler in the area in 1901: he built his house adjacent the north-west of Yonderup Lake. In 1903 he was appointed honorary caretaker and guide of the caves (Downey, 1958). By 1904 most of the major caves in the Park area had been discovered and explored. The importance of the caves in the area was recognised, and in 1905 most of what is now Yanchep National Park was reserved for the 'Protection and preservation of caves and flora and for a health and pleasure resort'. Control was by the Caves Board.

Major development of the recreation area into a 'Health and Pleasure Resort' occurred in the 1930's. It was the brainchild of Mr L. E. Shapcott, Under Secretary of the Premier's Department and Chairman of the State Gardens Board. Works were funded by grants made by Sir Charles Mc Ness to provide jobs during the Depression. During this time the following were constructed: roads and internal pathways, Mc Ness Hostel (around the original caves house), crystal pool, Gloucester Lodge, the Yanchep Inn, the administration building and a 'weekend house' for Mr Shapcott at the northern end of Lake Mc Ness. Other works included the dredging of Loch Mc Ness, and the subsequent establishment of a launch service, siting of eight trams for bungalows near Boomerang Gorge, the fitting out of several caves (Crystal, Bedomoro, Mambibby, Yonderup) for tours...

*The reserve was declared a National Park in 1969.
(Department of Conservation & Land Management, 1989: 11-13)*

Some specific historical references to the dredging project are:

*Another early project was the dredging of a channel around the perimeter of Yanchep Lake and a small suction dredge constructed at Yanchep for this purpose under my father's supervision. It was later replaced by a larger, more efficient dredge. The silt dredged from the lake was used as landfill to reclaim swampy areas around the lake foreshore. Once a channel had been dredged, a number of rowing boats were made available for hire to the public. On Sundays and public holidays, a motor launch was available to carry passengers on trips around the lake.
(Walton, n.p.)*



Figure 5: 'Dredge and Walton 1937' (City of Wanneroo Museum and Heritage Collection)



Figure 6: Photograph of two dredges together taken 17 November 1937—grab dredge at left and suction dredge at right. (City of Wanneroo Museum and Heritage Collection)



Figure 7: Photograph of northern site suction dredge dated 1983 (City of Wanneroo Museum and Heritage Collection)

An image in *Stories of old Wanneroo* by Bill Marwick is labelled 'Ron and Tiddles Cockman and Wally Watkins dredge Yanchep Lake', and shows the hand-crane operated grab dredge in operation removing the reeds from shallow water working on conjunction with the suction dredge in the background.



Figure 8: ‘Ron and Tiddles Cockman and Wally Watkins dredge Yanchep Lake’ (from Marwick, 2002)

At the commencement of the Depression in 1929 he (Sir Charles McNess) donated £1,000 towards the cost of a dredge and £2,000 as a legacy for dredging the lakes. As a result many men were employed at Yanchep. The area actually reserved was 5940 acres; 2000 acres are occupied by the lake. The idea of dredging the lake was to enable boat trips to be made. Islands were formed to improve the appearance and actual flow of water for future aquatic life.
(Downey, 1958)

The Yanchep area owes much of its improvement to the public works during the depression years....A major project undertaken was the dredging of Loch McNess, so named as a reminder of the late Sir Charles McNess who developed the park. During his lifetime he donated £ 1,000 for the buying of a dredge to deepen Loch McNess. He left a legacy of £2,000 to further the work in progress of Yanchep. The remains of the dredge today can be seen on the southern side of Loch McNess where it lies rotting in the water.

The dredge gave an excellent performance. A complete circular channel was made around the perimeter of Loch McNess and a large area inside the lake was dredged. The internal area was 50 acres in extent. The mud and ooze was banked up in Lake McNess to form 5 man made islands taking a total of seven islands. Future plans at the time of this development were the dredging of a wide channel northwards, then east, then south to enable tours of the launch to cover several miles through the scenic surroundings. Loch McNess, after the dredging, was made into a place of scenic beauty.
(Mackay, 196?)

A channel was dredged around the perimeter of the lake by a small suction dredge which was later larger and more efficient one. Once this channel had been dredged a number of rowing boats were made available to the public and on Sundays a motor launch was available to carry passengers on trips around the Lake.
(Gentilli, 1963)

A letter signed by a senior clerk N.F. Hunt (?-name unclear) dated 1 September 1964 refers to the bridge at the northern end of Loch Mc Ness stating that ‘when dredging operations are commenced a lot of spoil could perhaps be used in this area for filling’.

John Clarke advised that the larger suction dredge (northern site) was rebuilt/ repaired in the 1960s to conduct further dredging work as the lake had silted up. (Clarke, J. pers. comm., 11 September 2007). Colour digital photographs supplied by the City of Wanneroo Heritage and Museum Collection dated 1983 also show what appears to be the northern dredge being re-floated, pumped out and fitted with a water pump.

Based on the historical information and current observations of lake depth and silt levels (combined with dropping water table levels) a dredging cycle is apparently required every 30-40 years to maintain the depth of the lake for ongoing recreational use.



Figure 9: Refloated dredge in 1983 (City of Wanneroo Museum and Heritage Collection)

Overall the historical references and descriptions above describe the following vessels:

- 1) A suction dredge constructed at Yanchep that was replaced by a larger more powerful dredge (Ref: Walton, Gentili)
- 2) The original dredge constructed at Yanchep and paid for by Sir Charles Mc Ness at a cost of £1,000 that lies in the southern part of the lake (Ref: Mackay)
- 3) The suction dredge that was rebuilt in the 1960s is the northern dredge (Ref: Clarke)

As there are two wrecks in the lake this matches the historical information provided that the smaller dredge (southern site) was initially used as a suction dredge, but later converted into a grab dredge when the new suction dredge (northern site) was built. This larger new suction dredge was then rebuilt/ repaired in the 1960s with heavier bearers to allow maintenance dredging of the lake. It was also apparently re-floated in 1983 although it is not currently known if it was used for dredging the lake. Alternatively there is a third, as yet unlocated dredge—the original suction dredge.

Historic photographs show the two dredges working in conjunction, the grab dredge removing reeds and rushes and the suction dredge pumping mud and ooze.

3.0 Site survey descriptions

Both wrecks lie mainly submerged in less than a metre depth of water. The sites were recorded in three dimensions by baseline/ offset tape measurements, depth/ height profiles and photography. Both sites are in shallow (<1m) depth and are partly submerged in the fresh water of Loch Mc Ness/ Wagardu Lake. Corrosion of machinery parts, and degradation of the hull timbers on both wrecks is noticeable.

Site 1: Northern site – floating suction dredge

Location

32° 32.584' S

115° 40.657' E (Datum: WGS84)

Construction - timber, carvel-built, horizontal planking, flat bottomed box construction narrowed at front, non-propelled. Possibly rebuilt/ reinforced in 1960s e.g. new engine bearers.

Machinery – suction pump piping, discharge pipe, hand-operated geared winch (partially collapsed) with rollers, vertical stud poles (one collapsed), engine for suction dredge pump (engine now missing). Bushfires have burnt most of the wooden hull timbers above water and superstructure and some partially burnt timbers remain. Piles have been driven in next to the wreck to stop it floating into the lake.



Figure 10: Partially collapsed winch Site 1 suction dredge, August 2005. (MAAWA)

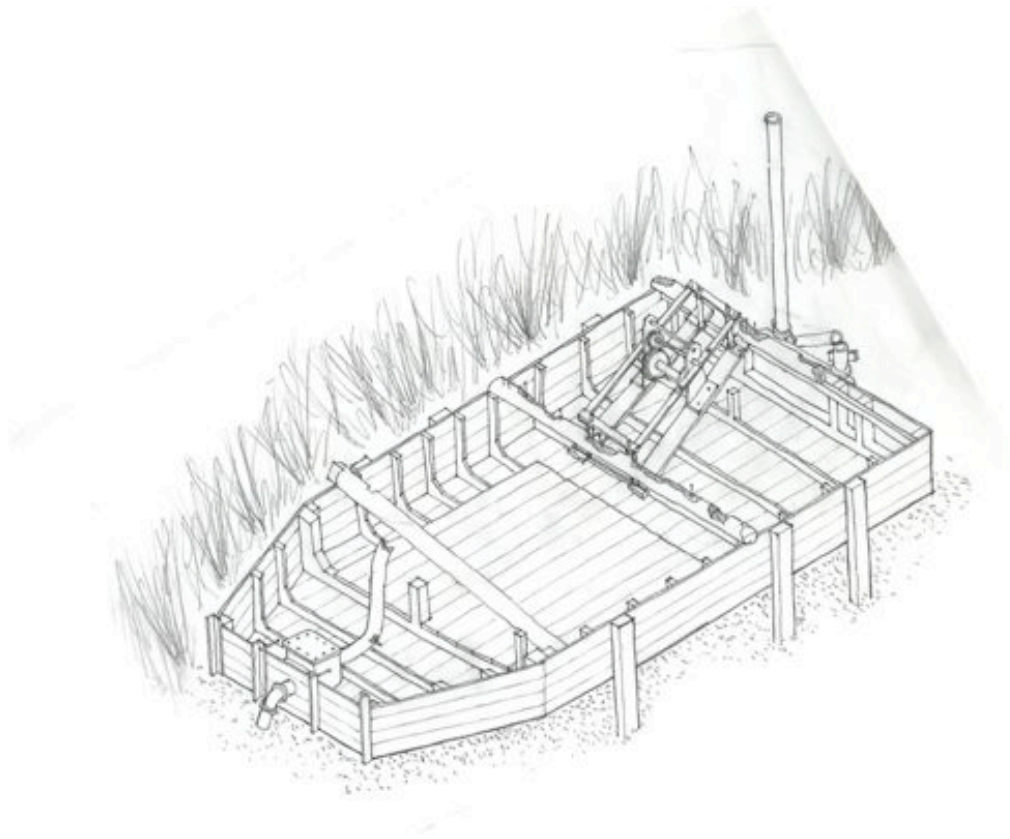


Figure 11: Isometric site plan of Site 1 suction dredge (C. Cockram/ MAAWA)



Figure 12: Site 1 suction dredge in July 2005. Note bushfire damaged walkway/ bridge in background and foreground (J. Clarke)

Site 2: Southern site – floating grab crane dredge

Location:

31° 32.911' S

115° 40.870' E (Datum: WGS84)

Construction – timber, 3 layers of vertical and horizontal hull planking, rectangular flat bottomed box construction, non-propelled, dimensions 6.25 x 3.90m

Machinery - hand-operated geared winch for steel wire, revolving crane operating grab dredge (grab dredge now missing). The crane is corroding and appears likely to collapse in the near future.



Figure 13: Photomosaic of Site 2 grab dredge (southern site) looking north-east (M. Gainsford, WA Museum)

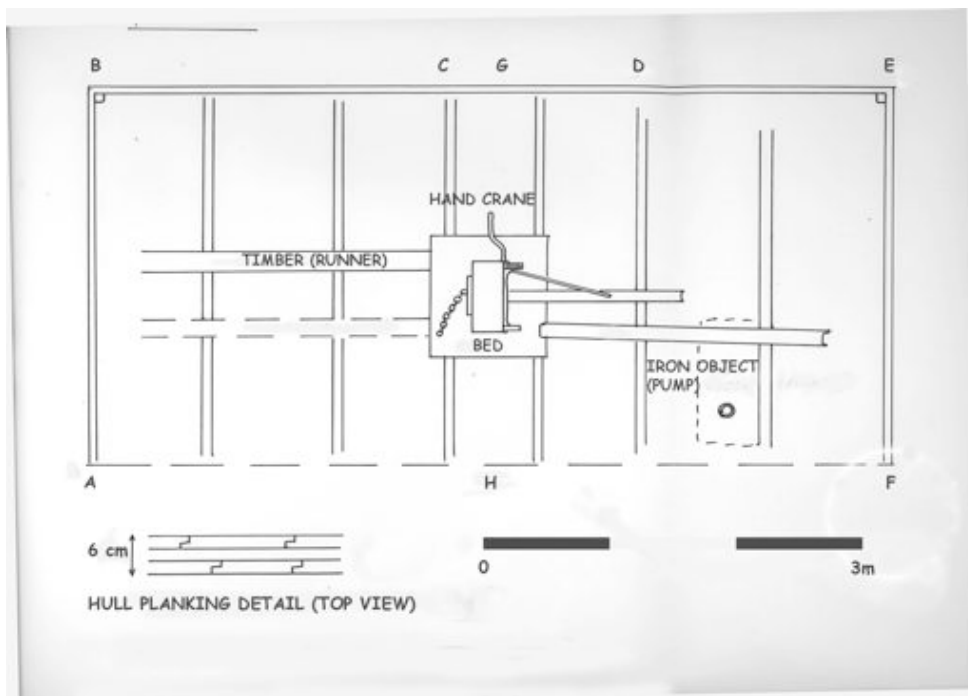


Figure 14: Site 2 grab dredge site plan (R. Anderson, WA Museum)

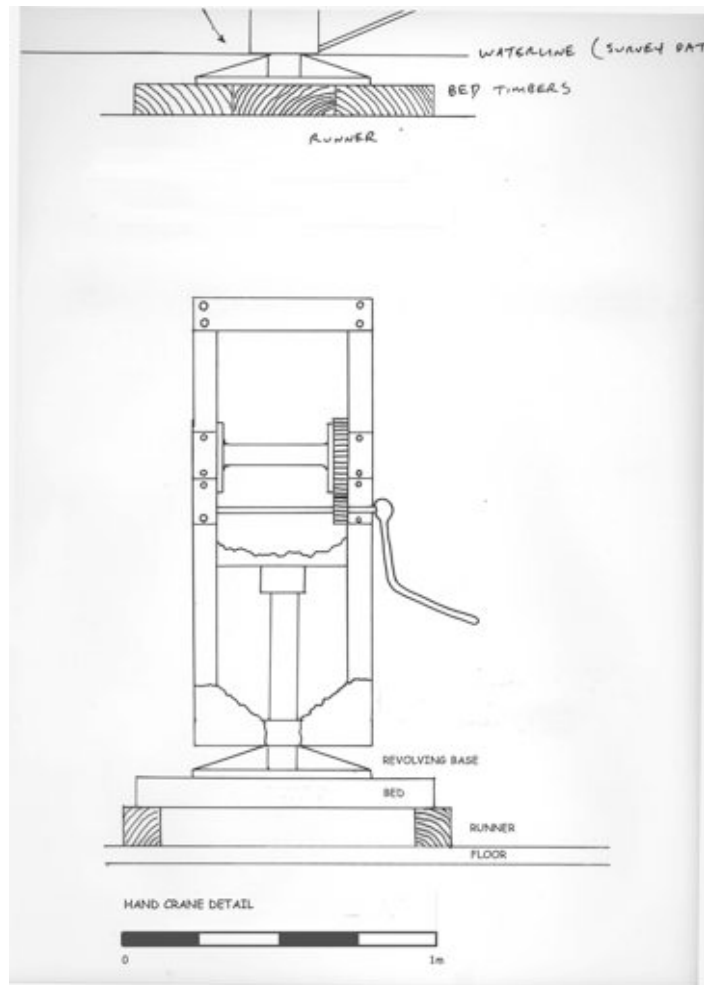


Figure 15: Detail of hand operated crane on Site 2 grab dredge (R. Anderson, WA Museum)

The construction of the southern site dredge is unusual for its 3 layers of hull planking—two vertical planked layers (external and internal) sandwiching a horizontal layer. This construction is inconsistent with any known nautical or boatbuilding traditions and is best described as a ‘robustly constructed waterproof box’.

Suction dredge piping

A length of flanged pipe is visible on the land on the south-eastern foreshore, that is probably associated with the suction dredging works.

Location

31° 32.905' S

115° 40.951' E (Datum: WGS84)



Figure 16: John Clarke recording flanged pipe (MAAWA)

4.0 Results and significance

The survey achieved its aims of documenting the remains of both wrecks. The sites have local interest and significance for their role in the modification of Loch Mc Ness/ Wagardu, the development of Yanchep National Park and Wanneroo area generally, and for their ability to demonstrate the nature of work arising from the sustenance labour projects program in Western Australia.

Yanchep National Park Precinct is registered as Place 04151 on the Western Australian Heritage Register.

In terms of historic value the Heritage Commission states that:

‘The development of Yanchep National Park demonstrates Western Australian Government attempts to provide work during the Depression with assistance from private funds.’

(Heritage Commission, Register of Heritage places, Assessment Documentation, 17 February 2006)

Other major sustenance labour projects of this period include the Great Ocean Road construction and Maribyrnong River benching projects in Victoria, and Kalgoorlie Golden Pipeline construction project in Western Australia.

In this context the Loch McNess/ Wagardu Lake wrecks are interesting as they demonstrate the sustenance labour project work used to modify Lake Yanchep to create Loch Mc Ness, a central aesthetic and recreational feature of Yanchep National Park's recreational facilities. Like the famous Victorian Great Ocean Road sustenance labour construction project the combination of hard work and creating aesthetically and recreationally pleasing places in the Australian landscape were a form of social and physical therapy, as well as providing economic benefit to returned servicemen. In a similar way many memorials to World War I servicemen throughout Australia such as horse drinking troughs and drinking fountains were for public benefit and amenity—having a dual function of making the world a better place while remembering those who were lost. Moreover by making such memorials and places of lasting public benefit they were more likely to be preserved in the public memory—'Lest We Forget'.

It appears likely that the vessels, though apparently abandoned, were in fact purposefully left for future use in the park either for a) the future planned extension of dredging waterway channels and/or b) as reeds and rushes were anticipated to grow back and the lake silted up through natural processes. One of the barges (the northern site suction dredge) appears to have been partially rebuilt and reused in the 1960s to deepen the lake.

5.0 Recommendations

- 1) That both wrecks are preserved *in situ* and interpreted to park visitors e.g. interpretive signage in area of new bridge/ northern wreck.
- 2) That DEC staff contact the Department of Materials Conservation, WA Museum for advice on long-term preservation of the wrecks.
- 4) That the two dredges used to modify Loch Mc Ness/ Wagardu Lake are added into the description of the extent of registration in the Heritage Council of WA listing for the Yanchep National Park Precinct (Place 04151).
- 5) That copies of this report are provided to Department of Environment and Conservation, Yanchep National Park, Heritage Council of WA and Wanneroo Museum.

6.0 References

Primary and secondary sources

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Personal communication

John F. Clarke, September-December 2007