

**Appendix A: Cultural Heritage Assessment (incl. Condition Assessment Of Church, Graves And Monuments)**

PLAN OF MANAGEMENT FOR BAR ISLAND,  
HAWKESBURY RIVER, NEAR BROOKLYN,  
N.S.W.

Cultural Heritage Assessment.

Edward Higginbotham  
MA (Cambridge), PhD (Sydney), MAACAI.  
EDWARD HIGGINBOTHAM & ASSOCIATES PTY LTD  
PO Box 97  
HABERFIELD, NSW 2045.  
Phone. (02) 9716-5154  
Fax. (02) 9716-8547.

For  
Hornsby Shire Council.

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**ACKNOWLEDGMENTS.**

The author would like to thank

**Client:** Ms. Diane Campbell, Hornsby Shire Council.

**Historian:** Mr. Tom Richmond, local resident.

## **1 INTRODUCTION.**

### **1.1 Background.**

This report was commissioned by Hornsby City Council on 31 July 2002.

A number of documents have been previously prepared on the Bar Island Cemetery. The most important report is the Bar Island Conservation Plan, prepared jointly by Amanda Jean and Siobhan Lavelle for Hornsby Council in 1996.<sup>1</sup>

Hornsby Shire Council now wishes to prepare a Draft Plan of Management for the whole island under the Local Government Act with appropriate reference to the principles of land management under the Crown Lands Act. The Plan will also comply with the provisions of Section 36 of the Local Government Act, 1993, relating to plans of management to facilitate its management as a conservation reserve and historic site.

The Plan is to provide for retention and the conservation of monuments, graves and built items, define whether developments should be excluded from the Island, provide for construction of a raised walkway over the Aboriginal midden and other matters including the potential reconstruction of the jetty, restoration of ruins, etc.

The plan is further to ensure a complementary approach to the conservation of the biological diversity of Bar Island and the protection and management of cultural sites of European and Aboriginal Significance.

This report forms the cultural heritage assessment for the Draft Plan of Management, and is prepared in accordance with the following brief.

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<sup>1</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996.

## **1.2 Brief.**

The scope of work for this report is to complete only a portion of the brief for the Draft Plan of Management. The brief includes a methodology for the following issues, namely:

1. Soil and Water issues.
2. Vegetation issues.
3. Fauna issues.
4. Cultural heritage issues.
5. Access and Visitor issues.
6. Interpretation.
7. Compliance issues.
8. Performance, monitoring and reporting.

Only Item 4 above forms the scope of work for this report, with a review and comments on interpretation signage and a contribution towards Compliance issues.

The cultural heritage issues includes the following:

1. Review the Conservation Plan for Bar Island, undertaking any additional research and analysis and community consultation, where appropriate.
2. Address specific issues raised in the Conservation Plan and its review, including:
  - The retention and conservation of the Church, graves and monuments and their surrounds.
  - Undertaking urgent repair works to cemetery monuments, such as displaced graves, stabilisation of the chimney ruins, repair to the memorial lookout.
  - Construction of a boardwalk over the aboriginal midden, etc.
3. Make recommendations for a maintenance program with procedural guidelines for all items that include monitoring for structural stability of the chimney.
4. Make recommendations for a timetable and an estimate of costs for completion of recommended works and ongoing maintenance.
5. Adopt an approach that recognises the natural setting and compliments the management of the natural area and expectations of the community for an appropriate level of use of the area.

6. Prepare submissions to the Heritage Office of NSW and the Australian Heritage Commission for inclusion of Bar Island on the State Heritage Register and the Register of the National Estate.

### **1.3 Location of site.**

Bar Island is located on the south bank of the Hawkesbury River, at the mouth of Berowra and Marramarra Creeks. It is approximately 10 kilometres west of Brooklyn (Figure 1.1). The Island, with an area of approximately 3.8 hectares, is divided into 3 portions of land, namely Lots 22A, 23A and 24, DP 752040. The southern allotment (Lot 24) is Crown land under the care, control and management of Hornsby Shire Council. The 2 northern allotments were owned by the Anglican Church, but were transferred to Hornsby Shire Council on 12 May 2000. The 2 northern allotments measured 3 acres total, now about 1.25 hectares.<sup>2</sup> The two portions were rezoned as Open Space A (Public Recreation – Local) under the Hornsby LEP 1994.<sup>3</sup>

### **1.4 Study methodology and limitations.**

The study is prepared in accordance with standard guidelines for the preparation of conservation management documents.<sup>4</sup>

No survey plans have been prepared for Bar Island, which may be used to obtain accurate measurements and locations for heritage items. The preparation of a survey plan was not part of the scope of work for this report.

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<sup>2</sup> A. Jean & S Lavelle. Bar Island, Hawkesbury River, Conservation Plan. Hornsby Shire Council. 1996:1.

<sup>3</sup> Hornsby Shire Council, 2001. Bar Island – Land Management Options.

<sup>4</sup> Heritage Office and Department of Urban Affairs and Planning. 1996. Statements of Heritage Impact.

Heritage Office and Department of Urban Affairs and Planning. 1996. Conservation Management Documents.

Heritage Office and Department of Urban Affairs and Planning. 1996. NSW Heritage Manual.

Heritage Office and Department of Urban Affairs and Planning. 1996. Archaeological assessments.

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### **1.5 Author identification.**

This report was prepared by Dr. Edward Higginbotham. Historical Research was completed by Terry Kass and forms Chapter 2 of this report.

This report is indebted to the Conservation Plan prepared by Amanda Jean and Siobhan Lavelle in 1996. Where sections of this report are sourced from the 1996 Conservation Plan, each principal reference will be acknowledged.

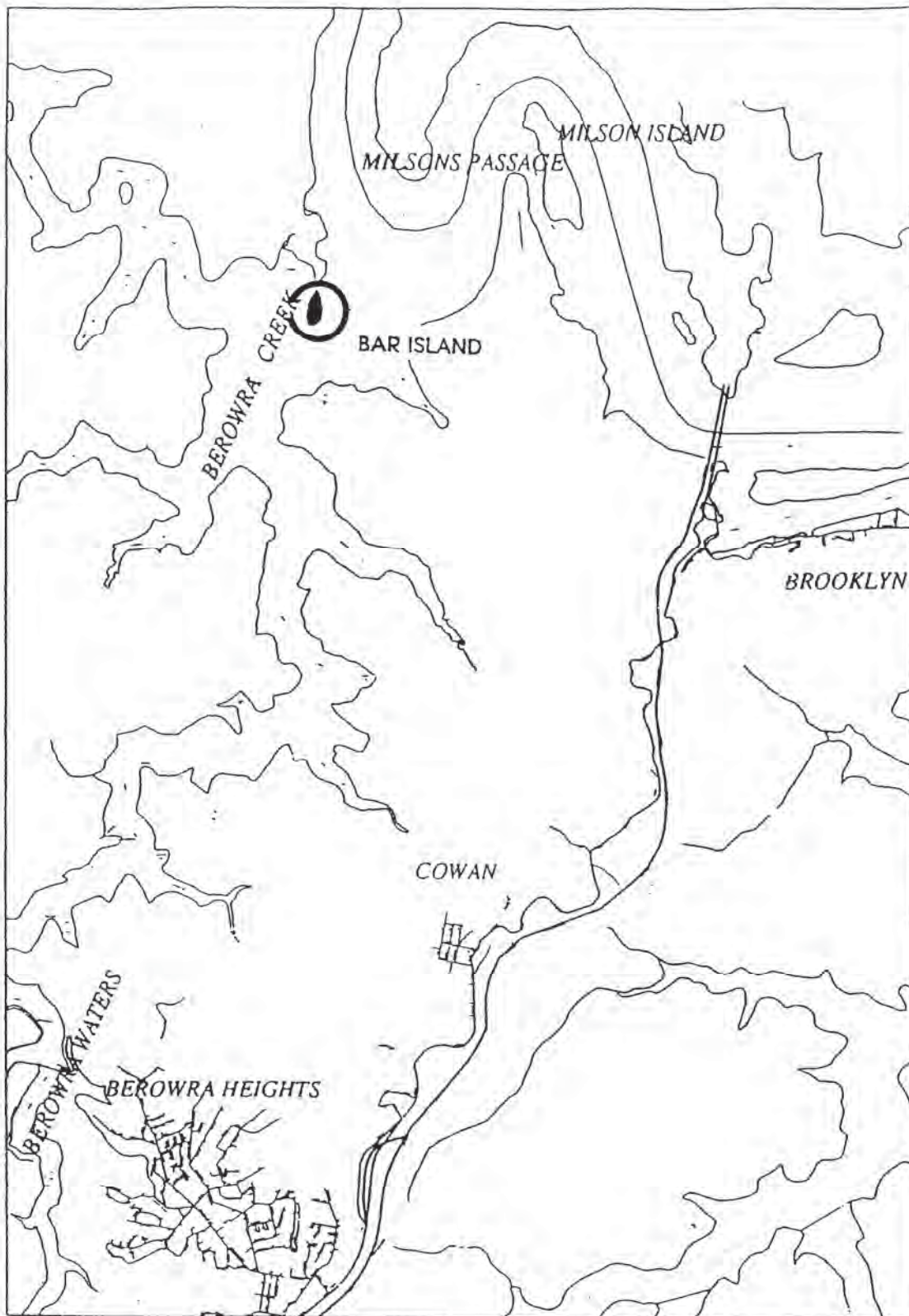
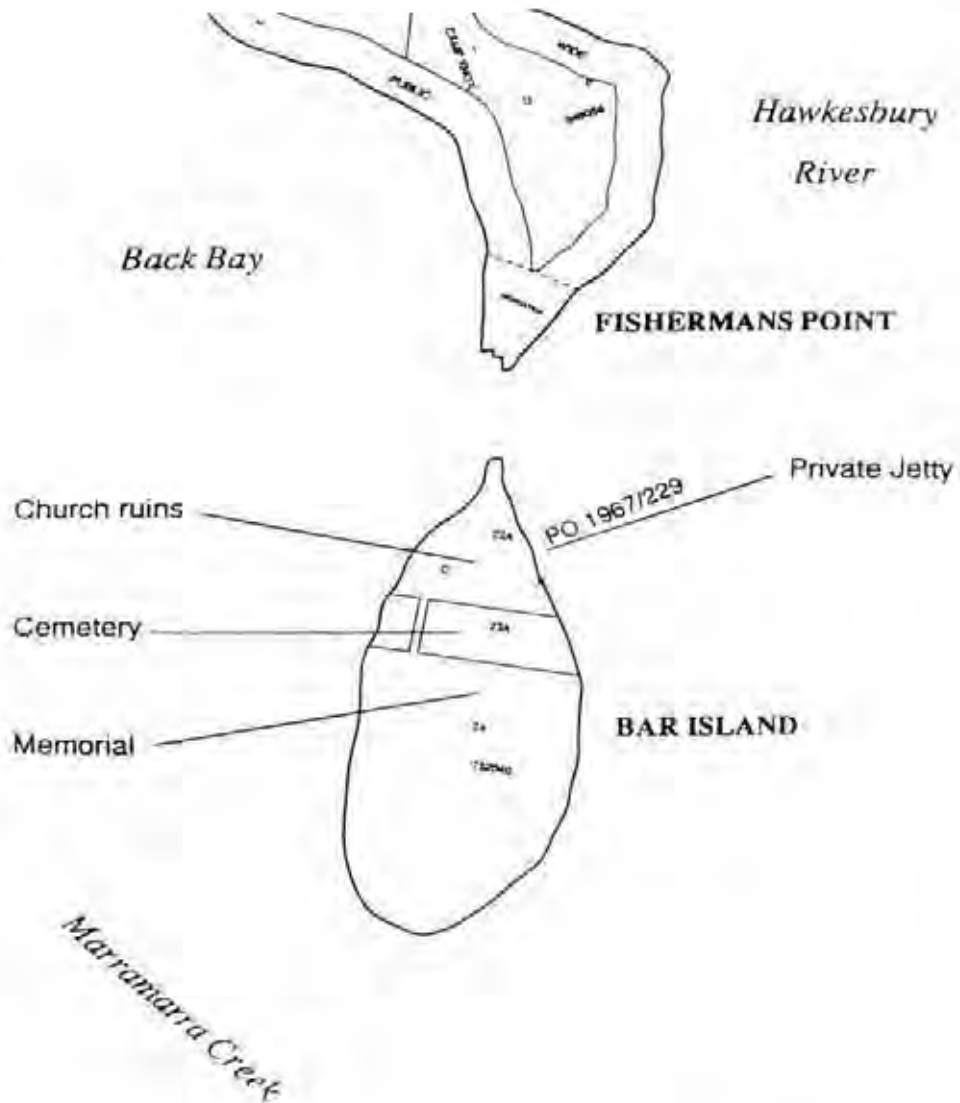


Figure 1.1. Location plan for Bar Island, Hawkesbury River, NSW.



**FIGURE 3.1**  
Location Plan, showing land portions.  
Scale 1: 4000  
(Source: River Settlements Report, Figure 16)

Figure 1.2. Site plan for Bar Island, Hawkesbury River, NSW.  
Source: Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan.  
Hornsby Council 1996. Figure 3.1.

## **2 HISTORICAL BACKGROUND.**

### **2.1 Introduction.**

The following historical report was researched and written by Terry Kass, historian. It seeks to assist in the review of the 1996 Conservation Plan.

This report is not intended as a detailed history of the Island and the cemetery. It seeks to analyse and clarify a number of issues, which have emerged since the preparation of the 1996 Conservation Plan.

### **2.2 A brief history of Bar Island.**

Settlement of Europeans on the Upper Hawkesbury at what is now Wilberforce in 1794, followed by the settlement of increasing number of more people there, ensured the Hawkesbury became the major access route to the area for many years. Although roads were gradually laid out to the settlement on the Upper Hawkesbury, they were originally poor and the river remained a major transport route for many years. Settlement on the Lower Hawkesbury also proceeded.

Bar Island was positioned at the junction of the Hawkesbury River with Berowra and Marramarra Creeks, all of which possessed a number of arms along which settlement also proceeded. It is not known who were the earliest European users of the island. In 1862, Bar Island was included in a blanket reservation by the Crown of the banks of rivers and islands within rivers.

However, the accessibility of Bar Island and the paucity of other places to settle on this rocky stretch of the river meant that it attracted attention. On 31 May 1871, John Greer, of Mangrove Creek, applied to purchase Bar Island.<sup>5</sup> Surveyor G M Pitt was delegated to survey the island in answer to this request. His report of 31 October 1871 described Bar Island as “a small sandstone mountain, devoid of fresh water, with high

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<sup>5</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340



grass”, with Aboriginal midden deposits on the north-east part. <sup>6</sup> John Greer was informed in March 1872 that the Island could not be alienated.<sup>7</sup>

On 14 February 1876, Reverend Henry H Britten of Castle Hill, the Anglican minister servicing this large parish, requested permission to erect a small building on the island to use as a church. He had already been refused permission for a church grant of the island for use of the Church of England. <sup>8</sup> Approval to erect the building was granted on 2 August 1876. A church was duly built of weatherboards with a stone chimney. The first service was held in the newly completed Bar Island church on 26 October 1876.

In 1876 the school at Peat’s Ferry nearby had to close when use of the private building, which housed the school, was withdrawn. Britten offered to permit the school to operate in the church on Bar Island, which was duly accepted. The school commenced lessons in the church in 1877.<sup>9</sup> The school was known as Bar Point until 1892. From its commencement in 1875 until December 1883, the school operated as a half-time school in conjunction with Peat’s Ferry / Brooklyn.<sup>10</sup>

Britten applied for a grant to the Church of England of 3 acres on Bar Island for a church and burial ground on 22 February 1878.<sup>11</sup> Surveyor Robert Deighton, who was measuring a road in the vicinity, was delegated to measure the Island for the church ground as well. Deighton’s survey in March 1878 found that the island was a “rough sandstone hill” with gum, apple and oak trees and poor soil. There was a church of weatherboard, worth £120, and a cottage, worth £20, already on the island.<sup>12</sup>

Exclusive use of such a site by one denomination contravened the policy of the Lands Department, Thus, on 9 April 1878, the Surveyor-General P F Adams, minuted that the island must be divided to cater for other denominations. Deighton was instructed on 18 April 1878 to provide areas on the island for other denominations. In addition, a

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<sup>6</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>7</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>8</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>9</sup> Richmond, Bar Island, p 5

<sup>10</sup> Dept of Education, Government Schools of New South Wales 1848 to 1993, Dept, 1993, p 27

<sup>11</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>12</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

“Road of access to the Churches and Cemeteries may be made, but need not be wider than necessary for a funeral procession”.<sup>13</sup>

Britten was not pleased with this development and protested vigorously making a number of objections. Deighton was informed on 11 June 1878 that Britten had objected that there was not enough ground on the island to cater for all denominations. Additionally, Britten pointed out, the other denominations were provided for in other locations on the Hawkesbury. Deighton was asked to report on the matter.<sup>14</sup> After making the necessary enquiries locally, Deighton reported on 20 June 1878 that Britten’s objections were valid.<sup>15</sup> This allowed the Department to set Bar Island aside for the Anglican Church.

The earliest known interment in Bar Island cemetery was that of 5 month old Caroline Mary Banks, who died on 20 August 1879 and was buried there on 23 August 1879.<sup>16</sup> It is notable that this is before the official gazettal of the land for a church or cemetery. Such interments on unreserved ground were not uncommon in the less settled early years of New South Wales. It cannot be discounted that there were earlier burials. The surviving sexton’s records were a compilation made about 1897 by the sexton, William Coote, or, as Tom Richmond, has suggested, by his wife, a literate woman, who assisted her illiterate husband. The burial list includes a number of lots in the sections with no data, as the names were not known to Coote.<sup>17</sup> By the time Caroline Mary Banks was buried in August 1879, the church had been functioning for almost three years.

Meanwhile, the official reservation of part of Bar Island for the church proceeded. On 13 November 1879, Bar Island was to be laid out as approved by the Secretary for Lands.<sup>18</sup> Surveyor F L Burdett was delegated to complete this task. Burdett surveyed the cemetery on 10 March 1880. Although it did not fully accord with the instructions, his survey was accepted.<sup>19</sup> His survey plan noted the addition of a fence worth £8/0/0 in the cemetery reserve.<sup>20</sup>

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<sup>13</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>14</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>15</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>16</sup> T Richmond, *Bar Island: Last Resting Place*, Author, Brooklyn, 2002, p 12

<sup>17</sup> Tom Richmond, (ed), *Bar Island Cemetery: Sexton’s Records*, Author, Brooklyn, 2002

<sup>18</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>19</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>20</sup> C. 845.1984, Crown Plan

The year 1880 proved to be a notable one. On 1 October 1880, Maud Lloyd, a three week old baby, died and was buried on Bar Island by her father, storekeeper, Richard Lloyd. Henry Kendall, the poet, who was working on mail deliveries for the Fagan family of Gosford, was acquainted with the Lloyd family. There is some evidence that this burial at Bar Island and the consequent grief of the family inspired the Henry Kendall poem, entitled “On A Baby Buried by the Hawkesbury”.<sup>21</sup>

On 6 November 1880, the death occurred of Sarah Ferdinand, who is believed to have been the last full-blooded Aboriginal on Berowra Creek.<sup>22</sup> This will be examined in more detail below.

The moves to set aside the island, or part of it at least, for the church and burial ground reached fruition on 11 March 1881, when Bar Island was dedicated for the Church of England church and cemetery.<sup>23</sup> Almost immediately, another claimant for the island pressed forward. On 4 July 1881, the Department of Public Instruction applied for a school site to cover 2 acres on Bar Island east of the church, plus 4 acres to the south for use as a school paddock.<sup>24</sup>

In response to a request from the Lands Department for advice and a report on the matter, Surveyor Burdett, who had recently completed the cemetery survey, reported that there was only about 3/4 of an acre available between the church and cottage and about 3 acres on the south part of the island for the paddock.<sup>25</sup> In other words, there was little scope for the land, which the Department of Public Instruction needed. In view of this, the Department of Public Instruction deferred establishment of a permanent school site on 31 October 1883, but it still wanted the rest of the island reserved for school purposes.<sup>26</sup> The Department was informed on 10 December 1883 that Bar Island had been included in a general reservation of land along rivers and islands for water supply etc.<sup>27</sup> There the matter rested since developments in other parts of the district were overtaking the need for the school.

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<sup>21</sup> T Richmond, *Bar Island: Last Resting Place*, Author, Brooklyn, 2002, p 14

<sup>22</sup> T Richmond, *Bar Island: Last Resting Place*, Author, Brooklyn, 2002, p 14-5

<sup>23</sup> NSWGG, 11 March 1881, p 1357

<sup>24</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>25</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>26</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

<sup>27</sup> At Ms 83/21738, Lands, Miscellaneous Branch, Correspondence, SRNSW 2/1340

Bar Island School became a full-time school in February 1884.<sup>28</sup> The commencement of railway works to construct the Homebush to Waratah railway from 1883 onwards had a large impact on the locality. Work on the causeway to the Hawkesbury River Bridge, and the establishment of the railway camp near the bridge shifted the focus of the area eastwards to what soon became the Village of Brooklyn.<sup>29</sup>

Thus, in April 1892, the Bar Island School closed. The School reopened briefly from January 1901 to July 1903.<sup>30</sup>

By the beginning of the twentieth century, the Church building was in a dilapidated state. There are various tales attributing the cause of its decay to a range of causes, ranging from normal wear and tear, lack of maintenance, vandalism, and a fierce storm in 1887. It subsequently became a ruin. Now only the more substantial elements, such as the stone chimney, remain.

### **2.3 Analysis of criticisms of the 1996 Conservation Plan**

Some omissions in the 1996 Conservation Plan were later identified by Tom Richmond. The accuracy of these claims has been disputed by others, such as Ralph Hawkins.

The main issues, which need to be resolved, are:

1. There appear to have been other burials on the Island, which were not identified in the 1996 Conservation Plan.
2. The identification of Sarah Ferdinand, buried in the cemetery, as an Aboriginal person has been disputed.
3. A poem by noted early Australian poet, Henry Kendall, about a child burial on Bar Island needs further support.

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<sup>28</sup> Dept of Education, Government Schools of New South Wales 1848 to 1993, Dept, 1993, p 27

<sup>29</sup> Tom Richmond, *Brooklyn: Federation Village*, Deerubbin Press, Berowra Heights, 2002, pp 35-8

<sup>30</sup> Dept of Education, Government Schools of New South Wales 1848 to 1993, Dept, 1993, p 27

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## 2.4 Burials on the Island

There are additional burials, which have been identified by Tom Richmond.

The 1996 Conservation Plan identified the burial plots, which could be located. Additional burials can be added to this list. By perseverance and following up occasional clues, Tom Richmond has located a number of other burials, all of which are listed and given brief biographies in his publication *Bar Island: Last Resting Place*.<sup>31</sup> The most fruitful source for the additional burials was the surviving burial list of the sexton.<sup>32</sup> However, even this is incomplete.

Due to the position of Bar Island, with many travellers passing by and due to the fact that people from the local community were also focussed on different areas beyond the Hawkesbury, there are no sources which will provide additional data about burials which do not require a great deal of time to access.

A fuller picture of burials will emerge as research continues. Tom Richmond has used the sexton's records, coupled with other sources, to identify 45 people, who are buried on the island. Additional unnamed plots in the sexton's records and other sources suggest that there may be a total of 50 to 60 burials (not allowing for the interment of more than one person in family plots).<sup>33</sup> The time necessary to identify this handful of additional plots and their occupiers is disproportionate to the additional data that will be obtained. It looks as though Tom Richmond will continue to locate other burials as additional data comes to hand. This should not only be expected, but could even be encouraged.

## 2.5 Identity and Significance of Sarah Ferdinand/Lewis

“Granny Lewis” is claimed by various people to have been the last full-blooded Aboriginal to have died on the Hawkesbury.

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<sup>31</sup> Tom Richmond, *Bar Island: Last Resting Place*, Author, Brooklyn, 2002

<sup>32</sup> Tom Richmond, (ed), *Bar Island Cemetery: Sexton's Records*, Author, Brooklyn, 2002

<sup>33</sup> Tom Richmond, (ed), *Bar Island Cemetery: Sexton's Records*, Author, Brooklyn, 2002, Introduction

This claim has been followed up by Tom Richmond, who has, by careful research over many years, identified her as Sarah Wallace, later known as Sarah Ferdinand/Lewis. She can confidently be identified as the same woman as Granny Lewis.

Sarah's father was identified on her death certificate as "Richard Wallace, Aboriginal". Her mother's name was given as Bridget. She was buried at Bar Island cemetery after her death on 6 November 1880.

There is other evidence from family traditions that she and her descendants had a special relationship with the local Hawkesbury Aborigines. They regularly met members of the Berowra Aborigines, practiced bushcraft with them and nursed them as death approached.

Ralph Hawkins has investigated the accuracy of the identification of Richard Wallace as an Aboriginal person. He now accepts that Sarah Wallace was a full blood Aboriginal person from the Hawkesbury area.<sup>34</sup> Sarah's date of birth appears to have been somewhere about 1805.

In May 1825, Sarah Wallace unsuccessfully applied to marry Lewis Ferdinand ("Ferrando" in the documentation) at Windsor. By then, she already had her first child, Elizabeth, who has been identified as one of her children by both Richmond and Hawkins.

The earliest documentary evidence to place the couple in the Marra Marra area dates from 1828, though they may have been there as early as 1825.

Tom Richmond carried out the arduous task of making the initial linkages, which connected the reputedly full-blooded Aboriginal Granny Lewis of legend to the real life Sarah Wallace/Ferdinand/Lewis. On the basis of the data available to him, Richmond concluded that she was identical to "Granny Lewis". He was not able, for

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<sup>34</sup> Personal communication: Diane Campbell, Hornsby Shire Council. 30 October 2002. Also discussions between Ralph Hawkins and Diane Campbell on 27 November 2002, relayed to the author in comments on the report text on 28 November 2002.

family reasons, to check a fuller range of sources about her earlier years, which Ralph Hawkins has done.

Granny Lewis/Ferdinand became the matriarch of many local families, since her children married into the local community. She maintained links with the Hawkesbury/Berowra Aboriginal community, which were maintained in later years by her children. She was a key figure linking local families and the survivors of the local Aboriginal community.

Granny Lewis has significance for the Bar Island cemetery. Some of these elements of significance have been pointed out by Tom Richmond. These are:

1. She is of Aboriginal descent and she is indeed buried on Bar Island, though the location of her grave is not known.
2. She has links to a number of the other burials in the cemetery and is a key link between many early families in the district.

## **2.6 Association of a Henry Kendall poem with a child burial on Bar Island.**

Henry Kendall was a noted early Australian poet, one of the first to treat the Australian landscape as intrinsically beautiful and capable of arousing deep and passionate love of country.

Henry Kendall's own life was a hard and difficult one. For a period from the mid 1870s until about 1881, he lived and worked for the Fagan family at Gosford, which enabled him to recover his stability, earn some money and regain his self-respect after crushing blows in his earlier life. As one of the tasks Henry Kendall undertook for the Fagans, who held the mail contract, he often carried the mail down the Hawkesbury. It was during these mail runs, that he is reputed to have become friends with Richard Lloyd, the local storekeeper, and his young, second wife, Josephine. Kendall is reputed to have sent a poem to them in exchange for goods he bought at the store. The early evidence for this comes from the reminiscences of William ("Bill") Mathews, an early resident of Brooklyn. These reminiscences were confirmed by other people from the area, who were knowledgeable about the history of the locality, such as Tom Richmond's grandmother. They also confirm the details



of the association of the Henry Kendall poem with Maud Lloyd buried at Bar Island.<sup>35</sup>

The details are thus – the Lloyd family, Richard and Josephine, had a small daughter, Maude, in September 1880. She was a much wanted child, but she died on 1 October 1880, aged a mere three weeks old. She was buried by the family on Bar Island. Her father, Richard (often called John in many documents), acted as the undertaker.

In response to the grief of the family, which possibly reacted with his own memories of the loss of a much loved small daughter, Kendall is believed to have written the poem, “On a Baby Buried by the Hawkesbury” which was sent to the Lloyd family.

The evidence for this is uncertain. It relies upon oral tradition. The earliest informant was Mrs Ted Ross, a niece of the Lloyds, who informed W C Mathews of this story, which he repeated at a talk at Brooklyn Public School in 1950. In addition, Tom Richmond heard the same tale from his grandmother, Anne Johnson (nee Seymour), as well as from Sam Williams, now deceased. All of these are oral traditions and do acquire some degree of credibility. No other evidence has been cited to corroborate the claim that the burial was associated with the poem. Further research should be undertaken to either confirm or repudiate this association.

Other evidence might provide direct data about the writing of the poem and who it was meant for. Yet, even if such data of a direct link is not forthcoming, there are other ways to confirm the likelihood of the poem being associated with this burial. No source has been found to confirm the date on which the poem was written, nor has anything linked it to the place where the burial occurred. If a date can be assigned to the poem, it could, at the very least, eliminate a series of other possible burials of small children along the Hawkesbury. As the matter stands at present, the poem could relate to any child of a young mother buried along the banks of the Hawkesbury between the years 1875 to 1881.

At this stage, the claim for the association between the poem and the unmarked grave should be further investigated. There are a number of sources for Henry Kendall, both primary and secondary, which should be examined in order to cast further light on this matter. The matter might be resolved if such additional research was undertaken.

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<sup>35</sup> William Mathews, *History of Brooklyn and its School*, edited by Tom Richmond, Brooklyn, 1998, pp 7-9



2.7 Historical plans and photographs.

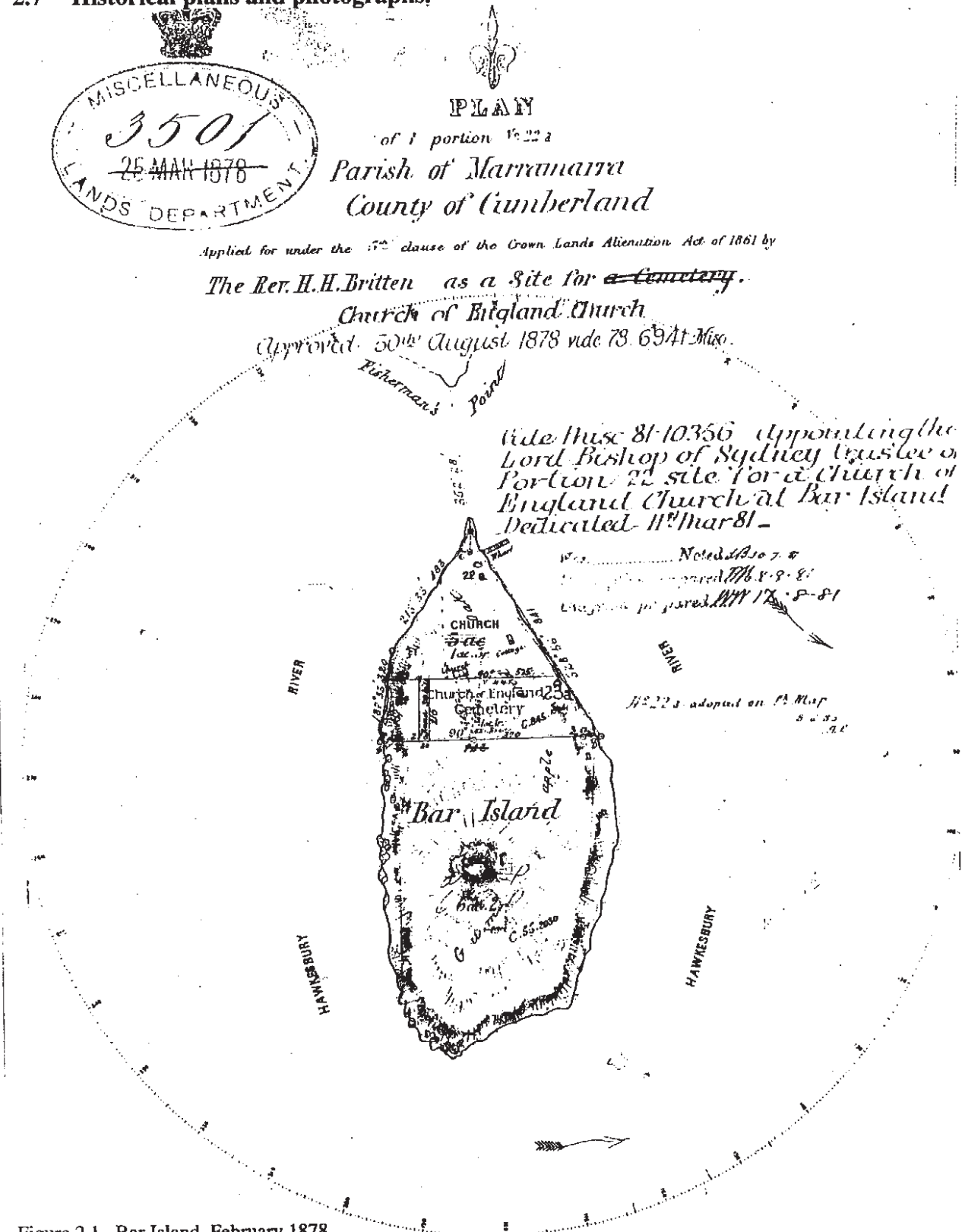


Figure 2.1. Bar Island, February 1878

This survey by Surveyor Robert Deighton, showed the church, cottage and wharf plus the land to be set aside for the church and cemetery plus the road along the western side.

Source: C.638.1984, Crown Plan



Figure 2.2. Bar Island, March 1880

A later survey by Surveyor F L Burdett, showed similar details to those in Deighton's survey, on which it was probably based. Note the fenced area in the cemetery, with a fence worth £8.

Source: C.845.1984, Crown Plan



Figure 2.3. St. John's Church, Bar Island, undated.  
One of the clearest available views of the weatherboard church with its vestry and the surviving fireplace on its northern end. The church building is aligned east-west, the east end at the left of the photograph.

Source: Tom Richmond, historian and local resident.

Figure 2.4. St. John's Church, Bar Island, undated.  
View of the south side of the church, showing the entrance porch.





Figure 2.5. St. John's Church, Bar Island, undated.  
View of the north-east side of the church, showing the vestry on the right and the entrance porch on the left.  
Source: Tom Richmond, historian and local resident.

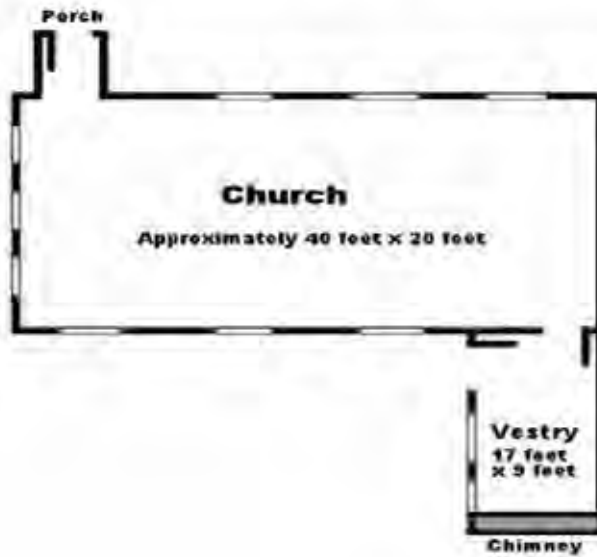


Figure 2.6. St. John's Church, Bar Island.

This plan of the church was drawn by Tom Richmond, based on historical measurements of the vestry and extrapolated measurements for the church and porch. The measurements were checked on the site and found to coincide with sandstone blocks, which may have been piers for the church building.

Source: Tom Richmond, historian and local resident.





Figure 2.7. St. John's Church, Bar Island, 1970s.

Photograph of the chimney of the vestry, together with the flagpole, erected after the demolition of the church.

Source: Tom Richmond, historian and local resident.



Figure 2.8. St. John's Church, Bar Island, undated.  
Photograph of the grave of Richard Hibbs and Maria Byrnes, prior to the removal of the gravestone and inscription.  
Source: Tom Richmond, historian and local resident.



Figure 2.9. St. John's Church, Bar Island, undated.  
The pathway leading to the church, with the fireplace in the background. Note the sandstone surface of the pathway.  
Source: Tom Richmond, historian and local resident.



### **3 SITE SURVEY.**

Site survey of the Bar Island Cemetery and related sites was completed by Edward Higginbotham on 28 August 2002.

The goals of the site survey can be listed as follows:

1. Record the current condition of all sites and monuments.
2. Check for any evidence for additional sites.

#### **3.1 General description of sites and monuments on Bar Island.**

The 1996 Conservation Plan includes a relatively complete description of the sites and monuments on Bar Island.<sup>36</sup> The following text is a summary of this description, updated by notes taken during site survey in 2002.

The island comprises an area of approximately 3.8 hectares (9 acres) and rises to a height of about 30 metres. The island is covered in natural bushland with areas of sandstone outcrops. An aboriginal midden (2) is located on the northern tip of the island. Evidence of historical settlement includes a jetty (1), rock inscription, ruins of the church (3), the site of a small cottage (5), the cemetery (4.1-4.27) and on the summit a memorial lookout (6). The site of a pit (8) was not relocated in the 2002 site inspection. The Inventory of the 1996 Conservation Plan is reproduced in Appendix 2, and the numbering of this inventory is re-used in this report.

“The island has a spectacular natural setting, being surrounded by largely unspoilt bushland areas, with dramatic and steep cliffs which descend from high sandstone escarpments to the drowned river valley of the Hawkesbury and its tributaries. Bar Island is a distinctive landmark when viewed from the Hawkesbury River and adjacent shore lands”.<sup>37</sup>

The island is only accessible by boat. Visitors to the island undertake a number of activities, including picnics, barbeques and over night camping. While visitation was

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<sup>36</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:14-22.

<sup>37</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:14.

considered quite high in the 1996 Conservation Plan, levels of visitation may have been reduced more recently, possibly by the removal of the decking of the jetty. Nonetheless visitation has caused a number of problems, including erosion of the Aboriginal shell midden, vandalism of headstones, damage to the chimney, removal of stones to make ad hoc fireplaces, lighting of fires, weed invasion and the cutting of timber.

### **3.1.1 Cemetery.**

The cemetery is located on the northern part of the island, within Lot 23 on the gently sloping ridgeline. Access to the cemetery is from the jetty (1) at the north end of the Island. The pathway crosses the Aboriginal midden (2) and also an inscribed rock, before reaching and crossing through the site of the church (3). The area of the cemetery (4) is gradually being overgrown by bushland. There are a number of established trees within the area occupied by the graves, as well as a number of saplings and shrubs, together with native grasses. No exotic species were observed, although a number of exotic bulbs were noted in the National Trust listing. The cemetery covers an area of approximately 20 metres east to west and 30 metres north to south. No evidence of a fenced boundary or pathways within the cemetery could be located. The graves are all nominally facing east (east-west orientation) as is usual in Christian practice, with one exception (4.04).

According to the sexton's records, the cemetery was divided into three sections, each aligned on a north to south axis, numbered 1-3 from east to west. Each section was comprised of 2 rows of burials and there appears to have been a central pathway, running between the two rows of the central section.<sup>38</sup> The passage of time has obscured the original layout, so that by the time the 1996 Conservation Plan was prepared, it could be described as follows: "the monuments themselves form two main clusters within the cemetery on each side of the central path. In plan the layout of the grave rows and monuments does appear to be orderly, with two sets of three grave rows divided along a probable north-south axis."<sup>39</sup> The 1996 Conservation Plan recognised the six major north-south rows, however the plan included in the report

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<sup>38</sup> Tom Richmond, (ed), *Bar Island Cemetery: Sexton's Records*, Author, Brooklyn, 2002

<sup>39</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:15.

shows four of these rows are only indicated by two to three marked graves, as follows (Figure 3.2):

Row 6	Row 5	Row 4	Row 3	Row 2	Row 1
18	17	16	1		
19				2	
		15		3	
20					(4)
21				5	6
22			11		7
					8
			13	9	10
23				12	(unmarked)
24					
25	26				14
27					

The six rows of burials divide into pairs, Rows 1 and 2 belonging to Section 1, Rows 3 and 4 to Section 2 and Rows 5 and 6 to Section 3. The current pathway through the cemetery may have been present from the date the sexton's records were drawn up between 1897 and 1904, but could be a later feature associated with the

The sexton's records reveal that there were 58 burials, as follows:<sup>40</sup>

Section 3	Section 2	Section 1
24 burials	8 burials	26 burials

This can be compared with the present appearance of the cemetery, as follows:

Section 3	Section 2	Section 1
14 burials. <sup>41</sup>	5 burials	12 burials. <sup>42</sup>

The following burials therefore remain unlocated in each section, as follows:

Section 3	Section 2	Section 1

<sup>40</sup> Tom Richmond, (ed), *Bar Island Cemetery: Sexton's Records*, Author, Brooklyn, 2002

<sup>41</sup> No. 26 is a triple burial. No. 27 is a double burial.

<sup>42</sup> No. 4 is not counted. No. 3 is a double burial.

10 burials	3 burials	14 burials
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The gaps in the rows leave ample space for a large number of unmarked additional grave sites.

Total burials (sexton's records and other sources)	58-62. <sup>43</sup>
Total burials with identifications located by site survey (including 4.3). <sup>44</sup>	19
Other burials, unidentified, located by site survey (excluding 4.2)	12
Burials still to be located	27-31

The 27-31 unlocated burials could easily fill many of the gaps in the existing rows with their exact position being lost through accidental or deliberate removal of rough stone surrounds and the rotting away of timber markers.

“The cemetery contains a total of twenty seven (27) marked grave plots in six major rows. Fifteen plots have formal headstones or other distinct markers and several of these plots feature formally constructed surrounds of sandstone kerbing. Formal headstones comprise seven of white marble with lead lettering; two small sandstone obelisks; two sandstone headstones; one small sandstone desk monument. Other markers comprise three roughly squared local stone pieces with painted inscriptions. One of these painted rocks marks a very small grave which unlike all other monuments in the cemetery faces north. This grave was not noted in the National Trust's 1987 survey, and is therefore thought to be a more recent introduction. It is also thought that it may be a grave of a pet animal, due to its extremely small size. The cemetery also contains at least ten grave plots marked by surrounds of local stone pieces, one double plot marked with a surround of bricks and stone pieces and one plot defined with cement kerbing.”<sup>45</sup>

<sup>43</sup> Tom Richmond indicates that there are 58 burials recorded in the sexton's records. He also points out that there may be 3-4 other burials. Tom Richmond, (ed), *Bar Island Cemetery: Sexton's Records*, Author, Brooklyn, 2002

<sup>44</sup> See Section 3.3 for identification of Grave 4.3.

<sup>45</sup> Amanda Jean and Siobhan Lavelle, *Bar Island, Hawkesbury River, Conservation Plan*. Hornsby Council 1996: 16.

The 1996 Conservation Plan notes at least ten burials with rough stone surrounds. This stone can easily and accidentally be displaced, or deliberately moved from one grave to another. It is quite possible that a number of graves without stone headstones have been lost in this way. They may originally have been marked by rough stone surround and a timber marker, which has now rotted away.

The cemetery possesses a range of work by monumental masons, with inscriptions revealing sources in Sydney, the North Shore and Rookwood, but none from the locality. Most of the headstone designs are typical of their era, in simple and restrained styles, with traditional funerary symbolism and inscriptions. The 1887 sandstone headstone (4.25) is a relatively late example of its style, with parallels on the Hawkesbury at Windsor and in private cemeteries along the McDonald River Valley. The dominance of white marble in the Bar Island Cemetery indicates the rapid acceptance of new fashions, which had seen marble become the predominant material used in Sydney's cemeteries from the 1880s onwards. The 1996 Conservation Plan suggested that "the simple vernacular surrounds of rock pieces and the concrete surround also imply that use of the cemetery probably continued into the Depression years of the 1930s", although with only one exception there are no known burials later than 1906.<sup>46</sup> It is also stated that the presence of the rough stone surrounds suggests that "the poorer members of the local community were not able to afford formal headstones. They may reflect modest economic means or difficult times such as the 1890s or 1930s Depressions."<sup>47</sup>

### **3.1.2 The church.**

The 1996 Conservation Plan suggests that the surviving chimney "may have been as a slightly detached structure, which is common in primitive timber building construction techniques where the hazard of fire was a real concern."<sup>48</sup> With the benefit of additional research by Tom Richmond and a third photograph becoming

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<sup>46</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996: 16.

<sup>47</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996. Inventory, for example 4.5.

<sup>48</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:21.

available it is clear that the chimney formed the end wall of the vestry (Figures 2.3 to 2.6).

The site of the church and cottage is shown in Figures 2.1 and 2.2.

### **3.1.3 The Jetty.**

The 1996 Conservation Plan describes the jetty as being constructed in the early 20<sup>th</sup> century. The jetty is first shown on the plan dated to 1878, and hence the site, if not the jetty itself, is earlier than previously expected. The current jetty was built by Gordon Thompson in 1972 and replaced the previous structure.<sup>49</sup> The existing structure therefore has little or no heritage significance, except that it denotes continuous use of the location for a jetty since the 1870s. (Figures 2.1 and 2.2).

## **3.2 Current condition of sites and monuments.**

The 1996 Conservation Plan included an inventory of sites on Bar Island. The numbering system of the 1996 Conservation Plan is reused in this report. One site was not recorded in 1995, namely the inscription on the rock on the pathway to the Cemetery. The condition of the grave markers and church / vestry fireplace was assessed in detail by Julian Bickersteth, International Conservation Services.<sup>50</sup>

<b>Inventory</b>	<b>Item name</b>	<b>Current condition.</b>
01	Timber Jetty	Since 1995 the timber decking of the jetty has been removed. Otherwise the stone and concrete supports for the jetty appear to be in similar condition to 1995 survey.

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<sup>49</sup> Personal Communication: Gordon Thompson.

<sup>50</sup> Julian Bickersteth, International Conservation Services .. 2002. Assessment of condition of Church, graves and monuments on Bar Island, Hawkesbury. Hornsby Shire Council.

<b>Inventory</b>	<b>Item name</b>	<b>Current condition.</b>
02	Aboriginal midden	The current condition of the midden appears little changed from 1995. There is current erosion of the midden and soil deposits on the foreshore near the jetty. The surface of the midden is still being eroded by the pathway to the cemetery.
*. 51	Rock inscription.	A large slab of natural sandstone is located on the pathway, approximately half way between the jetty and the church. On its smooth, slightly sloping surface is a hand cut inscription, namely "H E BRITTEN" in capital letters. This appears to refer to the wife of H. H. Britten, the minister for St. John's on Bar Island. The inscription is on the pathway and is used as a stepping stone to gain access along the pathway. Eventually the inscription may be eroded away by this action.
03 and 03.01	Former Church Site.	The condition of the chimney, which formed a wing of the church, appears to have deteriorated in condition since 1995, with some new masonry collapse. Research by Tom Richmond has clearly indicated that the sandstone chimney formed the end wall of the Vestry, attached at right angles to the north side of the Church at its western end. The entrance porch to the church was located on the south side of the building, towards its eastern end. The site of the church building remains in a similar condition to the 1995 survey. The location of the flagpole can still be discerned. This was erected after the church was demolished.
04.	Cemetery	Gravestones and / or markers were numbered 04.01 through to 04.27 in the 1996 Conservation Plan. Investigation by Julian Bickersteth has indicated that most gravemarkers are similar in condition to the original survey in 1995, carried out for the 1996 Conservation Plan. <sup>52</sup> Exceptions include: 04.14. Paintwork faded and almost illegible. 04.27 Headstone has fallen over since 1995 and is now in 2 pieces.
05	Former Cottage Site.	Stone footings of a possible fireplace were noted in an area complying with the description of the site in 1995. No periwinkle was observed. The site does not appear to have deteriorated in condition.
06	Sandell and Buckman Memorial.	The Memorial has deteriorated in condition since 1995. <sup>53</sup>

### 3.3 Comments on the identification of certain burials.

During the site visit on 28 August 2002, Tom Richmond made a number of comments on the identity of certain burials, as follows:

<sup>51</sup> Site not located during original survey.

<sup>52</sup> See Appendix 3.

<sup>53</sup> See Appendix 3.

<b>Inventory</b>	<b>Item name</b>	<b>Comments</b>
4.2	Sandstone obelisk	<p>Tom Richmond indicated that he did not believe this to be a grave, in spite of the rough stone surround. He has the text of a small metal plaque, which was originally attached to the obelisk, which recorded the dedication of the cemetery.</p> <p>The 1996 Conservation Plan suggests this is the grave of Richard Hibbs and Maria Byrnes.</p> <p>Tom Richmond has provided a photograph of the Hibbs and Byrnes grave, showing the inscription prior to its removal. The photograph is of a double burial with brick included in the rough stone surround (Figure 2.8). The photograph and the presence of brick clearly identify the Hibbs / Byrnes grave as Inventory 4.3.</p>
4.10	Rock edged graves	Tom Richmond was shown the site of the Vincent William Seymour grave by a relative.
4.9	Rock edged grave	Tom Richmond was shown the site of the Annie Ellis Butters (or Bathurst) grave by a relative.
4.15	Miller, 1959.	Tom Richmond has suggested this is only a commemorative plaque, the burial having been elsewhere.



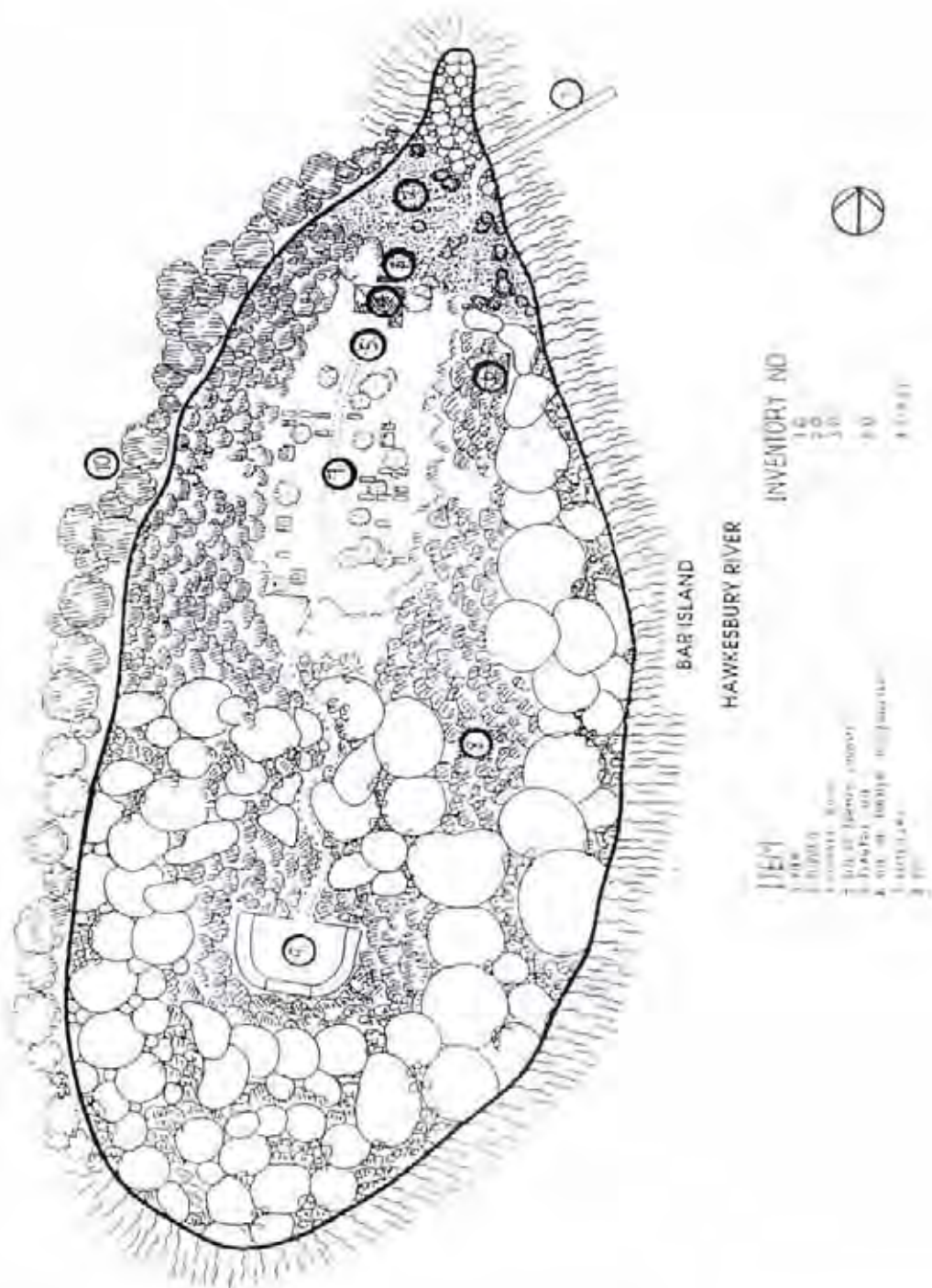


Figure 3.1. Site Plan of Bar Island, showing location of sites and monuments.  
 Source: Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan, Hornsby Council 1996, Figure 2.2.

INVENTORY NO

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

1. Sandstone chimney  
 2. Flagpole base  
 3. Eucalypt  
 4. Eucalypt  
 5. Eucalypt  
 6. Eucalypt  
 7. Eucalypt  
 8. Eucalypt  
 9. Eucalypt  
 10. Eucalypt  
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 27. Eucalypt

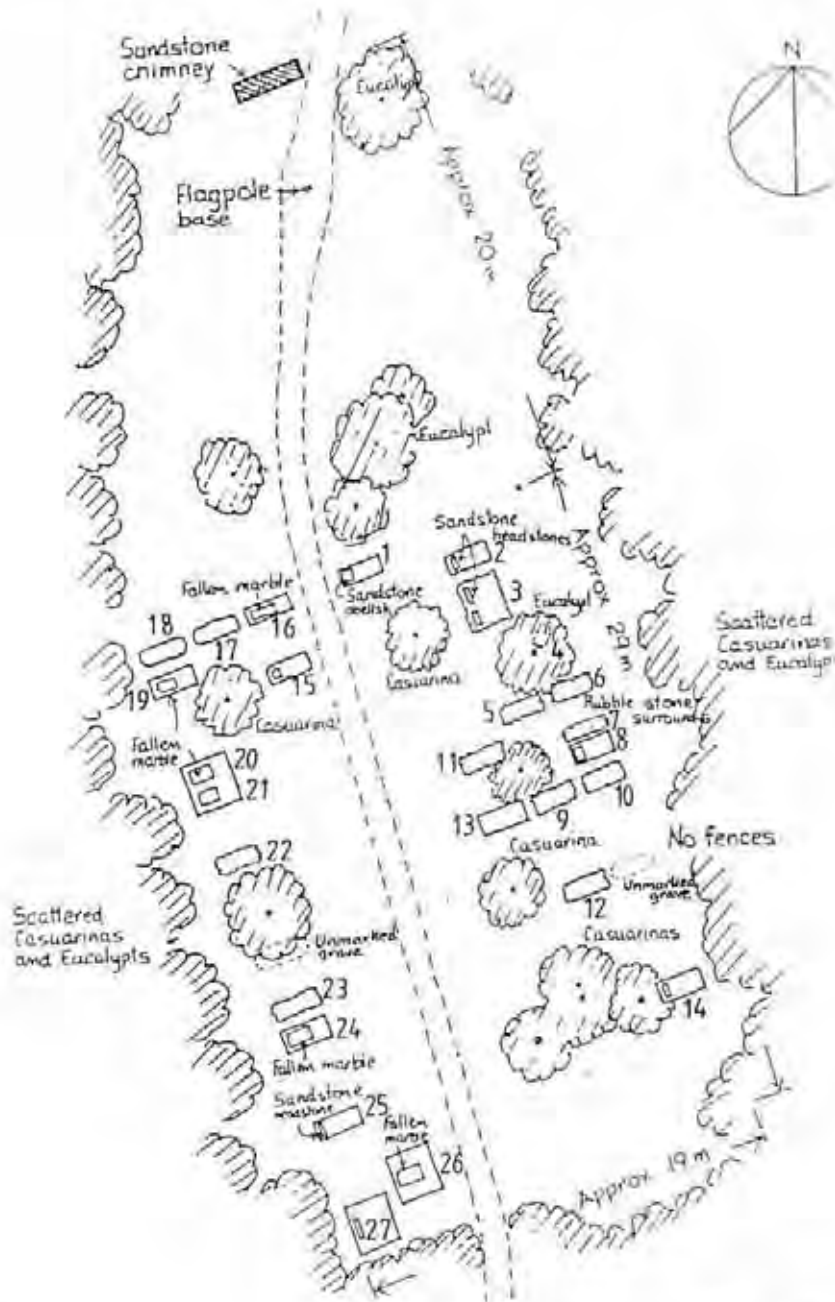


FIGURE 3.2 Site Plan.

FIGURE 3.3 Cemetery Plan, showing inventory No.s Scale 1: 250

(Source: Plan by S Clarke for National Trust Listing, 1986 annotated July 1995 during fieldwork.)

Figure 3.2. Plan of Bar Island Cemetery, showing location of graves and monuments.  
 Source: Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan, Hornsby Council 1996, Figure 2.3.



### 3.5 Photographs.



Plate 3.1. Bar Island in its picturesque natural setting.

Plate 3.2. Bar Island. Jetty (1).





Plate 3.3. Bar Island, Aboriginal shell midden (2), showing erosion caused by pathway.

Plate 3.4. Bar Island, Aboriginal shell midden (2), showing erosion caused by wave action.





Plate 3.5. Bar Island. Rock on pathway between jetty and church, with rough inscription, "H E BRITTEN", who was the wife of H H Britten, the first minister of the church.  
Plate 3.6. Bar Island. Remains of the fireplace of the vestry (3).





Plate 3.7. Bar Island. Site of the church (3).

Plate 3.8. Bar Island. Possible remains of a fireplace on the site of the cottage (5).





Plate 3.9. Bar Island. Cemetery (4). Grave (1).  
Plate 3.10. Bar Island. Cemetery (4). Grave (2).





Plate 3.11. Bar Island. Cemetery (4). Grave (3).

Plate 3.12. Bar Island. Cemetery (4). Grave (4).





Plate 3.13. Bar Island. Cemetery (4). Grave (5).

Plate 3.14. Bar Island. Cemetery (4). Grave (6).





Plate 3.15. Bar Island. Cemetery (4). Grave (7) and Grave (8) with headstone on left.  
Plate 3.16. Bar Island. Cemetery (4). Grave (9).





Plate 3.17. Bar Island. Cemetery (4). Grave (8) with headstone and Grave (10) on left.  
Plate 3.18. Bar Island. Cemetery (4). Grave (11).





Plate 3.19. Bar Island. Cemetery (4). Grave (unmarked).  
Plate 3.20. Bar Island. Cemetery (4). Grave (12).





Plate 3.21. Bar Island. Cemetery (4). Grave (13).

Plate 3.22. Bar Island. Cemetery (4). Grave (14).





Plate 3.23. Bar Island. Cemetery (4). Grave (15).  
Plate 3.24. Bar Island. Cemetery (4). Grave (16).





Plate 3.25. Bar Island. Cemetery (4). Grave (17).

Plate 3.26. Bar Island. Cemetery (4). Grave (18) and Grave (19) on left.





Plate 3.27. Bar Island. Cemetery (4). Grave (20) and Grave (21) on left.

Plate 3.28. Bar Island. Cemetery (4). Grave (22).





Plate 3.29. Bar Island. Cemetery (4). Grave (23) and Grave (24) on left.

Plate 3.30. Bar Island. Cemetery (4). Grave (25).





Plate 3.31. Bar Island. Cemetery (4). Grave (26).

Plate 3.32. Bar Island. Cemetery (4). Grave (27).





Plate 3.33. Bar Island. Sandell and Buckman Memorial (6).

Plate 3.34. Bar Island. Sandell and Buckman Memorial (6), detail.





Plate 3.35, Bar Island. Signage near the midden (2).

Plate 3.36, Bar Island. Signage at the church site (3) and wire fence around the chimney.

## 4 CULTURAL SIGNIFICANCE.

### 4.1 Current assessment criteria.

The importance of the subject site will be assessed in general terms according to its cultural significance. The criteria for assessment of significance have been recently updated by the Heritage Office of NSW.

The State Heritage Register and the State Heritage Inventory were established under Part 3A of the Heritage Act (as amended in 1998) for listing of items of environmental heritage.<sup>54</sup> The State Heritage Register list items, which are of state heritage significance, while the State Heritage Inventory includes items of local (or regional) heritage significance.<sup>55</sup>

To be assessed for listing on the State Heritage Register (state significance) or State Heritage Inventory (local or regional significance) an item will, in the opinion of the Heritage Council of NSW, meet one or more of the following criteria.<sup>56</sup>

an item is important in the course, or pattern, of NSW's cultural or natural history;

an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history;

an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW;

an item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons;

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<sup>54</sup> *environmental heritage* means those places, buildings, works, relics, moveable objects, and precincts, of state or local heritage significance (section 4, *Heritage Act, 1977*).

<sup>55</sup> *state heritage significance*, in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific cultural, social, archaeological, architectural, natural or aesthetic value of the item (section 4A(1), *Heritage Act, 1977*).

<sup>56</sup> Guidelines for the application of these criteria have not been prepared by the NSW Heritage Office to date, but reference should be made to the NSW Heritage Manual, which includes the previous wording for these criteria.

Heritage Office and Department of Urban Affairs and Planning. 1996. Heritage Assessments. pp. 4-7.

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- an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history;
- an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history;
- an item is important in demonstrating the principal characteristics of a class of NSW's
  - cultural or natural places; or
  - cultural or natural environments.

An item is not to be excluded from the Register or Inventory on the ground that items with similar characteristics have already been listed on the Register or Inventory.

The NSW Heritage Manual provides for three levels of significance, namely local, regional and state. While the new criteria have abandoned the use of the term "regional", nonetheless the use of the term is still considered beneficial to differentiate between items of local and regional significance, even though both categories are only appropriate for listing on the State Heritage Inventory or Local Environment Plan (LEP).

(In criteria a to g, where an item is deemed to be of local significance, the word locality should be substituted for NSW. Where an item is deemed to be of regional significance, the word region should be substituted for NSW).

#### **4.2 Previous assessment criteria, 1996.**

In 1996 the assessment criteria were standardised by the Heritage Office and Department of Urban Affairs and Planning in the *NSW Heritage Manual*.<sup>57</sup> These previous assessment criteria are summarised below for reference purposes. Some practitioners may still prefer to use the three criteria relating to level of significance, namely local, regional and state, although there is only provision to use the levels local and state under the current guidelines.

Where there is an equivalence between the current and previous guidelines, a letter (a-g) referring to the current criteria is placed against the previous definition.

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<sup>57</sup> Heritage Office and Department of Urban Affairs and Planning. 1996. *NSW Heritage Manual*.

**Nature of significance.**

**Historical significance (evolution and association) (criteria a and b).** An item having this value is significant because of the importance of its association with, or position in the evolving pattern of our cultural history.

**Aesthetic significance (scenic / architectural qualities / creative accomplishment) (criterion c).** An item having this value is significant because it demonstrates positive visual or sensory appeal, landmark qualities and/or creative or technical excellence.

**Technical / research significance (archaeological, industrial, educational, research potential and aesthetic significance values) (criterion e).** Items having this value are significant because of their contribution or positive contribution to an understanding of our cultural history or environment.

**Social significance (contemporary community esteem) (criterion d).** Items having this value are significant through their social, spiritual or cultural association with a recognisable community.

**Degree of significance.**

**Representativeness (criterion g).** Items having this value are significant because they are fine representative examples of an important class of significant items or environments.

**Rarity (criterion f).** An item having this value is significant because it represents a rare, endangered or unusual aspect of our history or cultural environment.

**Level of significance.**

**Local.** Comprises items significant in a local historical or geographical context or to an identifiable contemporary local community.

**Regional.** Comprises items significant in a regional historical or geographical context or to an identifiable contemporary regional community.

**State.** Comprises items significant in a state-wide historical or geographical context or to an identifiable contemporary state-wide community.<sup>58</sup>

#### **4.3 Technical / research significance and archaeological significance.**

The term 'archaeological significance' may be defined as the extent to which a site may contribute knowledge, not available from other sources, to current themes in historical archaeology and related disciplines.<sup>59</sup> 'Archaeological significance' is included in Criterion E of the current criteria for assessment.

In the assessment of archaeological significance, several factors or criteria have to be taken into account. Questions include:

- Does the site contribute knowledge not available from other sources? In this respect, the preservation of the site, the availability of comparative sites, and the extent of historical documentation should be considered.
- Does this knowledge contribute meaningfully to current research themes in historical archaeology and related disciplines? The level of this contribution may be assessed on the same basis as other aspects of cultural significance, for example, locality, region or state.

It is clear that the determination of archaeological significance is closely related and, in fact, dependent upon the development of current research themes in historical archaeology. Research themes will be discussed in this study, thereby giving the historical archaeologist a framework or starting point from which future research and site assessment may proceed.

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<sup>58</sup> The above assessment criteria were extracted verbatim from Heritage Office and Department of Urban Affairs and Planning. 1996. *Heritage Assessments*. pp. 4-7.

<sup>59</sup> This definition is based upon the following references; A. Bickford, & S. Sullivan, 'Assessing the research significance of historic sites', in S. Sullivan, & S. Bowdler, *Site survey and significance assessment in Australian archaeology*, Dept. of Prehistory, Research School of Pacific Studies, ANU, Canberra, 1984, pp. 19-26.; S. Sullivan, & S. Bowdler, *Site survey and significance assessment in Australian archaeology*, Dept. of Prehistory, Research School of Pacific Studies, ANU, Canberra, 1984, passim.

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#### **4.4 The heritage significance of Bar Island and its Cemetery.**

The following statement of significance for Bar Island is prepared in accordance with the current assessment guidelines. It concentrates on aspects of archaeological and historical significance.

*an item is important in the course, or pattern, of NSW's cultural or natural history;*

St. John's Anglican Church was built on Bar Island in 1876 to serve the spiritual needs of the local community on the Lower Hawkesbury River. A part time school was transferred to the premises in 1877, became full time in 1884, but closed in April 1892, reopening for a short period in January 1901 to July 1903. The first burial in the Cemetery took place on 23 August 1879, with the majority of burials taking place before 1906, by which time the church was a ruin.

An Aboriginal shell midden, located on the northern tip of the Island, provides evidence for occupation and use of the locality by Aboriginal groups prior to European or historical settlement.

Thus Bar Island provides evidence of both Aboriginal and historical settlement of this locality on the Lower Hawkesbury River. It demonstrates the importance of the river as the principal means of communication for the community and provided facilities, both spiritual and educational, which were otherwise hard to find until the growth of Brooklyn in the early 19<sup>th</sup> century.

Level of significance: Local.

*an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history;*

The cemetery provides physical and documentary evidence (inscriptions on gravestones) for the genealogy of the local community and occasionally for those who were only temporarily in the area. Bar Island is the burial place of "Granny Lewis", (Sarah Wallace / Lewis / Ferdinand) who was of Aboriginal descent. She was also the link between many early families in the district.

Oral tradition points to an association with the poet, Henry Kendall. It is believed that Kendall wrote a poem for one of the children, Maud Lloyd, who is buried on the Island.

Level of significance: State.

*an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW;*

The cemetery monuments indicate a range of work by monumental masons, mostly from Sydney, the North Shore and Rookwood. Most of the headstone designs are typical of their era, in simple and restrained styles, with traditional funerary symbolism and inscriptions. One monument is a late example of a design or style known elsewhere on the Upper Hawkesbury at Windsor or in private cemeteries along the MacDonal River Valley. The dominance of white marble in the Bar Island Cemetery indicates the rapid acceptance of new fashions, which had seen marble become the predominant material used in Sydney's cemeteries from the 1880s onwards.

Bar Island itself is located in an area of great beauty, as described in the 1996 Conservation Plan.

“The island has a spectacular natural setting, being surrounded by largely unspoilt bushland areas, with dramatic and steep cliffs which descend from high sandstone escarpments to the drowned river valley of the Hawkesbury and its tributaries. Bar Island is a distinctive landmark when viewed from the Hawkesbury River and adjacent shore lands”.<sup>60</sup>

Level of significance: Local.

*an item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons;*

Bar Island, together with its cemetery, have strong and close associations with other members of the local community, who have relatives buried on the Island, or who may be descendants of those buried there.

The social significance of the island is also evident though its listing by the National Trust of NSW, thus indicating the recognition of its heritage significance by an independent organisation.

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<sup>60</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:14.

Level of significance: Local.

*an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history;*

Bar Island and its cemetery have the potential to reveal important information, which is not available from other sources, or is only partly available from other sources. It provides a comparative sample of monumental masonry. While it is not suggested that excavation of the cemetery should take place, such an investigation would enable a larger number of the burials to be identified by comparison with registrations of death. It would also provide evidence of funeral customs, pathology, health of the population and other lifestyle indicators.

Level of significance: Local.

*an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history;*

The riverine focus of the Lower Hawkesbury community, resulting in the choice of an island for a place of worship, burial and education, is extremely unusual in New South Wales. While the riverine focus of communities on the North Coast was common until the advent of rail or road transport in the late 19<sup>th</sup> or early 20<sup>th</sup> centuries, nowhere else on the New South Wales coast has this focus resulted in the choice of an island for the purposes outlined above. Unlike elsewhere, the steep terrain of the Lower Hawkesbury, downstream from Wisemans Ferry, has resulted in the necessity of choosing an island location for these purposes. A similar island site for a cemetery is also located at Port Arthur, Tasmania.

Oral tradition associates the poet, Henry Kendall, with a burial on the island. Such an association is rare.

Level of significance: State.

*an item is important in demonstrating the principal characteristics of a class of NSW's*

*cultural or natural places; or*

*cultural or natural environments.*

In most respects, Bar Island and its cemetery provide characteristics, which are representative of the locality. These include the layout and design of the cemetery and

neighbouring church, the range of monumental masonry, the religious symbolism and burial inscriptions

Level of significance: Local.

#### **4.5 Summary of statement of significance.**

The cultural significance of the Bar Island Cemetery is summarised below.

St. John's Anglican Church was built on Bar Island in 1876 to serve the spiritual needs of the local community on the Lower Hawkesbury River. A part time school was transferred to the premises in 1877, became full time in 1884, but closed in April 1892, reopening for a short period in January 1901 to July 1903. The first burial in the Cemetery took place on 23 August 1879, with the majority of burials taking place before 1906, by which time the church was a ruin.

An Aboriginal shell midden, located on the northern tip of the Island, provides evidence for occupation and use of the locality by Aboriginal groups prior to European or historical settlement.

Thus Bar Island provides evidence of both Aboriginal and historical settlement of this locality on the Lower Hawkesbury River. It demonstrates the importance of the river as the principal means of communication for the community and provided facilities, both spiritual and educational, which were otherwise hard to find until the growth of Brooklyn in the early 19<sup>th</sup> century.

The cemetery provides physical and documentary evidence (inscriptions on gravestones) for the genealogy of the local community and occasionally for those who were only temporarily in the area. Bar Island is the burial place of "Granny Lewis", (Sarah Wallace / Lewis / Ferdinand) who was of Aboriginal descent. She was also the link between many early families in the district.

Oral tradition also points to an association with the poet, Henry Kendall. It is believed that Kendall wrote a poem for one of the children, Maud Lloyd, who is buried on the Island. This aspect of significance, if proven, would increase the significance of the Bar Island Cemetery from a local level to a state level of significance.

The cemetery monuments indicate a range of work by monumental masons, mostly from Sydney, the North Shore and Rookwood. Most of the headstone designs are typical of their era, in simple and restrained styles, with traditional funerary symbolism and inscriptions. One monument is a late example of a design or style known elsewhere on the Upper Hawkesbury at Windsor or in private cemeteries along the MacDonald River Valley. The dominance of white marble in the Bar Island Cemetery indicates the rapid acceptance of new fashions, which had seen marble become the predominant material used in Sydney's cemeteries from the 1880s onwards.

Bar Island itself is located in an area of great beauty, as described in the 1996 Conservation Plan.

“The island has a spectacular natural setting, being surrounded by largely unspoilt bushland areas, with dramatic and steep cliffs which descend from high sandstone escarpments to the drowned river valley of the Hawkesbury and its tributaries. Bar Island is a distinctive landmark when viewed from the Hawkesbury River and adjacent shore lands”.<sup>61</sup>

Bar Island, together with its cemetery, have strong and close associations with other members of the local community, who have relatives buried on the Island, or who may be descendants of those buried there.

The social significance of the island is also evident through its listing by the National Trust of NSW, thus indicating the recognition of its heritage significance by an independent organisation.

Bar Island and its cemetery have the potential to reveal important information, which is not available from other sources, or is only partly available from other sources. It provides a comparative sample of monumental masonry. While it is not suggested that excavation of the cemetery should take place, such an investigation would enable a larger number of the burials to be identified by comparison with registrations of death. It would also provide evidence of funeral customs, pathology, health of the population and other lifestyle indicators.

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<sup>61</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:14.

The riverine focus of the Lower Hawkesbury community, resulting in the choice of an island for a place of worship, burial and education, is extremely unusual in New South Wales. While the riverine focus of communities on the North Coast was common until the advent of rail or road transport in the late 19<sup>th</sup> or early 20<sup>th</sup> centuries, nowhere else on the New South Wales coast has this focus resulted in the choice of an island for the purposes outlined above. Unlike elsewhere, the steep terrain of the Lower Hawkesbury, downstream from Wisemans Ferry, has resulted in the necessity of choosing an island location for these purposes. A similar island site for a cemetery is also located at Port Arthur, Tasmania.

In most respects, Bar Island and its cemetery provide characteristics, which are representative of the locality. Two factors make the site rare at a state level of significance, namely its island location and its association with the poet, Henry Kendall, as indicated by oral tradition.

## **5 CONSTRAINTS, OPPORTUNITIES AND OTHER REQUIREMENTS.**

The following constraints, opportunities and other requirements summarise and update the constraints and requirements of the 1996 Conservation Plan. New information is available from a number of sources and is discussed below.

### **5.1 The NSW *Heritage Act* and historical archaeology.**

The *Heritage Act* contains various legal measures to protect historical archaeological resources.

Where historical research has revealed the location of historical settlement, experience has shown that the discovery of relics is highly likely once the soil is disturbed. When relics are revealed the Heritage Council must be notified. This may involve delay until appropriate arrangements can be made to record the archaeological remains. As a result, developers and others are normally advised that excavation permits must be obtained prior to undertaking works, which involve excavation or the disturbance of historical sites. In this way most delays can be avoided.

The NSW *Heritage Act* defines a ‘relic’ as:

*any deposit, object or material evidence -*

*a). which relates to the settlement of the area that comprises New South Wales, not being aboriginal settlement; and*

*b) which is 50 or more years old*

Section 139 of the *Heritage Act* provides that:

*c). A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.*

*d). A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.*

If a site is the subject of an order under Section 130, an Interim Heritage Order, or is listed on the State Heritage Register, approval for an excavation permit is required under Section 60 of the *Heritage Act*.

If a site is not the subject of an order under the *Heritage Act* and is not listed on the State Heritage Register, an excavation permit is required, in accordance with Section 140.

Section 146 of the *Heritage Act* requires that the accidental discovery of relics should be reported to the Heritage Council of NSW.

*A person who is aware or believes that he or she has discovered or located a relic (in any circumstances, and whether or not the person has been issued with an excavation permit) must:*

*e). within a reasonable time after he or she first becomes aware or believes that he or she has discovered or located that relic, notify the Heritage Council of the location of the relic, unless he or she believes on reasonable grounds that the Heritage Council is aware of the location of the relic, and*

*f). within the period required by the Heritage Council, furnish the Heritage Council with such information concerning the relic as the Heritage Council may reasonably require.*

When an item of heritage significance comes under the ownership or control of a public authority, the authority is required to record it in a Heritage and Conservation Register, under section 170 of the *Heritage Act*. The purpose of the provision is to alert the authority whenever works are proposed, which might affect the item.

## **5.2 National Parks and Wildlife Act 1974.**

Under the *National Parks and Wildlife Act 1974*, the National Parks and Wildlife Service (NPWS) is responsible for the protection and preservation of aboriginal relics in New South Wales.



A relic is defined as " any deposit, object or material evidence (not being a handicraft made for sale), relating to indigenous and non-European habitation both prior to and concurrent with the occupation of the area by person of European extraction."<sup>62</sup>

Anyone who discovers a relic, whether it is the property of the Crown or not, must report the discovery to the Director, National Parks and Wildlife Service, within a reasonable time of the discovery, unless he/she believes the Director already knows of its existence and location. - i.e. that it is already on the National Parks and Wildlife Register. It is important to report discoveries promptly so that officers of the NPWS, can visit the site if they wish. It is illegal to disturb, damage, deface or destroy a relic or Aboriginal Place, without the Director's prior written consent.

If the relic is found on privately owned land it should be deposited with the Central Region Office of the NPWS. If it is found on Crown Land, including public roads, it should be deposited with The Australian Museum, College Street, Sydney, which curates moveable aboriginal relics, which are the property of the Crown.

Where historical relics are located on land owned by the NPWS, guidelines for obtaining approvals for works are outlined in NPWS. *Guidelines for Approvals: Cultural heritage places, buildings, landscapes & movable heritage items on NPWS estate*, December 2001.

Apart from the presence of a known Aboriginal shell midden (2), the likelihood of discovering aboriginal relics on the remainder of the island has not been assessed.

The Aboriginal midden is listed on the Aboriginal Sites Register, held by the National Parks and Wildlife Service (NPWS).<sup>63</sup>

The NPWS will require liaison and discussion with the Local Aboriginal Land Council and other Aboriginal groups in the use, management and conservation of Bar Island.<sup>64</sup>

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<sup>62</sup> National Parks and Wildlife Act, 1974.

<sup>63</sup> Aboriginal Heritage Information Management System. Site number 45-6-0349. NPWS.

<sup>64</sup> Personal communication. Brad Welsh, NPWS, Bobbin Head.

### **5.3 Other legislation.**

The 1996 Conservation Plan discusses other legislation that has an existing or potential implication for the management of Bar Island, including:

1. Environmental Planning and Assessment Act, 1979.
2. Hornsby Shire LEP, 1994.
3. Sydney Regional Environmental Plan No. 20 – Hawkesbury – Nepean River, 1989.
4. The Local Government Act, 1993.
5. The Crown Lands Act, 1989.
6. National Parks and Wildlife Act, 1974.
7. The Australian Heritage Commission Act, 1975.
8. The Conversion of Cemeteries Act, 1974.
9. The Public health Act, 1991.

Reference should be made to the 1996 Conservation Plan for the relevance of this legislation to the management of the Bar Island Cemetery and associated remains.<sup>65</sup> Note that the provisions of the Heritage Act, 1977 have been updated since 1996. Refer to Section 5.1.1 of this report.

### **5.4 Heritage Listings.**

Bar Island Cemetery, Church Ruins and Memorial are listed as heritage items in the Hornsby LEP. The latest edition of the LEP was published in 2002, although the document was originally gazetted in 1994.<sup>66</sup> The site is listed on the State Heritage Inventory as Cemetery, Church Ruins and Memorial.<sup>67</sup>

The site is also listed (classified) by the National Trust of Australia (NSW).

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<sup>65</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:27-32, 35.

<sup>66</sup> Hornsby Shire LEP, 1994.

<sup>67</sup> Research of State Heritage Inventory, 4 October 2002.

The Aboriginal midden is listed on the Aboriginal Sites Register, held by the National Parks and Wildlife Service (NPWS).<sup>68</sup>

### **5.5 The surviving condition of the place.**

The surviving condition of the archaeological remains on Bar Island has been described in chapter 3. In addition, a detailed assessment of the condition of the chimney of the vestry (3) and surviving cemetery monuments (4) was prepared by Julian Bickersteth of International Conservation Services.<sup>69</sup>

The surviving condition of the Bar Island Cemetery and associated remains requires the completion of repair and maintenance work (see Section 6.13).

### **5.6 State level of significance.**

The statement of cultural significance for Bar Island Cemetery and associated remains has indicated two aspects of significance at a State level, namely the rarity of an island location for the Cemetery and also the association with the poet, Henry Kendall.

The state level of significance indicates that the site should be placed on the State Heritage Register and also the Register of the national Estate.

The significance of the heritage item also makes it necessary to conserve and manage the site in an appropriate manner and in accordance with standard heritage guidelines, practice and legislation.

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<sup>68</sup> Aboriginal Heritage Information Management System. Site number 45-6-0349. NPWS.

<sup>69</sup> Julian Bickersteth, International Conservation Services .. 2002. Assessment of condition of Church, graves and monuments on Bar Island, Hawkesbury. Hornsby Shire Council.

### **5.7 The interpretation of the archaeological remains.**

The Bar Island Cemetery and associated remains are an important part of our cultural heritage and a focal point for the community on the Lower Hawkesbury River. This significance should be made accessible to the general public through education, publication, interpretation and display. This goal is normally achieved through the preparation of an interpretation plan. The interpretation and display should seek to provide a balanced understanding of the past.

Existing signage and interpretation on the island is minimal, with 3 signs recently being erected by Council. Near the jetty and midden is a sign indicating the prohibition of camping and lighting of fires. Another sign is erected on the temporary fencing to explain the purpose of the fence and its temporary nature. Adjacent is a painted sign providing brief details of the history and significance of the site, with an illustration of the weatherboard church.

While this level of interpretation and signage is appropriate in the short term, more extensive interpretation and display is envisaged once the plan of management has been adopted by Council.

### **5.8 Existing compatible uses.**

The 1996 Conservation Plan indicated that the main users of the island were as follows:

1. Local population and local historical societies with links to the island's history.
2. Regular but infrequent visitation from a wider community who have knowledge of the site through organisations such as the Cubs, Boy Scouts or Outward Bound organisations.
3. Recreational users of the Hawkesbury River.

The southern portion (Crown Land) of the Island was zoned for recreational uses in 1934. The whole island has been a popular destination for picnics from at least the

1870s and was previously in Aboriginal use for thousands of years. The community also valued the island for its scenic qualities.<sup>70</sup>

### **5.9 Existing non-compatible uses.**

The 1996 Conservation Plan indicated that visitors to the island undertake a number of activities, including picnics, barbeques and over night camping. Nonetheless visitation has caused a number of problems, including erosion of the Aboriginal shell midden, vandalism of headstones, damage to the chimney, removal of stones to make ad hoc fireplaces, lighting of fires, weed invasion and the cutting of timber.<sup>71</sup>

Of the above uses, barbeques, camp fires, overnight camping, vandalism of headstones, damage to the chimney, removal of stones to make fireplaces and cutting of timber are regarded as incompatible with the heritage significance of the place.

Erosion of the Aboriginal shell midden and weed invasion are regarded as consequences of visitation, which need to be rectified by future management of the Island.

It should be noted that the 1996 Conservation Plan regarded the repair of gravestones and the chimney “is not likely to prove successful in the long term unless additional protection can be provided for the cemetery to reduce the incidence of vandalism.” It also noted that control of access to the island should also be resolved prior to repair.<sup>72</sup>

While the removal of the decking from the jetty has made access to the island more difficult, it has not resolved the problems of incompatible usage in the long term.

When the site was inspected on 8 May 2002, a group was found camping on the island, under the leadership of Southern Adventures. The campers had lit a fire and had removed stones from the chimney. In response to the inspection of the Island, Council decided to take immediate action to protect the chimney by the erection of

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<sup>70</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:39.

<sup>71</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:14.

<sup>72</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:21.

temporary fencing, the placing of a no camping sign at the jetty and also the church site.<sup>73</sup> This work was completed prior to site survey on 28 August 2002.

### **5.10 Community views and requirements.**

The Anglican Church, Parish of Berowra, prior to the sale of the land to Hornsby Council on 12 May 2000, formulated a number of requirements for Bar Island and its future. The Church expressed concern that:

1. Bar Island Cemetery and associated remains should be protected and conserved.
2. The public should be guaranteed continued, but controlled, access to Bar Island.<sup>74</sup>

While these views express the resolution of the Parish of Berowra, it is highly likely that they also reflect the concerns of the local community, especially the relatives and descendants of those buried on the Island.

In their correspondence with the Council, the Parish of Berowra also suggested proposals for a caretaker's cottage, but this view was not shared by the authors of the 1996 Conservation Plan.<sup>75</sup> The National Trust saw some merit in the proposal, but stated that under no circumstances should the Island be zoned residential, since this would have a major impact on the significance of the place. The National Trust recommended the preparation of a conservation plan and design guidelines for the island (Portions 22 and 23), prior to any approval of a caretaker's cottage. In later correspondence, the Trust outlined additional concerns that the caretaker's cottage would become a saleable residential property. It recommended that the 2 lots (Lots 22 and 23) should be combined as one title, or that the cottage should be erected on the same lot as the cemetery. The Trust suggested that if the Church had no further use for the property, then it should revert to the Crown and be dedicated as an historic site under the Crown Lands Act, with Hornsby Council as trustees of the historic site<sup>76</sup>

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<sup>73</sup> Report by Di Campbell for Council, 28 May 2002.

<sup>74</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:36.

<sup>75</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:37.

<sup>76</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:38.

In the event, St. Mark's Anglican Church, Berowra gave title of Portions 22 and 23, Bar Island to Hornsby Shire Council on 12 May 2000, in exchange for Council land adjacent to the church at Berowra. The two portions were rezoned as Open Space A (Public Recreation – Local) under the Hornsby LEP 1994.<sup>77</sup>

Other community concerns have been outlined by Tom Richmond, as follows:

1. The historical importance of Bar Island should be recognised as the last resting place for ancestors of several local families, together with the association with Henry Kendall and the Aboriginal connection through “Granny Lewis”.
2. The Cemetery should be maintained as a sign of respect to those buried on the Island and Council's policy for maintenance made clear to the community. Maintenance should include control of vegetation and repair of gravestones.
3. The Island should be made accessible to those related to the burials on the Island as well as others. The jetty should be repaired to improve access.
4. Descendants of those buried on the Island should not have to seek permission to visit the cemetery.
5. Those buried in the cemetery should be remembered by a plaque or sign indicating the details of all known burials.
6. The plaque that commemorated the church should be put back into position.
7. An historical interpretive display should be set up.
8. The southern part of the Island (Crown Land) should continue in recreational usage.
9. Invasive weed species, like lantana, should be cleared from the Island.<sup>78</sup>

The Aboriginal occupation of Bar Island has been described in this report. Hornsby Council is in the process of discussions with the Local Aboriginal Land Council and other groups regarding the future use, conservation and management of the Island.<sup>79</sup>

A neighbouring property owner, Ian Gowrie-Smith, has proposed that Bar Island should be returned to its former usage, namely “worship, marriage and burial.” The proposal also includes the reconstruction of the church, and the resumption of

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<sup>77</sup> Hornsby Shire Council, 2001. Bar Island – Land Management Options.

<sup>78</sup> This is a summary of a submission made by Tom Richmond to Hornsby Shire Council on 18 September 2002.

<sup>79</sup> Personal communication: Ms. Di Campbell, Hornsby Shire Council.

services by the Anglican Church. The property owner is prepared to offer funding up to a total of \$250,000 for this purpose. He envisages the establishment of a non-profit trust to carry out the recommendations of a plan of action, to be approved by Council, but also requires a 21 year lease of the Island at a peppercorn rent. The possible establishment of a security system for the Island forms part of the proposal. Mr. Ian Gowrie-Smith is not prepared to simply become a caretaker for the site if his proposal does not proceed.<sup>80</sup>

### **5.11 Advice from NPWS regarding the management of the Island.**

As a result of a site inspection with Council, the NPWS has made a number of suggestions with regard to the conservation and management of the Island, as follows:<sup>81</sup>

1. One alternative may be the passive management of the headstones, “whereby no active conservation works were undertaken and the headstones were left to decay slowly over time.” More active conservation might need to be undertaken if the site was assessed as state significant.
2. Interpretation signage should not be placed on the site, unless active visitation was encouraged.
3. Since “the site does not really lend itself to high visitation”, access should be by permit and on “open days” or for specific community events. While this may reduce the cost of infrastructure, protection works and signage, the ongoing cost of patrol and enforcement may be high.
4. Three options for management were considered, including NPWS control, Council control and joint control. Council control was the option preferred by NPWS, “mainly due to our assessment that Council has the capability to review, implement and control activities identified in the Conservation Plan.”

These issues are discussed below, as they relate to the conservation policy.

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<sup>80</sup> Ian Gowrie-Smith to Hornsby Shire Council, 13 May 2002.

<sup>81</sup> Mr. Chris McIntosh, Regional Manager, Sydney North to Hornsby Shire Council, 9 May 2001.



### **5.12 Council requirements.**

Hornsby Shire Council has investigated a number of options for future management of Bar Island, taking into account the level of protection afforded to the site and the availability of funding for conservation works. Taking into account the submission by NPWS outlined above, it resolved that Council ownership still remained the most appropriate option, with listing on the Register of the National Estate and on the State Heritage Register enhancing protection and availability of funding.<sup>82</sup>

### **5.13 Archival recording.**

Prior to disturbance or change of use, detailed recording of the site should be undertaken to archival standard, in accordance with NSW Heritage Office 1998. *Heritage Information Series. How to prepare archival records of heritage items.*

### **5.14 The ICOMOS Burra Charter.**

These guidelines have been prepared in accordance with the provisions of the Burra Charter as amended in 1999. All works on the place should also be guided by its principles.<sup>83</sup>

### **5.15 Definition of Terms.**

The ICOMOS Burra Charter, as updated in 1999, provides useful definitions of the terms used in conservation plans.<sup>84</sup> Article 1 of the Burra Charter defines the following terms:

1.1 *Place* means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

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<sup>82</sup> Hornsby Shire Council, 2001. Bar Island – Land Management Options.

<sup>83</sup> Appendix 4.

<sup>84</sup> Australia ICOMOS. The Burra Charter. The Australia ICOMOS Charter for Places of Cultural Significance. 1999.

1.2 *Cultural significance* means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural significance is embodied in the place itself, its *fabric, setting, use, associations, meanings, records, related places and related objects*.

Places may have a range of values for different individuals or groups.

1.3 *Fabric* means all the physical material of the *place* including components, fixtures, contents and objects.

1.4 *Conservation* means all the processes of looking after a *place* so as to retain its *cultural significance*.

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

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

1.7 *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.

1.8 *Reconstruction* means returning a *place* to a known earlier state and is distinguished from *restoration* by the introduction of new materials into the *fabric*.

1.9 *Adaptation* means modifying a *place* to suit the existing use or a proposed use.

1.10 *Use* means the function of the place, as well as the activities and practices that may occur at the place.

1.11 *Compatible use* means a use which respects the *cultural significance* of a *place*. Such a use involves no, or minimal, impact on cultural significance.

1.12 *Setting* means the area around a *place*, which may include the visual catchment.

1.13 *Related place* means a place that contributes to the *cultural significance* of another place.

1.14 *Related object* means an object that contributes to the *cultural significance* of a *place* but is not at the place.

1.15 *Association* means the special connection that exists between people and a *place*.

1.16 *Meanings* denote what a *place* signifies, indicates, evokes or expresses.

1.17 *Interpretation* means all the ways of presenting the cultural significance of a *place*.

## 6 CONSERVATION POLICY AND IMPLEMENTATION GUIDELINES.

The following conservation policy summarises and updates the conservation policy of the 1996 Conservation Plan. New information is available from a number of sources and is discussed below.

### 6.1 General discussion.

The Conservation policy of the 1996 Conservation Plan envisaged the conservation of all aspects of the heritage significance of Bar Island “as a collective entity”, including:

1. its natural environment, vegetation and setting.
2. its history.
3. The physical fabric of the cemetery, monuments and ruined structures/sites.
4. The Aboriginal site.

The 1996 Conservation Plan considered the erection of new structures (residential development), as suggested by the Anglican Church, the then owners of the northern part of the island, as detrimental to the significance of the place. Apart from heritage issues, other impacts were likely, such as stormwater run off, effluent disposal, clearance of vegetation, water supply and power supply. The difficulties of ensuring the caretaker role of any development was discussed and examples given of where this caretaker role had not been successfully undertaken.

The 1996 Conservation Plan proposed a two stage implementation of the conservation policy, an initial stage followed by a more complete conservation phase. It appears that little or no action was taken to implement this initial conservation phase, with the consequence that it is now important to proceed directly to the second more complete conservation phase.

The 1996 Conservation Plan clearly indicates that *reconstruction* should not form a major part of the works, while *restoration* is more appropriate for the identified monuments and other features. (see ICOMOS Burra Charter definition of terms).<sup>85</sup>

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<sup>85</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:40-42.

The conservation policy of the 1996 Conservation Plan therefore does not support the reconstruction of the church, as proposed by a neighbouring landowner although other aspects of that proposal are worthy of further consideration (see Section 6.6).

## **6.2 Future activities, uses and visitation.**

The 1996 Conservation Plan recommends that bar island should be managed primarily as a conservation reserve and a historic site, with a lesser role as an open space or passive recreation resource for the community.

According to the 1996 Conservation Plan, future compatible uses include:

1. Use of the site as an educational and research resource.
2. Picnics, where they do not involve the lighting of fires.

Incompatible uses include:

1. Lighting of camp fires.
2. Cutting of timber.
3. Overnight camping.
4. Importation of pets or domestic animals.
5. Permanent structures, such as toilets or houses.

The 1996 Conservation Plan regarded the construction of a walkway over the Aboriginal midden as an exception to the general principle that no new structures should be introduced.

Through these restricted uses outlined above, the 1996 Conservation Plan fails to take into account the views and requirements of the local community, particularly the descendants of those buried in the cemetery. This report considers that the following uses are also appropriate, namely:

1. Visitation by family and descendants of those buried on the Island.
2. Outdoor religious services of worship, remembrance or marriage.

It is appropriate that an agreement should be made between members of the local community, descendants, the Council and the Anglican Church, among others, to place an appropriate limit on maximum numbers in attendance and also to determine who is responsible for timetabling, programming, managing and permitting services.



These issues should become the responsibility of a management committee, as recommended below.

It should be recognised that the involvement of the local community, and especially relatives and descendants will assist and promote the conservation of Bar Island.

The 1996 Conservation Plan ruled out the resumption of burials on the Island, although the interment of ashes (cremated remains) in existing family plots might be permitted.<sup>86</sup> The issue was not further discussed by the 1996 Conservation Plan, but warrants further consideration.

The burial of ashes in existing family plots poses a number of issues, some of which include:

1. The disturbance of the remains of the gravestones and other grave marking materials.
2. The possible shallow depth of previous burials. The depth of soil over bedrock has not been established in the cemetery, possibly resulting in shallow historical burials. The exposure of bedrock over much of the island may suggest only a thin layer of soil and clay above bedrock.
3. The possible disturbance of unidentified graves, of which at least 27 to 31 are still to be located.

Items 1-3 above would require prior archaeological assessment and possible investigation.

4. The introduction of new structures is not recommended by the 1996 Conservation Plan, although it suggests that additional, sympathetically designed, grave markers may be added to existing plots.<sup>87</sup>
5. Only a limited number of graves can be identified with certainty (19), restricting the use of only these family grave plots to possible resumption of burial of ashes by relatives and descendants
6. The majority of the relatives and descendants of the persons buried in the family would have to agree to reuse of existing family graves for cremation.

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<sup>86</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:48.

<sup>87</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:43, 51, 52.

7. The site is no longer consecrated as a cemetery and is zoned Open Space A.

The resumption of burials on the Island, in the form of cremated ashes, raises too many restrictions and limitations for the proposal to be considered feasible.

The policy of the 1996 Conservation Plan regarding new grave markers on existing plots is confusing. On the one hand it proposes to restrict the introduction of new fabric, while on the other allows new markers within the cemetery. Where new markers have been erected in other cemeteries, they appear almost always to be intrusive into the historical setting. It is more appropriate to place new plaques or inscriptions outside the cemetery.

### **6.3 Interpretation.**

The 1996 Conservation Plan recommended a number of measures for interpretation, including:<sup>88</sup>

1. 'Limited' circulation of information on the history and heritage values of the cemetery.<sup>89</sup>
2. Continuing research and publication.
3. Provision for limited and controlled public visitation.
4. On site interpretation and display.
5. Commemorative plaques.

In view of the significance of the island and the need for restrictions and limitations on access, the 1996 Conservation Plan suggested the interpretation scheme should seek to explain the significance of the site and its surviving condition as the reasons behind the access limitations.<sup>90</sup>

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<sup>88</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:40-42, 50, 53.

<sup>89</sup> While it may be appropriate to place restrictions and limitations on visitation to the island, this limitation should not extend to the dissemination of information or knowledge about the history and significance of the site, nor should limits be placed on public interest. It may be more appropriate to target certain groups with relevant information during the conservation and management process, but there should not otherwise be a limitation on publicity and interest in the site once the management process is in place and conservation works completed.

<sup>90</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:48.

The 1996 Conservation Plan recommended the erection of a single interpretation sign on the site, the preparation of brochures or a resource kit for local schools. The views of the local community suggest that a more extensive programme of interpretation and display should be undertaken.

Interpretation signage should include the following elements:

1. Plan of island, showing location of main elements.
2. Plan of layout of cemetery, showing each grave, numbered and cross referenced to a list of the person buried there, with biographical details.
3. Brief outline history of the Island, mentioning each phase of occupation and use.
4. Photographs of the church and cottage as well as a photograph of the chimney and flagpole. Possibly also illustrations of the island in the past.

The above information should be placed on one or more signs, possibly near the church site or between the church site and cemetery, but not within the cemetery. The signage should not be intrusive, nor detract from the setting of the place.

Plaques that have been removed from the site should be reinstated in their original positions, where possible.

#### **6.4 Management.**

The 1996 Conservation Plan raised a number of management issues for the Island, including ownership, an issue that has now been resolved. Lots 22 and 23 of Bar Island were transferred by the Anglican Church to Hornsby Shire Council on 12 May 2000. The two lots were rezoned as Open Space A (Public Recreation – Local) under the Hornsby LEP 1994 in accordance with the recommendations of the 1996 Conservation Plan.<sup>91</sup>

The Conservation policy of the 1996 Conservation Plan envisaged the conservation of all aspects of the heritage significance of Bar Island “as a collective entity.” For this

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<sup>91</sup> Hornsby Shire Council, 2001. Bar Island – Land Management Options. Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:47.

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purpose it proposed the establishment of a Conservation Area over the whole island, governed by the conservation policy of the 1996 Conservation Plan or its successor, this plan of management.<sup>92</sup>

The 1996 Conservation Plan also recommended that a small management committee with delegated authority from Council should be responsible for management of the cemetery.<sup>93</sup>

The 1996 Conservation Plan recommended that one person should be nominated as responsible for implementation of the Plan.<sup>94</sup> This is the role of the Council. While it also proposed the establishment of a “Friends of Bar Island” group, comprising existing interest groups, it is suggested that the management committee and the friends group could be one and the same thing.<sup>95</sup>

## **6.5 Limited access to Island – Vandalism.**

The 1996 Conservation Plan regarded limited visitation as appropriate in the short term, taking into account the significance of the place, the condition of the cemetery and other items, and practicalities of the location. It proposed to restrict access to a level that can be effectively monitored, and suggested a yearly pass or permit system as used by the NPWS. It stated that the permit system “should endeavour to create a custodial awareness of the site amongst regular and periodic users, and seek their co-operation in increasing the security of the site.”<sup>96</sup>

The proposed permit system does not take into account the views of the local community or the relatives and descendants, who have expressed the view that they should have free access to the site, without the need for permits or passes.

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<sup>92</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:48.

<sup>93</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:44.

<sup>94</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:46.

<sup>95</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:49.

<sup>96</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:47, 53.



While the proposed permit system would control or limit those who want to visit the site for legitimate purposes, its principal justification can only be as an effective means to prohibit vandalism of the site, a role it cannot effectively fulfil, except in a 'neighbourhood watch' type of passive role. It is clear that the existing NPWS permit system has limited success in preventing vandalism or arson in nature reserves and some historic sites, nor should it be relied upon as the solution for Bar Island.

The 1996 Conservation Plan does not effectively address the issue of vandalism. It does not support the construction of a caretaker's cottage and has not proposed any other effective measures to control vandalism, even though it acknowledges that repair of gravestones and the chimney "is not likely to prove successful in the long term unless additional protection can be provided for the cemetery to reduce the incidence of vandalism." It also noted that control of access to the island should also be resolved prior to repair.<sup>97</sup>

An honorary ranger system or neighbourhood watch system should be developed for Bar Island to assist in control of vandalism. Together with regular Council inspections, it should provide:

1. Effective control of access to deter vandalism.
2. Promotion of a custodial awareness of the site.
3. Promotion of community co-operation.

The establishment of a security system has been suggested by a neighbouring owner and this should be considered further by Council. It is not too hard to imagine a security system of movement sensors on the island requiring a code to be entered into a key pad to deactivate, with the code changing daily / weekly, so that visitors have to contact Council to register their details and obtain the code. In this way, activation of the alarm would trigger a response from the appropriate authorities. This would however require a power source on the Island, although solar power should not provide any difficulties.

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<sup>97</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:21.

## **6.6 Proposal by Ian Gowrie-Smith.**

The proposal by Ian Gowrie-Smith, an adjacent property owner, regarding the future use of Bar Island is assessed in relation to the conservation policy of the 1996 Conservation Plan as amended and updated in this report.

This report has suggested that outdoor religious services of worship, remembrance and marriage are appropriate, but has found that the resumption of burials poses a number of conservation and community issues, which do not appear to make it feasible. The erection of memorial plaques was considered, but principally for relatives or descendants of those buried on the island, with burials taking place elsewhere. The Council would ultimately determine whether or not memorials for persons other than relatives or descendants could be included on the island, however the historic nature of the site would suggest that memorial plaques should commemorate those buried in marked graves. The reconstruction of the church is not considered appropriate under the conservation policy, but that does not preclude the holding of outdoor services. The establishment of a management group or “Friends of Bar Island” appears to coincide with the proposal for a non-profit trust, but there appears to be no need for any lease from Council in order to achieve its goals. Mr. Ian Gowrie-Smith has also made the suggestion that the Island should have a security system to prevent vandalism and unauthorised visitation and this suggestion has been developed in this report.

## **6.7 Aboriginal archaeological assessment.**

To date no thorough archaeological assessment of Aboriginal sites has been undertaken. This omission has the potential to change the conservation and management policies for the island and should any disturbance or change of use be considered a survey should be completed at the earliest opportunity.

The Aboriginal occupation of Bar Island has been described in this report. Hornsby Council is in the process of discussions with the Local Aboriginal Land Council and other groups regarding the future use, conservation and management of the Island.<sup>98</sup>

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<sup>98</sup> Personal communication: Ms. Di Campbell, Hornsby Shire Council.

The construction of a pathway across the midden will require the advice of an archaeologist with experience in Aboriginal sites, as well as liaison with NPWS and LALC and other groups.

### **6.8 Statutory Protection.**

The 1996 Conservation Plan recommends ongoing protection through heritage listing, not only in the Hornsby LEP 1994, but also with other agencies. For this purpose, listing applications are being prepared as an adjunct to this report for the Register of the National Estate and the NSW State Heritage Register.

### **6.9 Resources and funding.**

Hornsby Council believes that funding for conservation, maintenance and management of the island is best achieved by heritage listing of the site. In Council's opinion, this depends on the successful listing of the site on the Register of the National Estate and the NSW State Heritage Register. For this purpose, listing applications are being prepared as an adjunct to this report.

Implementation of the Conservation policy will require the commitment of additional funds by Council on an ongoing basis.

Funding may also be available from relatives and descendants, in order to pay for maintenance of graves. Other members of the community have indicated a willingness to expend funds on conservation, management and ongoing usage of Bar Island for appropriate purposes.

### **6.10 Excavation permit application.**

The 1996 Conservation Plan does not include any recommendations for application for an excavation permit. A permit is required for the disturbance of relics. The NSW Heritage Office should be contacted to determine whether or not a permit is required for conservation works to the headstones, graves or chimney, or whether the work is covered by standard exemptions.



### **6.11 Archival recording.**

Prior to disturbance or change of use, detailed recording of the site should be undertaken to archival standard, in accordance with NSW Heritage Office 1998. *Heritage Information Series. How to prepare archival records of heritage items.*

### **6.12 Landscape and vegetation. – maintenance.**

The 1996 Conservation Plan included specific recommendations for the conservation of fauna and flora on the Island, as follows:<sup>99</sup>

1. Access to the island should be restricted or at least monitored.
2. Dogs and cats must not be taken onto the island.
3. Vegetation within the cemetery area should be managed to retain the native canopy tree species, grasses, groundlayer plants and climbers. Within the cemetery area, mid storey vegetation or shrub species, which will damage monuments or graves should be removed by trimming to the ground and the application of poison. Power trimmers should not be used in the cemetery area as they cause indiscriminate damage to plant material and to the edges of masonry monuments. Periodic hand trimming is appropriate.
4. The exotic bulbs (Freesias, Autumn Crocus, Gladioli) and Hardenbergia species within the cemetery should be retained. They are unlikely to invade rapidly into the bushland areas. However, populations of these bulb and other species should be monitored and if invasion of healthy bushland is occurring, control of the spread of these plant species should be undertaken. Planting of appropriate species may be undertaken to prevent erosion or to reinstate previously recorded species in the cemetery.
5. The two exotic species noted on the old cottage site should be eradicated (but see recommendations below relating to Periwinkle).
6. Annual and grass weeds near the jetty and on the midden should be controlled. Weed control here must not disturb the midden, hence control must be limited to spot spraying with herbicide.
7. Other than as specified above, there should be no further clearance of vegetation.

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<sup>99</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:43 and Appendix B.

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8. All major trees should be retained and periodically inspected health and stability. Dead or dying branches in danger of falling on historical monuments should be removed.
9. The pathway through the cemetery should be monitored for signs of erosion or disturbance of graves.
10. No new formal pathways should be constructed, with the exception of the path across the midden.
11. Regular maintenance should include provision for removal of rubbish. No rubbish receptacles should be placed on the island.

The 1996 Conservation Plan also provided additional details on the maintenance of vegetation on the Island. Where appropriate these have been integrated into the above recommendations.<sup>100</sup>

Some additional heritage issues should be taken into consideration to ameliorate the impact of these recommendations on the historical remains. No bulbs or periwinkle were observed during site inspection on 28 August 2002, possibly due to extreme dry weather conditions.

Within the cemetery area, there is a risk that periodic removal or slashing of vegetation may disturb the simple stone surrounds of several of the graves. This could also easily result from pedestrian traffic over grave sites. It is important that this disturbance should be minimised by cutting native grasses short enough to clearly reveal the position of graves, but also by clearly defining the pathway through the cemetery to avoid stone grave surrounds. This pathway may best be defined by shorter trimming of grass and other vegetation.

Periwinkle (*Vinca major*) is a good indicator of historical occupation. Its removal would therefore have a detrimental impact on the significance of the island. As with the bulbs in the cemetery, the periwinkle should be monitored and restricted to the site of the hut.

The site of the church and possibly the site of the hut should generally be treated in the same manner as the cemetery, thereby maintaining the open nature of the sites of previous buildings.

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<sup>100</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:43, 52 and Appendix B.

For the purpose of maintaining the historical setting of the island, the 1996 Conservation Plan recommends that no new major landscape elements, like fencing or seating, should be introduced.<sup>101</sup> The recent construction of temporary protective fencing around the chimney should therefore be removed once the chimney is stabilised.

The Fauna and Flora Study has recommended a fire hazard reduction (asset protection) zone of 30 metres around the cemetery and church ruin site to be implemented manually. Implementation should accord with the recommendations of the 1996 Conservation Plan as described above.<sup>102</sup>

### **6.13 Conservation of cemetery, memorial, chimney and other items.**

The 1996 Conservation Plan recommended the conservation of the cemetery, the chimney and memorial. To this should be added the conservation of the “HE BRITTEN” inscription on the sandstone rock on the pathway between the jetty and the church site.

The 1996 Conservation Plan also detailed repair works for the cemetery monuments and chimney. The NPWS proposal “whereby no active conservation works were undertaken and the headstones were left to decay slowly over time” is contrary to the policy of the 1996 Conservation Plan, the principles of the ICOMOS Burra Charter and the provisions of the NSW Heritage Act.

The most appropriate action to conserve the “HE BRITTEN” inscription on the sandstone rock on the pathway is to divert the pathway around the rock, so that it is no longer used as a stepping stone.

The repair of the cemetery, memorial and chimney should be undertaken in accordance with the policies of the 1996 Conservation Plan, namely Sections 8.3.1, 8.3.2, 9.5.4, 9.5.5.<sup>103</sup> Detailed guidelines are given in Section 10 of the 1996

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<sup>101</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:43, 51.

<sup>102</sup> The Fauna and Flora Study is part of this Plan of Management.

<sup>103</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:42-43, 50

Conservation Plan.<sup>104</sup> Assessment of the condition of the cemetery monuments, the memorial and the chimney has been updated, together with a programme for repair works.<sup>105</sup>

It is important that the relatives and descendants and local community be notified and asked for their response to the conservation works for individual graves. They may wish to be more closely involved in the process. The notification of the community should be part of the interpretation, display and education role of the site.<sup>106</sup>

#### **6.14 Aboriginal shell midden – construction of pathway.**

While the 1996 Conservation Plan proposed 2 options for resolving the issue of erosion caused by the pathway across the shell midden, the less intrusive option is favoured by this report. It involved the laying of geotextile on the ground surface and the application of a layer of crushed sandstone to form a pathway surface that blends well with the surrounds. The use of rough sandstone blocks as steps and to divert stormwater on steeper eroded sections of the pathway is appropriate. The pathway should be diverted around the “HE BRITTEN” inscription. The construction of this pathway should only be carried out after consultation with the NPWS, the LALC and other Aboriginal groups.<sup>107</sup>

Erosion of the foreshore adjacent to the jetty and midden is also active and should be controlled. It is suggested that limited quantities of crushed sandstone and soil should be placed in areas of active erosion and covered with vegetable matting and planted with appropriate native plants to stabilise this problem. Again this measure should only be carried out after consultation with the NPWS, the LALC and other Aboriginal groups.

Cost estimates for the construction of the pathway and the measures to inhibit further erosion of the foreshore have not been costed to date. Community involvement by the

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<sup>104</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:56-57.

<sup>105</sup> See Appendix 3.

<sup>106</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:50.

<sup>107</sup> This method of pathway construction was recommended by Brad Welsh, NPWS, Bobbin Head.



LALC should be included in the cost, namely 2 representatives at a daily rate of \$250. The remaining staff complement may be made up of Council field officers, to which should be added the cost of materials.

### **6.15 Reconstruction of jetty.**

The replacement of the deck of the existing jetty or the construction of a new jetty is appropriate. It is recommended by the 1996 Conservation Plan and is also in accordance with community views.

The jetty should meet with safety standards. It is the site of the jetty, not the jetty itself that is significant, although any new structure should fit in with the historical setting.

Cost estimates for the various options for the jetty have been provided by Gordon Thompson, as follows:

1. New runners and deck on existing jetty.	\$400 per lineal metre.
2. New jetty with turpentine piles	\$750 per lineal metre.
3. New jetty with marine piles	\$950 per lineal metre.

### **6.16 Summary of essential and ongoing actions.**

The programme outlined in section 9.11 of the 1996 Conservation Report still provides an appropriate programme for the conservation, maintenance and future management of the Bar Island cemetery and related structures.<sup>108</sup>

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<sup>108</sup> Amanda Jean and Siobhan Lavelle, Bar Island, Hawkesbury River, Conservation Plan. Hornsby Council 1996:54-55

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**APPENDIX 1. BURIALS AT BAR ISLAND.**

Name	Age at death	Death date	Remarks	Plot located in 1996 Conservation Plan	Source
Absolem, Mary Ann	65	11/6/1887			Richmond, Bar Island, p 10
Banks, Caroline Mary	5 mos	20/8/1879			Richmond, Bar Island, p 11
Blundell, Joseph	2 weeks	14/1/1906			Richmond, Bar Island, p 11
Bowles, John	54	4/10/1903	William John Bowles in Richmond: John in Jean & Lavelle	4.26	Jean & Lavelle 4.26
Bowles, Marianne	41	26/10/1892		4.26	Jean & Lavelle 4.26
Brown, Charles Frederick	41	21/3/1901		4.8	Jean & Lavelle 4.8
Burton, Charlotte	75	23/7/1890		4.26	Jean & Lavelle 4.26
Butters, Annie Ellis	59	7/4/1898	Surname as "Bathurst" in Sexton's Records, but she was known as "Butters" – see Richmond, Bar Island, p 28		Richmond, Bar Island, p 11
Byrnes, Albert	17 days	13/2/1898			Richmond, Bar Island, p 11
Byrnes, Francis	6	4/5/1887	Date of death differs between Richmond & Jean & Lavelle	4.25	Jean & Lavelle 4.25
Byrnes, Joseph	46	23/6/1882			Richmond, Bar Island, p 11
Byrnes, Maria	58	16/1/1901		Possibly 4.2. <sup>109</sup>	Richmond, Bar Island, p 10
Calvert, Annie	67	1/6/1883			Richmond, Bar Island, p 11
Calvert, James	75	22/3/1880			Richmond, Bar Island, p 11
Cole, James	71	26/2/1885		4.20	Jean & Lavelle 4.20

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<sup>109</sup> See Section 3.3 for identification of Grave 4.3.




Name	Age at death	Death date	Remarks	Plot located in 1996 Conservation Plan	Source
Cole, Mary	72	6/10/1892			Richmond, Bar Island, p 11
Cole, Rubina	17 days	2/11/1880			Richmond, Bar Island, p 11
Ferdinand, Sarah	98	6/11/1880			Richmond, Bar Island, p 11
Garthon, James W	39	10/11/1898			Richmond, Bar Island, p 11
Goodridge, Betsy	38	20/9/1894			Richmond, Bar Island, p 12
Green, Eva Isabella	3 yrs 4 mos	27/11/1904			Richmond, Bar Island, p 11
Green, James Kenneth	7 mos	10/12/1904			Richmond, Bar Island, p 11
Green, Mary Anne Jane (Janie)	30	26/9/1892	Age at death differs	4.17	Jean & Lavelle 4.17
Green, W H C	31	16/4/1906	Age at death differs	4.14	Jean & Lavelle 4.14
Greer, John	66	30/3/1888		4.27	Jean & Lavelle 4.27
Greer, Mary	65	18/7/1886		4.27	Jean & Lavelle 4.27
Hibbs, Richard	60	18/12/1904		Possibly 4.2. 110	Richmond, Bar Island, p 10
Holland, Samuel Albert		20/3/1899			Richmond, Bar Island, p 11
Jessup, James Augustus		16/5/1902			Richmond, Bar Island, p 11
Johnson, Sarah Emily	36	7/11/1895			Richmond, Bar Island, p 11
Jones, Mary Ann	30	1/6/1883			Richmond, Bar Island, p 11
Lloyd, Maude	3 weeks	1/10/1880			Richmond, Bar Island, p 11
Lloyd, Richard	64	1/7/1894			Richmond, Bar Island, p 11


<sup>110</sup> See Section 3.3 for identification of Grave 4.3.

<b>Name</b>	<b>Age at death</b>	<b>Death date</b>	<b>Remarks</b>	<b>Plot located in 1996 Conservation Plan</b>	<b>Source</b>
McLaughlin, Frederick A	8 mos	30/12/1903			Richmond, Bar Island, p 12
Miller, Montague C		12/6/1959		4.15	Jean & Lavelle 4.15
Milson, Ann Elizabeth	39	9/9/1886		4.18	Jean & Lavelle 4.21
Milson, Robert	62	14/9/1886		4.21	Jean & Lavelle 4.16
Rose, Cyril Joseph	2 yrs 3 mos	22/11/1895		4.1	Richmond, Bar Island, p 10
Rose, Elizabeth Bessie	73	17/10/1897			Richmond, Bar Island, p 12
Scott, Mary Elizabeth	6 weeks 2 days	9/1/1887			Richmond, Bar Island, p 12
Seymour, Vincent William	75	9/4/1899			Richmond, Bar Island, p 12
Sutton, Ivy	1	26/12/1901			Richmond, Bar Island, p 12
Thompson, Lavinia Blanche	3 mos	19/2/1884			Richmond, Bar Island, p 12
Underwood, Frederick H	48	8/1/1902			Richmond, Bar Island, p 12
Wilson, Alexander Bow	33	3/5/1887	Difference in death date	4.24	Jean & Lavelle 4.24
Young, Harriett	75	14/12/1884	Difference in age and date of death	4.19	Jean & Lavelle 4.19


**APPENDIX 2. INVENTORY OF SITES, 1996 CONSERVATION PLAN.**

INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>TIMBER JETTY</b>			Inventory No. <b>1</b>
Priority High	Damage Yes	Photo Ref. MJ 02.12-15	Cost Estimate (for Repair) \$ 1,000 Cyclic maintenance
<b>Significance</b> Social and aesthetic/visual setting. Picturesque long timber jetty with white painted markings set against black timber, blue water and sky.			
<b>Description</b> Typical timber jetty of the area - 30m in length. Landing supported by 250mm diameter logs set in concrete piers. Tops of logs painted white. Towards the land piles of sandstone piers support the jetty. Constructed by local group organised by Mr Reg Hardy and friends (St Andrews Historical Society).			
<b>Photograph</b> 			
CONSERVATION AND MANAGEMENT INFORMATION			
<b>Condition &amp; Integrity</b> Medium.		<b>Comments</b> Evidence of continuous care and maintenance.	
<b>Recommended Action for Conservation or Management</b> <i>(Also refer to Repair Guidelines section of the main report)</i> Cyclic maintenance.			
<b>Recorder</b> M Jean			<b>Date</b> July 1995




INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ABORIGINAL MIDDEN</b>			Inventory No. <b>2</b>
Priority High	Damage Yes	Photo Ref. MJ 02.16	Cost Estimate (for Repair) SEE BELOW
<b>Significance</b> Archaeological research potential. Particularly good example of surviving middens in the area (many others were destroyed by 19th century lime burning activities).			
<b>Description</b> Large midden situated close to northern shore of the island. Predominantly comprised of oyster shells, with dark lenses of other organic material. Midden extends for 20 to 30 metres around the point of the island and is at least 2 metres deep.  Much of the midden is covered by vegetation, including some weed species.  The access track from the jetty crosses the midden and has caused some damage through erosion.			
<b>Photograph</b>			
CONSERVATION AND MANAGEMENT INFORMATION			
<b>Condition &amp; Integrity</b> Substantially intact.		<b>Comments</b> Midden is subject to the provisions of the NPW Act, 1974. Also of interest to the Metropolitan Aboriginal Land Council.	
<b>Recommended Action for Conservation or Management</b> <i>(Also refer to Repair Guidelines section of the main report)</i> Construction of an elevated walkway above the midden to prevent further erosion. Archaeological work may be required before or during construction. Or re-route the present access track and complete necessary stabilisation.			
<b>Recorder</b> S Lavelle			<b>Date</b> July 1995




INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>FORMER CHURCH SITE</b>			Inventory No. <b>3</b>
Priority High	Damage No	Photo Ref. MJ 02.30	Cost Estimate (for Repair) N/A
<b>Significance</b> Historic, Social, Archaeological Archaeological site. Social significance demonstrated by placing of plaques on the nearby chimney			
<b>Description</b> Former building site marked by level area of ground, adjacent to surviving sandstone chimney.  St John's Church erected 1876, known to have been small rectangular building of timber and weatherboard, supported on sandstone piers. Damaged by storm in late 19th century, finally removed 1937.  Several scattered sandstone blocks in the vicinity derive either from the chimney, or from these footings. The area of the church site also contains the base for the flagpole known to have formerly been on this site.			
<b>Photograph</b> 			
CONSERVATION AND MANAGEMENT INFORMATION			
<b>Condition &amp; Integrity</b> Building not extant, but archaeological site largely undisturbed.		<b>Comments</b>	
<b>Recommended Action for Conservation or Management</b> <i>(Also refer to Repair Guidelines section of the main report)</i> Site should be retained undisturbed, no other active management is necessary for the archaeological site. If site is to be disturbed or removed provisions of the NSW Heritage Act would apply.			
Recorder S Lavelle			Date July 1995




INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>FORMER CHURCH SITE - STONE CHIMNEY</b>			Inventory No. <b>3.1</b>
Priority High	Damage Yes	Photo Ref. MJ 02. 18-28	Cost Estimate (for Repair) \$ 8,000
Significance Historical, Social, Aesthetic/Technical Accomplishment Physical record of the former St John's Church and provisional school built by early settlers of the Hawkesbury River area in 1876.			
Description The sandstone chimney is a massive structure built from recycled stone from George Peat's colonial cottage at Fairview c. late 1830s/early 1840s. The chimney formed part of St John's Church and school, a timber frame, modest building with shiplap weatherboards and timber shingle roof constructed by early settlers John Crumpton and Burton Crossland. The chimney is on a raised sandstone base (1100mm x 3350mm) and rises 3 to 5 metres high. It has a large square hearth and the blocks range in size from 1330mm to 100mm.			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity	Substantially intact, some internal stone blocks removed.	Comments	Chimney is a "relic" under the NSW Heritage Act.
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> Structural Engineer's report and urgent works to stabilise structure and carry out repairs.			
Recorder	M Jean	Date	July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>SANDSTONE OBELISK to C. J. Rose, 1895</b>			Inventory No. <b>4.1</b>
Priority Low	Damage No	Photo Ref. SL. 01.17	Cost Estimate (for Repair) \$ 450
Significance HISTORIC, SOCIAL			
Description		Inscription:	
<p>Small sandstone obelisk , with tapered, pyramidal top, on square sandstone plinth. Approximately 1.05 metres high. Inscription carried on marble plaque affixed to east face of obelisk. Lead inlaid lettering in Gothic and Roman style scripts, also simple lead inlaid floral motif. Plot is enclosed by sandstone kerbing (straight edge) and measures approximately 1.38m x 0.57 m.</p>		<p><i>In Loving Memory of OUR LITTLE SON CYRIL JOSEPH ROSE WHO DEPARTED THIS LIFE NOV. 22ND 1895 AGED 2 YRS &amp; 3 MTHS Gone Home</i></p>	
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity		Comments	
Essentially intact. Fair condition. Several lead letters are missing.			
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i>			
The inscription remains legible. Re-leading is possible, but is highly specialised and costly work (see estimate above). Monitor condition, consider re-leading only if plaque becomes totally illegible.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>SANDSTONE OBELISK (unidentified)</b>			Inventory No. <b>4.2</b>
Priority High	Damage Yes	Photo Ref. SL. 01. 01	Cost Estimate (for Repair) \$ 600
Significance HISTORIC			
<p><b>Description</b> Tapered sandstone obelisk. Mid-section missing due to breakage of the monument. Evidence of a small plaque formerly on the east face of the monument, now not extant. Grave plot is defined by a surround of natural sandstone rock pieces (approx. 2.18 m x 0.92 m).</p> <p>National Trust listing information indicates that the obelisk was intact in 1987, and that it bore a marble plaque. Prior transcriptions suggest that this obelisk may have been erected to Richard Hibbs died December 18th 1904, and Maria Byrnes died January 16th 1901.</p>			
<b>Photograph</b>			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity Not intact. Broken, with loss of plaque and mid-section.		Comments	
<p><b>Recommended Action for Conservation or Management</b> <i>(Also refer to Repair Guidelines section of the main report)</i>                  Re-fix top part to base, using reconstituted stone, or a new stone piece for the missing mid-section. Subject to accurate research, consider new plaque which will re-identify this monument/gravesite.</p>			
Recorder S Lavelle			Date July 1995



**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

<b>Name</b> <b>DOUBLE GRAVE PLOT (unidentified)</b>	<b>Inventory No.</b> <b>4.3</b>
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<b>Priority</b> High	<b>Damage</b> Yes	<b>Photo Ref.</b> SL. 01.03	<b>Cost Estimate (for Repair)</b> \$100
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**Significance** SOCIAL

**Description** Small double grave plot enclosed by a border of brick and local sandstone rock pieces. Plot approximately 1.9 x 1.2 m. Short section of sandstone kerbing (cambered top) used as a "headstone" within the plot - facing east. Also another partly worked sandstone piece, now displaced and lying near the northwest corner of the grave plot which may have formed a second headstone within the plot.




**CONSERVATION AND MANAGEMENT INFORMATION**

<b>Condition &amp; Integrity</b> Fair. Plot is becoming obscured by leaf litter, some pieces displaced.	<b>Comments</b>
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**Recommended Action for Conservation or Management** (Also refer to Repair Guidelines section of the main report)  
Reinstate displaced elements of surround, and reset "headstones" within plot. Consider minor hand-clearing of vegetation in order to define the grave plot.

<b>Recorder</b> S Lavelle	<b>Date</b> July 1995
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INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ARCH (Local stone headstone)</b>			Inventory No. <b>4.4</b>
Priority Low	Damage No	Photo Ref. SL. 01.04	Cost Estimate (for Repair) N/A
Significance			
<p><b>Description</b> Partly worked, small squared sandstone piece. Painted white with crudely incised and painted inscription: ARCH. Also a small cairn of local stone pieces placed in front of the headstone.</p> <p>An extremely small grave, approximately 0.71 x 0.57 m, which unlike all other monuments in the cemetery faces to the north rather than to the east.</p> <p>This monument is not noted on the National Trust listing, which indicates that it may be a more recent introduction. The small size suggests that it may be the grave of a pet.</p>			
<p><b>Photograph</b></p> 			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity		Comments	
Good condition.			
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i>			
None required.			
Recorder S Lavelle			Date July 1995




INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ROCK EDGED GRAVE 1 (unidentified)</b>			Inventory No. <b>4.5</b>
Priority Low	Damage No	Photo Ref. SL. 01.05	Cost Estimate (for Repair) N/A
Significance <b>SOCIAL.</b>  The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.			
Description Grave plot defined by surround of natural sandstone rock pieces, approximately 2.5 x 1 m.  Several similar items are situated throughout the Bar Island Cemetery.  The presence of these enclosures suggests that the poorer members of the local community were not able to afford formal headstones. They may reflect modest economic means or difficult times such as the 1890s or 1930s Depressions.			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity		Comments	
Good. Essentially intact.			
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> All of these simpler types of grave enclosures are an important social document and should be retained on-site. When necessary these graves should be periodically hand-cleared to prevent excessive overgrowth.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ROCK EDGED GRAVE 2 (unidentified)</b>			Inventory No. <b>4.6</b>
Priority Low	Damage No	Photo Ref. SL. 01.06	Cost Estimate (for Repair) N/A
Significance <b>SOCIAL.</b>  The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.			
Description Grave plot defined by surround of natural sandstone rock pieces, approximately 1.9 x 1 m. Small roughly squared stone used as "headstone" at top of the plot.  Several similar items are situated throughout the Bar Island Cemetery.  The presence of these enclosures suggests that the poorer members of the local community were not able to afford formal headstones. They may reflect modest economic means or difficult times such as the 1890s or 1930s Depressions.			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition Fair, Essentially intact. Plot & Integrity becoming part overgrown.		Comments	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> All of these simpler types of grave enclosures are an important social document and should be retained on-site. When necessary these graves should be periodically hand-cleared to prevent excessive overgrowth.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ROCK EDGED GRAVE 3 (unidentified)</b>			Inventory No. <b>4.7</b>
Priority Low	Damage No	Photo Ref. SL. 01.06	Cost Estimate (for Repair) N/A
Significance SOCIAL.  The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.			
Description Small grave plot defined by surround of natural sandstone rock pieces, approximately 1 x 0.75 m. Becoming obscured by vegetation. The small size suggests that it may be the grave of a child.  Several similar items are situated throughout the Bar Island Cemetery.  This grave was not noted by the National Trust survey.			
Photograph			
			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition Fair. Essentially intact. Plot & Integrity becoming part overgrown.		Comments	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> All of these simpler types of grave enclosures are an important social document and should be retained on-site. When necessary these graves should be periodically hand-cleared to prevent excessive overgrowth.			
Recorder S Lavelle			Date July 1995



**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

Name <b>BROWN HEADSTONE, 1901</b>	Inventory No. <b>4.8</b>
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Priority <b>High</b>	Damage <b>Yes</b>	Photo Ref. <b>SL. 01.08</b>	Cost Estimate (for Repair) <b>\$50</b>
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**Significance** HISTORIC. SOCIAL. AESTHETIC/TECHNICAL ACCOMPLISHMENT  
 Personalised monument recording the profession of the deceased both in the written inscription and through the use of a symbolic carved motif.

**Description** Sandstone headstone, carved to imitate a cairn of coursed masonry, with low relief obelisk on east face. 0.82 m high. Grave plot edged with natural sandstone pieces, the majority of these have been displaced and scattered. Plot 1.85 x 1.2 metres.

Incised anchor above inscription. Inscription carved in a variety of lettering styles, including Gothic, Roman and Italic.

No mason evident.

Inscription:  
  
 Sacred  
 to  
 the memory of  
**CHARLES F BROWN**  
**MASTER MARINER**  
**DIED 21ST MARCH 1901**  
**AGED 41 YEARS**  
*At Rest*



**CONSERVATION AND MANAGEMENT INFORMATION**

Condition <b>Headstone - good.</b> & Integrity <b>Surround partly displaced.</b>	Comments
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**Recommended Action for Conservation or Management** *(Also refer to Repair Guidelines section of the main report)*  
 Reinstate displaced elements of surround.

Recorder <b>S Lavelle</b>	Date <b>July 1995</b>
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**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

<b>Name</b>	<b>ROCK EDGED GRAVE 4 (unidentified)</b>	<b>Inventory No.</b>	<b>4.9</b>
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<b>Priority</b>	<b>Damage</b>	<b>Photo Ref.</b>	<b>Cost Estimate (for Repair)</b>
Low	No	SL. 01.10	N/A

**Significance** SOCIAL.

The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.

**Description** Grave plot defined by surround of natural sandstone rock pieces, approximately 2 m x 1.1 m. Some pieces displaced at foot of grave and at northwest corner.

Several similar items are situated throughout the Bar Island Cemetery.

The presence of these enclosures suggests that the poorer members of the local community were not able to afford formal headstones. They may reflect modest economic means or difficult times such as the 1890s or 1930s Depressions.



**CONSERVATION AND MANAGEMENT INFORMATION**


<b>Condition &amp; Integrity</b>	Fair. Essentially intact.	<b>Comments</b>	
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**Recommended Action for Conservation or Management** *(Also refer to Repair Guidelines section of the main report)*


Reinstate displaced fabric to correct position.  
 When necessary this grave should be periodically hand-cleared to prevent excessive overgrowth.

<b>Recorder</b>	S Lavelle	<b>Date</b>	July 1995
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INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ROCK EDGED GRAVE 5 (unidentified)</b>			Inventory No. <b>4.10</b>
Priority Low	Damage No	Photo Ref. SL. 01.11	Cost Estimate (for Repair) N/A
Significance <b>SOCIAL.</b>  The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.			
Description Grave plot defined by surround of natural sandstone rock pieces, approximately 1.9 m x 0.95 m.  Several similar items are situated throughout the Bar Island Cemetery.  The presence of these enclosures suggests that the poorer members of the local community were not able to afford formal headstones. They may reflect modest economic means or difficult times such as the 1890s or 1930s Depressions.			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity Fair. Essentially intact.		Comments	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> When necessary this grave should be periodically hand-cleared to prevent excessive overgrowth.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ROCK EDGED GRAVE 6 (unidentified)</b>			Inventory No. <b>4.11</b>
Priority Low	Damage No	Photo Ref. SL. 01.14	Cost Estimate (for Repair) N/A
Significance <b>SOCIAL.</b>  The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.			
Description Grave plot defined by surround of natural sandstone rock pieces, approximately 2.15 x 1.1 m.  Several similar items are situated throughout the Bar Island Cemetery.			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity		Essentially intact.	
Comments			
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> All of these simpler types of grave enclosures are an important social document and should be retained on-site. When necessary these graves should be periodically hand-cleared to prevent excessive overgrowth.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ROCK EDGED GRAVE 7 (unidentified)</b>			Inventory No. <b>4.12</b>
Priority Low	Damage No	Photo Ref. SL. 01.15	Cost Estimate (for Repair) \$ 50
Significance SOCIAL.  The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.			
Description Grave plot defined by surround of natural sandstone rock pieces, approximately 2.4 m x 0.87 m. Some stones displaced, partly through growth of vegetation.  Dead tree at head of grave plot and sapling growing at base of the plot.  Several similar items are situated throughout the Bar Island Cemetery.			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity		Essentially intact.	
Comments			
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> All of these simpler types of grave enclosures are an important social document and should be retained on-site. Overgrowth should be cleared by hand. Displaced stones should be reinstated.			
Recorder S Lavelle			Date July 1995



**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

<b>Name</b>	<b>CONCRETE KERBED GRAVE (unidentified)</b>	<b>Inventory No.</b>	<b>4.13</b>
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<b>Priority</b>	Medium	<b>Damage</b>	Yes	<b>Photo Ref.</b>	SL. 01.12	<b>Cost Estimate (for Repair)</b>	\$ 50
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**Significance** SOCIAL.

**Description** Grave plot defined by 6" concrete kerbing (square profile). Approximately 2.1 m x 0.88 m. Plot infilled with local stone pieces.

Sapling growing at north side of the plot has caused cracking and distortion of the kerbing . Plot itself is becoming overgrown.



**CONSERVATION AND MANAGEMENT INFORMATION**

<b>Condition &amp; Integrity</b>	Poor.	<b>Comments</b>	
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**Recommended Action for Conservation or Management** *(Also refer to Repair Guidelines section of the main report)*  
 Overgrowth within plot should be cleared by hand. Displaced section of surround should be left as is, but should be monitored. If continued growth of sapling causes more damage, then the tree should be removed.

<b>Recorder</b>	S Lavelle	<b>Date</b>	July 1995
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**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

Name <b>W H C GREEN, 1906 (Local stone headstone)</b>	Inventory No. <b>4.14</b>
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Priority <b>High</b>	Damage <b>No</b>	Photo Ref. <b>SL. 01.16</b>	Cost Estimate (for Repair) <b>N/A</b>
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**Significance** SOCIAL. HISTORIC. RARITY.  
 Good example of vernacular tradition utilising simple and locally available materials. Continued maintenance of the inscription indicates that this gravesite retains community links and interest.

<p><b>Description</b> Grave plot enclosed by a border of roughly squared, local sandstone rock pieces. Plot approximately 2.25 x 1 m.</p> <p>Rough worked squared sandstone block is used as a headstone. This block is painted white with crudely incised and painted inscription (Green paint).</p> <p>The inscription has been repainted since the National Trust inspection in 1987, and the gravesite appears to be periodically cleared and maintained by relatives or other interested persons.</p>	<p><u>Inscription:</u></p> <p>IN LOVING MEMORY                  OF                  W H C GREEN                  DIED 16TH APRIL 1906                  AGED 31 YEARS                  RIP</p>
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**CONSERVATION AND MANAGEMENT INFORMATION**

Condition & Integrity <b>Intact and in good condition.</b>	Comments <b>Misidentified on National Trust listing card as "W Greer, 1906".</b>
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**Recommended Action for Conservation or Management** *(Also refer to Repair Guidelines section of the main report)*  
 None required at present.

Recorder <b>S Lavelle</b>	Date <b>July 1995</b>
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**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

Name <b>MILLER, 1959 (Sandstone Desk/Sloper)</b>	Inventory No. <b>4.15</b>
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Priority High	Damage No	Photo Ref. SL. 01.18	Cost Estimate (for Repair) \$ 50
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Significance SOCIAL. HISTORIC.

<p>Description Small sandstone desk or 'sloper' with incised stainless steel plaque on east face, at head of rock-edged grave plot, 1.6 x 1.1 m. Some stones from surround partly displaced.</p>	<p><u>Inscription:</u>  IN MEMORY OF MONTAGUE C. MILLER DIED 12TH JUNE 1959</p>
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**CONSERVATION AND MANAGEMENT INFORMATION**

Condition & Integrity Essentially intact. Fair condition.	Comments
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Recommended Action for Conservation or Management *(Also refer to Repair Guidelines section of the main report)*  
Replace displaced stones in surround.

Recorder S Lavelle	Date July 1995
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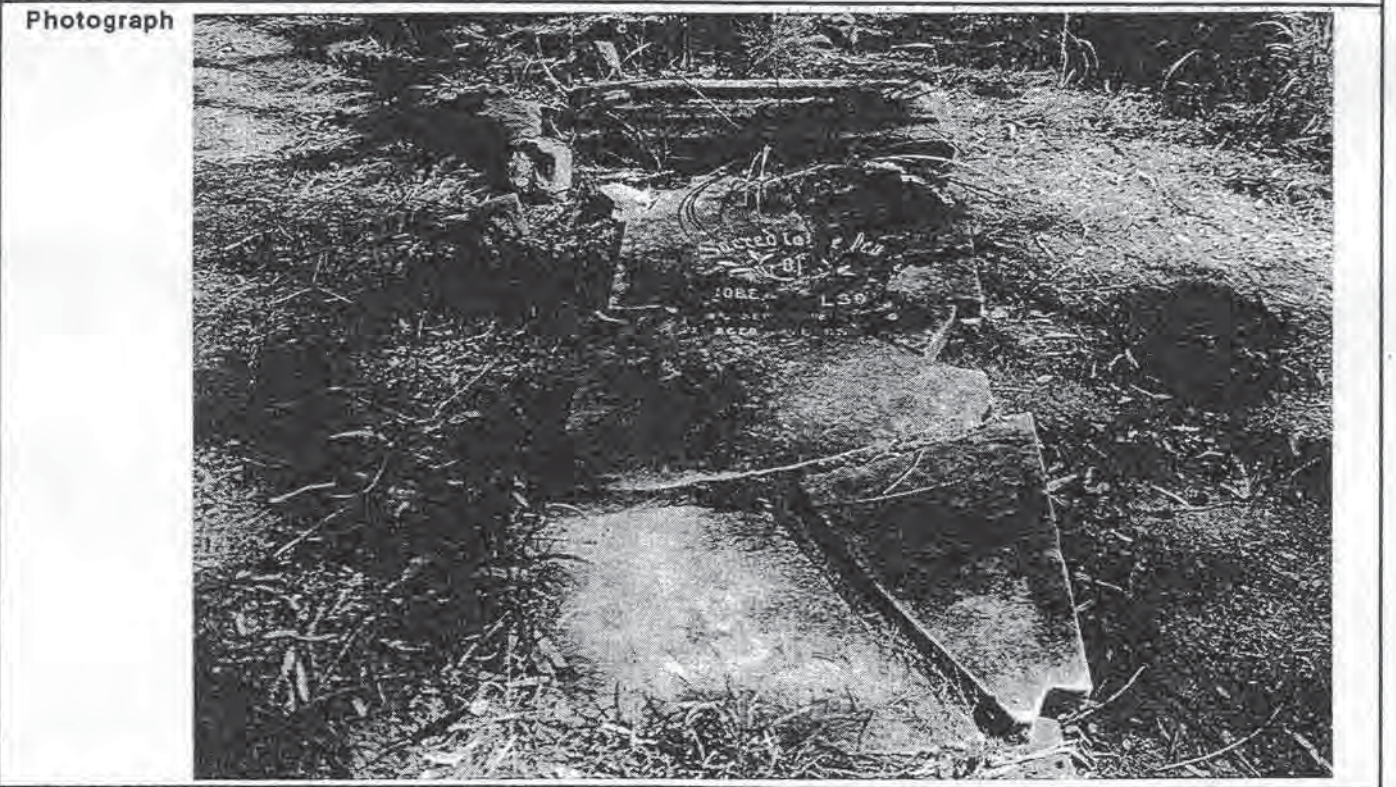
**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

<b>Name</b> <b>MILSON HEADSTONE, 1886</b>	<b>Inventory No.</b> <b>4.16</b>
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<b>Priority</b> High	<b>Damage</b> Yes	<b>Photo Ref.</b> SL. 01.19	<b>Cost Estimate (for Repair)</b> \$ 900
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**Significance** HISTORIC. SOCIAL.  
Robert Milson was a local settler after whom Milson Island and Milson Passage (both on the Hawkesbury River) are named.

<p><b>Description</b> Marble headstone, extensively damaged. Previously removed from the plinth and now comprised of several pieces lying face-up on the grave plot. 7 joining pieces present, at least one piece is missing. Formed a gable topped headstone with stylised scroll shoulders and a circular medallion with relief carved floral motifs on face. Sandstone plinth (socket intact) and 6" sandstone kerbing enclosing the grave plot. Inscription is in lead inlaid lettering using Gothic and Roman scripts, also lead inlaid stylised floral motif (either Olive or Laurel / Bay leaves). Mason: W Johnson, North Shore</p>	<p><u>Inscription:</u> <i>Sacred to the Memory</i> <i>of</i> <b>ROBERT MILSON</b> <b>DIED 14TH SEPTEMBER (188)6</b> <b>AGED 62 YEARS</b></p>
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**CONSERVATION AND MANAGEMENT INFORMATION**

<b>Condition &amp; Integrity</b> Poor. Extensively damaged.	<b>Comments</b> Date noted in prior transcriptions, although fragment is now missing.
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**Recommended Action for Conservation or Management** *(Also refer to Repair Guidelines section of the main report)*  
Headstone pieces could be rejoined using adhesives and dowels, use synthetic stone mix to fill voids. Reuse existing plinth. Rejoined headstone may need an additional support such as an armature or solid slab.  
Alternatively, assemble & preserve in sloping position on grave plot.

<b>Recorder</b> S Lavelle	<b>Date</b> July 1995
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INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>J GREEN, 1892 (Local stone headstone)</b>			Inventory No. <b>4.17</b>
Priority High	Damage No	Photo Ref. SL. 01.20	Cost Estimate (for Repair) N/A
<b>Significance</b> SOCIAL. HISTORIC. RARITY. Good example of vernacular tradition utilising simple and locally available materials. Continued maintenance of the inscription indicates that this gravesite retains community links and interest.			
<b>Description</b> Grave plot enclosed by a border of roughly squared, local sandstone rock pieces. Plot approximately 2.2 x 0.9 m.  Rough worked squared sandstone block is used as a headstone. This block is painted white with crudely incised and painted inscription (Green paint). Also a roughly squared footstone at the base of the grave.  The inscription has been repainted since the National Trust inspection in 1987, and the gravesite appears to be periodically cleared and maintained by relatives or other interested persons.		<b>Inscription:</b>  IN LOVING MEMORY OF JANIE GREEN DIED 26TH SEPT 1892 R I P AGED 30 YEARS	
<b>Photograph</b>			
CONSERVATION AND MANAGEMENT INFORMATION			
<b>Condition &amp; Integrity</b> Intact and in good condition.		<b>Comments</b> Misidentified on National Trust listing card as "Janie Greer 26/9/1892".	
<b>Recommended Action for Conservation or Management</b> (Also refer to Repair Guidelines section of the main report) None required at present.			
<b>Recorder</b> S Lavelle			<b>Date</b> July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ROCK EDGED GRAVE 8 (unidentified)</b>			Inventory No. <b>4.18</b>
Priority Low	Damage No	Photo Ref. SL. 01.21	Cost Estimate (for Repair) \$ 50
Significance SOCIAL.  The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.			
Description Grave plot defined by surround of natural sandstone rock pieces, approximately 2.1 m x 1 m. Several stones displaced and scattered, especially on north side.  Several similar items are situated throughout the Bar Island Cemetery.			
Photograph 			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition Fair. & Integrity		Comments	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> All of these simpler types of grave enclosures are an important social document and should be retained on-site. Displaced stones should be reinstated. Overgrowth should be periodically cleared by hand.			
Recorder S Lavelle			Date July 1995



**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

Name <b>YOUNG HEADSTONE, 1884</b>	Inventory No. <b>4.19</b>
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Priority <b>High</b>	Damage <b>Yes</b>	Photo Ref. <b>SL. 01.22</b>	Cost Estimate (for Repair) <b>\$ 400</b>
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Significance **HISTORIC, SOCIAL.**

<p><b>Description</b> Marble headstone, fallen and broken. Forcibly removed from the sandstone plinth, the socket of which has been broken across the back. Headstone is in two pieces lying face-up on the grave plot, the tenon has been snapped off the base piece. Formerly a semicircular topped headstone with inscription in lead inlaid lettering using Gothic and Roman scripts, also lead inlaid stylised floral motif (either Olive or Laurel / Bay leaves). Mason: Andrews Bros, Sydney. The grave plot is enclosed by 6" sandstone kerbing with a cambered top and stylised square corner &amp; centre posts.</p>	<p><u>Inscription:</u> <i>In Loving Remembrance of</i> <b>HARRIET YOUNG</b> <b>WHO DIED 14TH DECr 1884</b> <b>AGED 75 YEARS</b> <b>AT REST</b> <i>Erected by her fond Granddaughter</i> <b>HARRIET</b></p>
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**CONSERVATION AND MANAGEMENT INFORMATION**

Condition <b>Poor. Broken &amp; Not intact.</b> & Integrity	Comments
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**Recommended Action for Conservation or Management** *(Also refer to Repair Guidelines section of the main report)*  
Headstone pieces could be rejoined using adhesives and dowels. Existing plinth may require consolidation. Rejoined headstone may need an additional support such as an armature or solid slab.  
Alternatively, assemble & preserve in sloping position on grave plot.

Recorder <b>S Lavelle</b>	Date <b>July 1995</b>
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INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>COLE HEADSTONE, 1885</b>			Inventory No. <b>4.20</b>
Priority High	Damage Yes	Photo Ref. SL. 01.23	Cost Estimate (for Repair) \$ 500
Significance <b>HISTORIC. SOCIAL. AESTHETIC / TECHNICAL ACCOMPLISHMENT</b> Displays symbolism in design and carved motifs, with a verse indicative of the attitudes of the era. Inscription includes biographical detail.			
Description Marble headstone, fallen and broken. Forcibly removed from the marble plinth, however the socket remains intact. Headstone is in two pieces lying face-up on the grave plot, with the tenon still present on the base piece. Within double grave plot (also contains Item 21) with 6" cambered sandstone kerbing. High Victorian style headstone with Gothic motifs such as relief tracery and trefoil surmount. Also relief florals (lily, snowdrop, daisy & rose). Inscription in lead inlaid lettering using Gothic and Roman scripts, also lead inlaid stylised floral motif (either Olive or Laurel / Bay leaves). Mason: Hanson, Lewis & Co., Sydney.		Inscription: <i>In Loving Memory</i> of JAMES COLE NATIVE OF BRISTOL ENGLAND DIED 26TH FEBRUARY 1885 AGED 71 YEARS  BE HIS FRAILTIES COVERED BY HIS TOMB AND O'ER HIS ASHES GUARDIAN LAURELS BLOOM	
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition Poor. Broken & Not intact. & Integrity		Comments	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> Re-erect headstone upright by rejoining the sections using adhesives and dowels. Alternatively, assemble & preserve in sloping position on grave plot.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>MILSON HEADSTONE, 1886</b>			Inventory No. <b>4.21</b>
Priority High	Damage Yes	Photo Ref. SL. 01.24	Cost Estimate (for Repair) \$ 900
Significance <b>HISTORIC. SOCIAL. AESTHETIC / TECHNICAL ACCOMPLISHMENT</b>			
Displays symbolism in design and carved motifs, with a verse indicative of the attitudes of the era.			
Description		Inscription:	
Marble headstone, fallen and broken. Forcibly removed from the plinth, however the socket remains intact, with the base part of the headstone still affixed to the plinth. 13 pieces of headstone are lying face-up on the grave plot, some small fragments are missing. Within double grave plot (also contains Item 20) with 6" cambered sandstone kerbing. Extant pieces indicate that headstone was semicircular topped, and had a circular medallion with relief floral motifs. Inscription in lead inlaid lettering using Gothic and Roman scripts.		----- the Memory of ANN ELIZABETH MILSON DIED 9TH SEPTEMBER 1886 AGED 39 YEARS	
Mason: W Johnson, North Shore.			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition Poor. Broken & Not intact. & Integrity		Comments	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> Headstone pieces could be rejoined using adhesives and dowels, use synthetic stone mix to fill missing sections. Reuse existing plinth. Rejoined headstone may need an additional support such as an armature or solid slab. Alternatively, assemble & preserve in sloping position on grave plot.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>ROCK EDGED GRAVE 9 (unidentified)</b>			Inventory No. <b>4.22</b>
Priority Low	Damage No	Photo Ref. SL. 01.25	Cost Estimate (for Repair) \$ 50
Significance SOCIAL.  The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.			
Description Small grave plot defined by surround of natural sandstone rock pieces, approximately 1.65 m x 0.6 m. Possibly marks the grave of a child.  Several similar items are situated throughout the Bar Island Cemetery.			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition Fair. & Integrity		Comments	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> All of these simpler types of grave enclosures are an important social document and should be retained on-site. Displaced stones should be reinstated. Overgrowth should be periodically cleared by hand.			
Recorder S Lavelle			Date July 1995



**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

<b>Name</b>	<b>ROCK EDGED GRAVE 10 (unidentified)</b>	<b>Inventory No.</b>	<b>4.23</b>
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<b>Priority</b> Low	<b>Damage</b> No	<b>Photo Ref.</b> SL. 01.26	<b>Cost Estimate (for Repair)</b> N/A
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**Significance** SOCIAL.  
  
The presence of several simple rock-edged graves is a feature of the Bar Island Cemetery.

**Description** Grave plot defined by surround of natural sandstone rock pieces, approximately 2 m x 0.5 m. Larger boulder/rock placed at the head of the grave.  
  
Several similar items are situated throughout the Bar Island Cemetery.



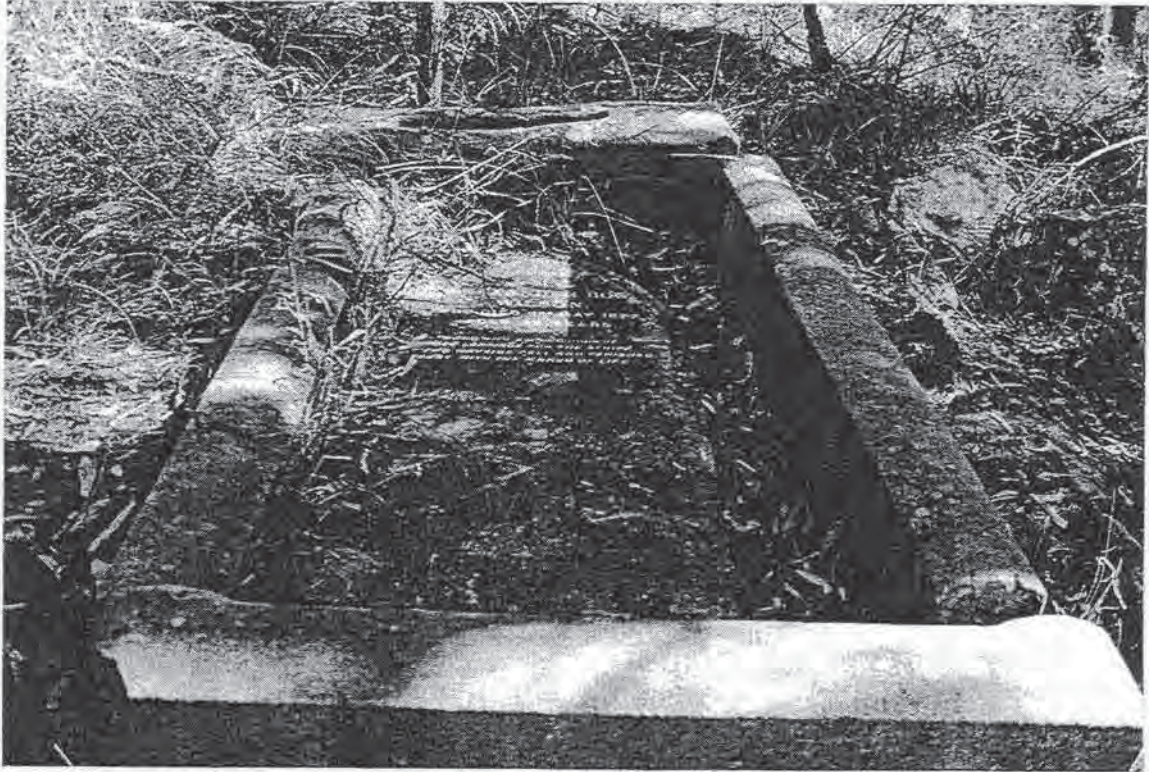
**CONSERVATION AND MANAGEMENT INFORMATION**

<b>Condition &amp; Integrity</b>	Fair.	<b>Comments</b>	
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**Recommended Action for Conservation or Management** (Also refer to Repair Guidelines section of the main report)  
All of these simpler types of grave enclosures are an important social document and should be retained on-site. Displaced stones should be reinstated. Overgrowth should be periodically cleared by hand.

<b>Recorder</b>	S Lavelle	<b>Date</b>	July 1995
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INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>WILSON HEADSTONE, 1887</b>			Inventory No. <b>4.24</b>
Priority High	Damage Yes	Photo Ref. SL. 01.27	Cost Estimate (for Repair) \$ 500
Significance HISTORIC. SOCIAL.  Verse indicative of the attitudes of the era.			
Description		Inscription:	
<p>Marble headstone, fallen and broken. Forcibly removed from the plinth, however the socket is basically intact. Headstone is in two pieces lying face-up on the grave plot, with the tenon still present on the base piece.</p> <p>Within single grave plot enclosed by with 6" cambered sandstone kerbing. Kerbing has minor chips, and is partly displaced on the north side.</p> <p>Arched headstone with simple moulded edge &amp; relief florals. Inscription in lead inlaid lettering using Gothic and Roman scripts, also lead inlaid stylised floral motif (either Olive or Laurel / Bay leaves).</p> <p>Mason: Patten, Sydney.</p>		<p><i>In Memory of</i> of ALEXANDER BOW WILSON WHO DIED 3RD MAY 1887 AGED 33 YEARS</p> <p>HE YOUNG AND STRONG WHO CHERISHED NOBLE LONGINGS FOR THE STRIFE BY THE WAYSIDE FELL AND PERISHED WEARY WITH THE MARCH OF LIFE</p>	
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition Poor. Broken & Not intact. & Integrity		Comments	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> Re-erect headstone upright by rejoining the pieces using adhesives and dowels. Alternatively, assemble & preserve in sloping position on grave plot.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>BYRNES HEADSTONE, 1887</b>			Inventory No. <b>4.25</b>
Priority High	Damage Yes	Photo Ref. SL. 01.27	Cost Estimate (for Repair) N/A
Significance HISTORIC. SOCIAL. AESTHETIC / TECHNICAL ACCOMPLISHMENT  Displays symbolism in design and carved motifs.			
Description		Inscription:	
<p>Small sandstone headstone, with rounded peaked shoulders. Matching footstone and natural stone rubble grave edging. Headstone bears several relief carved motifs, including Crown, fluted sunray motif, and pillasters on each side of the inscription. The Crown motif is probably symbolic of the "Crown of Glory" (Proverbs 4:9; 16:31).</p> <p>The inscription is relatively crudely carved, and was formerly 'blacked in'. Footstone has minor damage on north side. No mason evident.</p>		<p>FRANCIS BYRNES DIED MAY 4 1887 AGED 6 YEARS</p>	
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition Fair. & Integrity		Comments Stylistically very old fashioned for its date. Similar to sandstone headstones found in older areas of the Hawkesbury & Macdonald Rivers.	
Recommended Action for Conservation or Management (Also refer to Repair Guidelines section of the main report) None recommended at present. Monitor condition of the footstone.			
Recorder S Lavelle			Date July 1995



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>BURTON and BOWLES HEADSTONE, 1890s</b>			Inventory No. <b>4.26</b>
Priority High	Damage Yes	Photo Ref. SL. 01.30	Cost Estimate (for Repair) \$ 500
Significance HISTORIC. SOCIAL.  Symbolic motifs and verses are indicative of the social mores / attitudes of the era.			
Description Marble headstone, fallen and broken. Forcibly removed from the plinth, with socket partly broken away. Headstone is in three pieces lying face-up on the grave plot, with tenon attached to base piece. At least one piece is missing. Within single grave plot enclosed by 6" chamfered sandstone kerbing. Semicircular topped headstone with simple moulded edge & relief florals. Inscription in lead inlaid lettering using Gothic and Roman scripts, also lead inlaid stylised floral motif and crown/anchor motif (crown of glory and anchor of hope). Mason: Jones, Rookwood.			
Very lengthy inscription (see overleaf).			
Photograph			
			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity Poor. Broken & Not intact.		Comments Evidence of prior attempt at repair.	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> Re-erect headstone upright by rejoining the pieces using adhesives and dowels. Plinth may require consolidation. Fill voids with synthetic stone mix. Alternatively, assemble & preserve in sloping position on grave plot.			
Recorder S Lavelle			Date July 1995

BURTON and BOWLES HEADSTONE - Transcript

*In Loving Memory of*  
CHARLOTTE BURTON  
DIED 23RD JULY 1890  
AGED 75 YEARS

*FAREWELL MY FRIENDS FORBID TO WEEP  
WHILE IN THIS GRAVE I SWEETLY SLEEP  
THIS FRAILSOME WORLD I LEAVE BEHIND  
A CROWN OF GLORY FOR TO FIND*


*And In Loving Memory of*  
MARIANNE BOWLES  
DIED 26TH OCTOBER 1892  
AGED 41 YEARS

*WE HAVE LOVED HER AND WILL NOT  
FORGET HER UNTIL SHE IS ADMITTED INTO  
THE HOUSE OF THE LORD  
ETERNAL REST GRANT HER O LORD  
AND LET PERPETUAL LIGHT SHINE ON HER  
.....[ BREAK, PART OBSCURED] .....*

*Also*  
JOHN BOWLES  
WHO DIED 4TH OCTOBER 1903  
AGED 54 YEARS

*AT REST*



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>M GREER and J GREER HEADSTONE, 1880S</b>			Inventory No. <b>4.27</b>
Priority High	Damage Yes	Photo Ref. SL. 01.29	Cost Estimate (for Repair) \$ 400
Significance HISTORIC. SOCIAL.  Symbolic motifs and verses are indicative of the social mores / attitudes of the era.			
Description Marble headstone, fallen and broken. Headstone is in three pieces - two propped face-up on the grave plot, with lowest section still attached to the plinth. Within double grave plot enclosed with 6" cambered sandstone kerbing. Semicircular topped headstone with simple moulded edge & relief florals, also "Open Book" motif (symbolic of the Bible or the Book of Life) and lily (symbolic of Resurrection).  Inscription in lead inlaid lettering, mostly using Roman script.  Mason: C Hooworth			
Very lengthy inscription (see overleaf).			
Photograph			
CONSERVATION AND MANAGEMENT INFORMATION			
Condition & Integrity Poor. Broken & Not intact.		Comments Evidence of prior attempt at repair.	
Recommended Action for Conservation or Management <i>(Also refer to Repair Guidelines section of the main report)</i> Re-erect headstone upright by rejoining the pieces using adhesives and dowels.			
Recorder S Lavelle			Date July 1995

GREER HEADSTONE - Transcript

In Loving Memory of

Thy Will  
be done

MARY  
THE BELOVED WIFE OF  
JOHN GREER  
WHO DIED JULY 18TH 1886  
AGED 65 YEARS

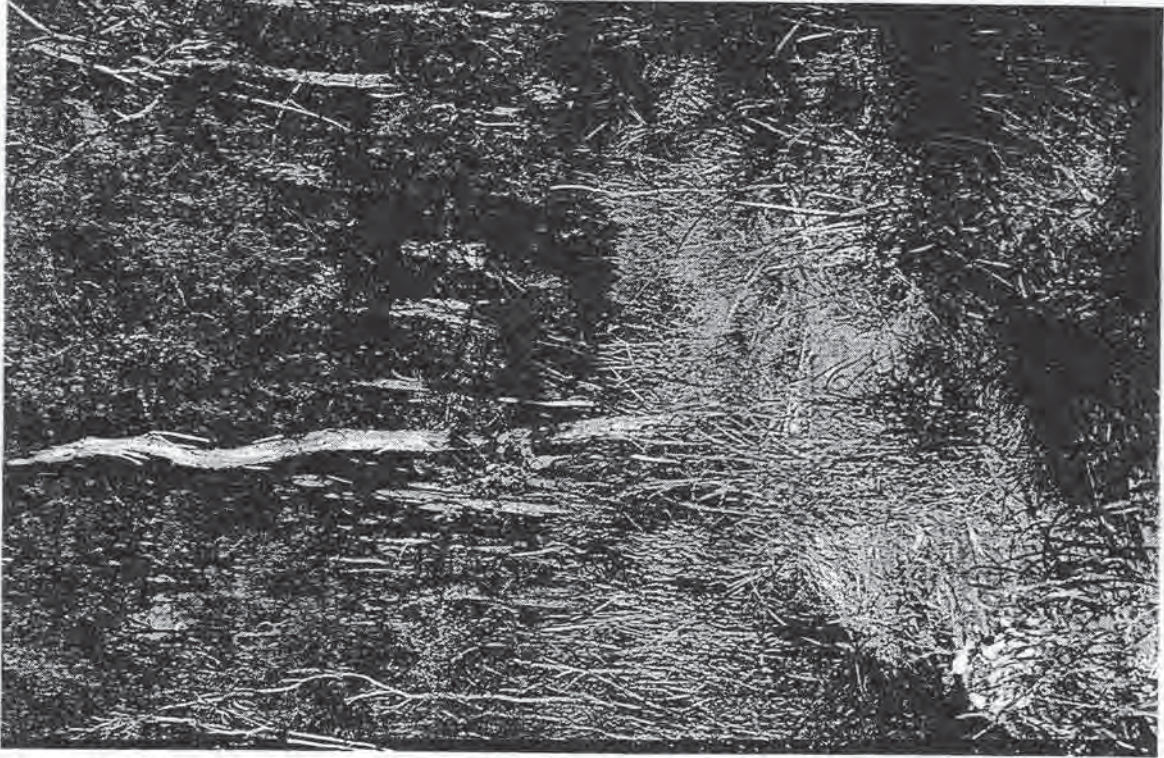
ALSO THE ABOVE NAMED

JOHN GREER  
WHO DIED MARCH 30TH 1888  
AGED 66 YEARS

*THEY ARE DEAD BUT NOT FORGOTTEN  
NEVER SHALL THEIR MEMORY FADE;  
SWEETEST THOUGHTS SHALL EVER LINGER  
ROUND THE SPOT WHERE THEY ARE LAID*

ERECTED BY THEIR LOVING SON  
JAMES GREER



INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS			
Name <b>FORMER COTTAGE SITE</b>			Inventory No. <b>5</b>
Priority Medium	Damage N/A	Photo Ref. MJ 02. 32	Cost Estimate (for Repair) N/A
<b>Significance</b> Historic, Social, Archaeological Site associated with the 19th century Anglican church community. Archaeological site with research potential to yield additional information about the cottage and it's occupation.			
<b>Description</b> Small cut into hillside and level area of approximately 2 metres by 3 metres. Interpreted as the building platform for the historically documented small cottage building.  Area covered by vegetation, including extensive Periwinkle planting (an exotic species popular in old gardens).  Site on eastern side of the island, roughly in line with the former church site.			
<b>Photograph</b> 			
CONSERVATION AND MANAGEMENT INFORMATION			
<b>Condition &amp; Integrity</b> Archaeological site appears undisturbed.		<b>Comments</b> Would be subject to the NSW Heritage Act.	
<b>Recommended Action for Conservation or Management</b> (Also refer to Repair Guidelines section of the main report) Retain site as is.			
<b>Recorder</b> M Jean & S Lavelle			<b>Date</b> July 1995



**INVENTORY SHEET - CEMETERY MONUMENTS AND OTHER ITEMS**

<b>Name</b>	<b>SANDELL AND BUCKMAN MEMORIAL</b>	<b>Inventory No.</b>	<b>6</b>
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<b>Priority</b> High	<b>Damage</b> Minimal	<b>Photo Ref.</b> MJ 02. 04-06	<b>Cost Estimate (for Repair)</b> \$ 200
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**Significance** Social and Aesthetic/Technical Accomplishment.  
Excellent example of early 1960s stylistic design in landmark setting with poignant social significance.

**Description** Attractive sandstone memorial designed as a semi-circular lookout on the summit of the island, sandstone 'crazy' paving floor. Formal rubble sandstone low solid balustrade wall with central raised obelisk square with carved central cross projecting out of the concrete relief panel at an angle on either side polished granite tablets set into the sandstone walls dedicated to the memory of J.O. Sandell and M.J. Buckman, two young Outward Bound instructors who drowned while trying to save their children in their charge at the Hume Weir.



**CONSERVATION AND MANAGEMENT INFORMATION**

<b>Condition &amp; Integrity</b> Fair, essentially intact.	<b>Comments</b> Bush setting and river views contribute to the aesthetic values of the item.
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**Recommended Action for Conservation or Management** (Also refer to Repair Guidelines section of the main report)  
Slight maintenance repair required to the central area.

<b>Recorder</b> M Jean	<b>Date</b> July 1995
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**APPENDIX 3. ICS CONDITION REPORT.**

Julian Bickersteth, International Conservation Services.. 2002. Assessment of condition of Church, graves and monuments on Bar Island, Hawkesbury. Hornsby Shire Council.

17<sup>th</sup> September 2002.

Mr Edward Higginbotham  
Edward Higginbotham & Associates  
PO Box 97  
**HABERFIELD NSW 2045**

Dear Ted,

**Re: Bar Island Conservation Plan**

Please find enclosed our recommendations for the care and maintenance of the church, graves, monuments and surrounds at Bar Island.

These recommendations are made as a result of our site visit on August 28<sup>th</sup> 2002, and the notes included in the Conservation Plan for Bar Island dated February 1996.

Please do not hesitate to call me if you have any queries. I enclose our invoice.

Yours sincerely,

**Julian Bickersteth**  
**Managing Director.**

Encl.



## **ASSESSMENT OF CONDITION OF CHURCH, GRAVES AND MONUMENTS ON BAR ISLAND, HAWKESBURY**

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### **1.0 INTRODUCTION**

The extant remains of the church, graves and monuments in the cemetery on Bar Island were extensively assessed during the writing of the 1996 Conservation Plan for the island by Amanda Jean and Siobham Lavelle. The purpose of this current assessment has been to update the condition reports on each element and provide recommendations for the ongoing care and maintenance of each element.

### **2.0 BACKGROUND SUMMARY**

Bar Island contains the following built elements (excluding the jetty) namely the sandstone chimney remaining from the church, twenty-seven marked grave plots, of which fifteen have formal headstones or other distinct markers, and a crescent shaped memorial lookout on the top of the hill above the cemetery.

### **3.0 CONDITION SUMMARY**

The overall condition of the elements were assessed as being similar to that found when last examined in 1995. The exceptions to this are the sandstone chimney, which has lost further stones, and the memorial lookout, which has been partly vandalised and is suffering from ground movement.

The 1996 Conservation Plan proposed a variety of actions to reinstate damaged grave sites and to stabilise the sandstone chimney. It does not appear that any of these actions have been carried out, apart from the secure fencing off of the sandstone chimney due to its highly unstable condition.

### **4. GUIDELINES FOR REPAIR**

The guidelines for repair of the built elements on Bar Island were provided by Siobham Lavelle in the 1996 Conservation Plan, and are wholeheartedly concurred with. They read as follows.

#### **4.1 Principles**

Conservation works carried out with respect to a place of cultural significance should endeavour to retain all identified significant attributes, and to enhance or recover them. The vandal damage and decay/natural attrition that has occurred to the historic structures on Bar Island has affected the significance of the place by reducing its:

- Integrity
- Aesthetic qualities
- Historic and genealogical information

2.

It may reasonably be expected that sympathetic works such as stabilisation and/or repair of the damaged items and cemetery monuments will recover some of these significant aspects of the site. In carrying out physical work on the damaged monuments within the cemetery, the following principles should be applied:

- Wherever possible, original fabric should be retained and preserved thereby maintaining the integrity of the original monument;
- Displaced fabric should be reinstated to its original location, where this is known, thereby restoring both original fabric and form;
- Careful regard should be paid to the existing landscape and setting of the island and sites on the island; and to the physical and visual relationships of individual elements between sites such as the church ruins and the cemetery;
- The information content of cemetery monuments should be retained;
- Reconstruction, using new fabric, should be limited to works which are essential, in order to allow preservation and restoration of existing fabric.

Wherever practicable, existing damaged fabric should be retained and incorporated in repair work. The temptation to replace fabric with “new” works should be resisted, as it is inevitable that an old cemetery will show evidence of some wear and tear. The original fabric has greater integrity than any replacement fabric, and could always be replaced at a later date – the reverse process being impossible once the original material has been discarded.

In Burra Charter terms preservation, restoration, and in some cases, reconstruction of the built fabric is appropriate for Bar Island. The following activities therefore should ***not*** occur:

- Hypothetical reconstruction of missing elements
- Movement or relocation of any monument (other than return to its original location if this is known, and relocation is a practical option)
- Discarding of original monument fabric

In the short term, pending the completion of a repair program, portable monument fragments should be collected and placed in a well drained position within grave plots, using fill and/or propping.

The nature of the mechanical damage to the stone chimney and cemetery monuments is such that repair work should only be attempted by a qualified stonemason or other practitioner skilled in the repair of damaged heritage items and/or cemetery monuments. Contractors should be asked to provide a list of completed projects, and should also provide examples of patching and repair techniques as necessary before the completion of on-site works.



#### **4.2 Repair of Cemetery Monuments**

The soil within the cemetery appears relatively stable, apart from some localised depressions (unmarked graves) and minor erosion.

No monuments in the cemetery are merely disassembled. All fallen monuments have suffered breakage. In view of the vandalism problem at the site, it is considered desirable that when repaired, monuments are dowelled to provide additional strength. Non-ferrous dowels should be used, set in lead, mason's putty or other appropriate inert compound.

The damage done to some headstones has resulted in multiple breaks and fragmentation, with some pieces of fabric apparently missing. The nature of this damage will require specialist treatment by a monumental mason skilled and experienced in repair of damaged monuments. In these cases, consideration should be given in repair to the use of lightweight armatures or frames, or the use of a sheet of compressed wet area fibro as a backing or support. It cannot be emphasised too strongly that such work should only be carried out by a practitioner experienced in repair of old cemetery monuments.

Although several headstones (especially those of marble) show a growth of black mould, the cleaning of stones is not considered a particular priority unless it is required to facilitate the repair and re-erection of broken monuments. Cleaning should not attempt to restore the stone to "new" condition, and should not remove the natural surface hardening of the stone. Cleaning should only seek to remove surface soiling and agents of deterioration. Where required, for example to enable accurate patching of broken stones, cleaning should generally be done with water and a bristle brush.

In some cases fragments will be missing, and repaired headstones would consequently have gaps between rejoined pieces. In such cases, patching with reconstituted stone may be undertaken. Any composite stone patching compound must be formulated for compatibility (i.e. strength, water permeability) with the given stone type. Patching should aim to match the stone (the break line may need to be trimmed before the adhesive is completely set). Where reconstituted stone patches cross areas of incised lettering, this may be reinstated where the prior wording is accurately known, and its replacement will facilitate the reading of the original inscription. Lettering should not be reinstated where wording is conjectural.

Where damage has occurred to the tenon and/or mortice of a monument, repair (by consolidation) and re-use of the existing fabric is preferable. As a last resort, consideration may be given to cutting back/re-morticing (involving some loss of original fabric), or to the use of facsimile or replacement plinth preferably in an appropriate stone.

### 4.3 Detailed Conservation Recommendations

#### 4.3.1 Stone Chimney of Church

At the time of inspection in 1995, it was noted that the chimney was unstable, and that small children were observed climbing on it. Based on the photograph in the report, it has continued to deteriorate, with at least four major stones now missing, and further collapse imminent (see photos 1,2). A secure fence has, however, been placed around the site to prevent ingress.

Also noted was at least two sessions of later re-pointing, which have both been undertaken with too hard a mortar mix, resulting in damage to the surrounding sandstone by exfoliation (see photos 3 & 4). This is caused by water not being able to pass through the softer mortar, and instead building up in fissures in the sandstone causing it to exfoliate.

It was also noted that the northern face is bellying outwards, as the mortar is progressively washed away (see photo 5).

The options for treatment are as follows:

- a) Dismantle
- b) Support upper sections of chimney with ACROW support pole and cross brace
- c) Rebuild the northern face of the chimney incorporating ties to stabilise the southern face

We would recommend that Option c) is followed, due to the significance of the chimney. However, it does need to be understood that this process will involve the introduction of some new sandstone, which will be unweathered and probably of a different colour to the existing stone. The process will involve at least the following:

- On site inspection by stone mason to ascertain what stones can be used from the site and what new stones will need to be sourced (see photo 6).
- Supporting and scaffolding of chimney to allow rebuilding. It should be noted that dismantlement prior to rebuilding needs to be avoided, so that the original shell rich mortar is retained
- Removal of later repointing
- Repointing with mortar of similar strength and background colour to original
- Capping of stonework with lead
- Documentation of works

#### 4.3.2 Headstones

- *Sandstone obelisk* (inventory no. 4.1).  
Condition as per 1995. Recommend that no work currently required
- *Sandstone obelisk* (inventory no. 4.2)  
Condition as per 1995. Recommend rebuild using new stone central section, pinning with bronze rod and epoxy



- *Double grave plot* (inventory no. 4.3)  
Condition as per 1995. No work currently recommended
- *ARCH headstone* (inventory no. 4.4)  
Condition as per 1995. No work currently recommended.
- *Rock edged grave 1* (inventory no. 4.5)  
Condition as per 1995. No work currently recommended
- *Rock edged grave 2* (inventory no. 4.6)  
Condition as per 1995. No work currently recommended
- *Rock edged grave 3* (inventory no. 4.7)  
Condition as per 1995. No work currently recommended
- *Brown headstone 1901* (inventory no. 4.8)  
Condition as per 1995. Reinstate displaced elements
- *Rock edged grave 4* (inventory no. 4.9)  
Condition as per 1995. No work currently recommended
- *Rock edged grave 5* (inventory no. 4.10)  
Condition as per 1995. No work currently recommended
- *Rock edged grave 6* (inventory no. 4.11)  
Condition as per 1995. No work currently recommended
- *Rock edged grave 7* (inventory no. 4.12)  
Condition as per 1995. Reinstate displaced elements
- *Concrete kerbed grave* (inventory no. 4.13)  
Condition as per 1995. No work currently recommended
- *WHC Green headstone* (inventory no. 4.14)  
Condition as per 1995, except that paintwork has become almost illegible. No work currently recommended
- *Miller headstone* (inventory No. 4.15)  
Condition as per 1995. Reinstate displaced elements
- *Milson headstone* (inventory no. 4.16)  
Condition as per 1995. Rejoin headstone with bronze dowels and epoxy. Re-stand on plinth, using internal bronze dowels to support. Leave any voids
- *J. Green headstone* (inventory no. 4.17)  
Condition as per 1995. No work currently recommended
- *Rock edged grave 8* (inventory no. 4.18)  
Condition as per 1995. No work currently recommended
- *Young headstone* (inventory no. 4.19)  
Condition as per 1995. Rejoin headstone with bronze dowels and epoxy. Re-stand on plinth, using internal bronze dowels as support. Leave any voids.
- *Cole headstone* (inventory no. 4.20)  
Condition as per 1995. Rejoin headstone with bronze dowels and epoxy. Re-bed headstone base and re-stand headstone on base, using internal bronze dowels to support. Leave any voids.

- *Milson headstone* (inventory 4.21)  
Condition as per 1995. Rejoin headstone with bronze dowels and epoxy, and re-erect on base
- *Rock edged grave 9* (inventory no. 4.22)  
Condition as per 1995. Reinstall displaced elements
- *Rock edged grave 10* (inventory no. 4.23)  
Condition as per 1995. No work currently recommended
- *Wilson headstone* (inventory no. 4.24)  
Condition as per 1995. Rejoin headstone with bronze dowels and epoxy. Re-bed headstone into base, using internal bronze dowels to support
- *Brynes headstone* (inventory 4.25)  
Condition as per 1995. No work currently recommended
- *Burton & Bowles headstone* (inventory 4.26)  
Condition as per 1995. Rejoin headstone with bronze dowels and epoxy. Consolidate and re-bed headstone into base, using internal bronze dowels to support
- *M. Greer & J. Greer headstone* (inventory 4.27)  
Headstone has fallen over since 1995 and is now in two pieces. Rejoin headstone with bronze dowels and epoxy. Re-bed headstone into base, using internal bronze dowels to support.

### 4.3.3 Memorial Lookout

Condition has deteriorated since 1995. The central hollow cast cross is separating at its joints and the top section is broken into a number of sections and only held together by its steel reinforcing bars (see photo 7). There is extensive buildup of rubbish internally. The entire eastern wall has substantially moved away from the cross, and has a slight lean towards the south.

The entire western wall also exhibits some movement with a crack at the joint with the cross. The two western-most coping stones are loose, with the end one split and with a small loss (see photo 8).

It is recommended that the top section of the cross be recast and the cross repointed. No attempt should be made to stabilise the walls at present, but their movement should be monitored.

The broken coping stones should be replaced.



## 5. TIMING & COST ESTIMATES

It is recommended that the works proceed as follows:

### *High Priority:*

- Assessment of stone requirements for repair of chimney by stone mason  
Timing: 1 day                      Cost: \$600 + GST
- Repair of chimney  
Timing: 2 weeks                      Cost: TBA

### *Medium Priority:*

- Repair of broken headstones – inventory no's. 4.2, 4.16, 4.19, 4.20, 4.21, 4.24, 4.26, 4.27  
Timing: 2 weeks                      Cost: \$15,000 + GST
- Repair of memorial lookout  
Timing: 1 week                      Cost: \$5,500 + GST

### *Low Priority:*

- Reinstatement of loose elements – inventory no's. 4.8, 4.12, 4.15, 4.22  
Timing: 1 day                      Cost: \$600 + GST

## 6. REPORT AUTHORSHIP

This assessment was undertaken and the report prepared by Julian Bickersteth of International Conservation Services in September 2002.

## PHOTOGRAPHS

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**Photo 1. Chimney showing loss of stone**





**Photo 2. Detail of collapsing section of chimney**



**Photo 3. Inappropriate repointing with adjacent stone exfoliation**





**Photo 4. Inappropriate repointing**



**Photo 5. Belying out of north face of chimney**





**Photo 6. Adjacent stones to chimney**



**Photo 7. Damage to Memorial Lookout capping**





**Photo 8. Damage to end coping stones on Memorial Lookout**

**APPENDIX 4. ICOMOS BURRA CHARTER, AS AMENDED IN 1999.**

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# The Burra Charter

(The Australia ICOMOS Charter for Places of Cultural Significance)

## Preamble

Considering the International Charter for the Conservation and Restoration of Monuments and Sites (Venice 1964), and the Resolutions of the 5th General Assembly of the International Council on Monuments and Sites (ICOMOS) (Moscow 1978), the Burra Charter was adopted by Australia ICOMOS (the Australian National Committee of ICOMOS) on 19 August 1979 at Burra, South Australia. Revisions were adopted on 23 February 1981, 23 April 1988 and 26 November 1999.

The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places), and is based on the knowledge and experience of Australia ICOMOS members.

Conservation is an integral part of the management of places of cultural significance and is an ongoing responsibility.

### Who is the Charter for?

The Charter sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians.

### Using the Charter

The Charter should be read as a whole. Many articles are interdependent. Articles in the Conservation Principles section are often further developed in the Conservation Processes and Conservation Practice sections. Headings have been included for ease of reading but do not form part of the Charter.

The Charter is self-contained, but aspects of its use and application are further explained in the following Australia ICOMOS documents:

- Guidelines to the Burra Charter: Cultural Significance;

- Guidelines to the Burra Charter: Conservation Policy;
- Guidelines to the Burra Charter: Procedures for Undertaking Studies and Reports;
- Code on the Ethics of Coexistence in Conserving Significant Places.

### What places does the Charter apply to?

The Charter can be applied to all types of places of cultural significance including natural, indigenous and historic places with cultural values.

The standards of other organisations may also be relevant. These include the Australian Natural Heritage Charter and the Draft Guidelines for the Protection, Management and Use of Aboriginal and Torres Strait Islander Cultural Heritage Places.

### Why conserve?

Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records, that are important as tangible expressions of Australian identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious.

These places of cultural significance must be conserved for present and future generations.

The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.



## Articles

### Article 1. Definitions

For the purposes of this Charter:

- 1.1 *Place* means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.
- 1.2 *Cultural significance* means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.  
  
*Cultural significance* is embodied in the *place* itself, its *fabric*, *setting*, *use*, *associations*, *meanings*, records, *related places* and *related objects*.  
  
Places may have a range of values for different individuals or groups.
- 1.3 *Fabric* means all the physical material of the *place* including components, fixtures, contents, and objects.
- 1.4 *Conservation* means all the processes of looking after a *place* so as to retain its *cultural significance*.
- 1.5 *Maintenance* means the continuous protective care of the *fabric* and *setting* of a *place*, and is to be distinguished from repair. Repair involves restoration or reconstruction.
- 1.6 *Preservation* means maintaining the *fabric* of a *place* in its existing state and retarding deterioration.
- 1.7 *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.
- 1.8 *Reconstruction* means returning a *place* to a known earlier state and is distinguished from *restoration* by the introduction of new material into the *fabric*.
- 1.9 *Adaptation* means modifying a *place* to suit the existing use or a proposed use.
- 1.10 *Use* means the functions of a *place*, as well as the activities and practices that may occur at the *place*.
- 1.11 *Compatible use* means a use which respects the *cultural significance* of a *place*. Such a use involves no, or minimal, impact on *cultural significance*.
- 1.12 *Setting* means the area around a *place*, which may include the visual catchment.
- 1.13 *Related place* means a *place* that contributes to the *cultural significance* of another *place*.

## Explanatory Notes

The concept of *place* should be broadly interpreted. The elements described in Article 1.1 may include memorials, trees, gardens, parks, places of historical events, urban areas, towns, industrial places, archaeological sites and spiritual and religious places.

The term *cultural significance* is synonymous with *heritage significance* and *cultural heritage value*.

*Cultural significance* may change as a result of the continuing history of the *place*.

Understanding of *cultural significance* may change as a result of new information.

*Fabric* includes building interiors and sub-surface remains, as well as excavated material.

*Fabric* may define spaces and these may be important elements of the *significance* of the *place*.

The distinctions referred to, for example in relation to roof gutters, are:

- *maintenance* — regular inspection and cleaning of gutters;
- *repair involving restoration* — returning of dislodged gutters;
- *repair involving reconstruction* — replacing decayed gutters.

It is recognised that all *places* and their components change over time at varying rates.

New material may include recycled material salvaged from other *places*. This should not be to the detriment of any *place* of *cultural significance*.



## Articles

- 1.14 *Related object* means an object that contributes to the *cultural significance* of a *place* but is not at the place.
- 1.15 *Associations* mean the special connections that exist between people and a *place*.
- 1.16 *Meanings* denote what a *place* signifies, indicates, evokes or expresses.
- 1.17 *Interpretation* means all the ways of presenting the *cultural significance* of a *place*.

## Conservation Principles

### Article 2. Conservation and management

- 2.1 *Places of cultural significance* should be conserved.
- 2.2 The aim of *conservation* is to retain the *cultural significance* of a *place*.
- 2.3 *Conservation* is an integral part of good management of *places of cultural significance*.
- 2.4 *Places of cultural significance* should be safeguarded and not put at risk or left in a vulnerable state.

### Article 3. Cautious approach

- 3.1 *Conservation* is based on a respect for the existing *fabric, use, associations* and *meanings*. It requires a cautious approach of changing as much as necessary but as little as possible.
- 3.2 Changes to a *place* should not distort the physical or other evidence it provides, nor be based on conjecture.

### Article 4. Knowledge, skills and techniques

- 4.1 *Conservation* should make use of all the knowledge, skills and disciplines which can contribute to the study and care of the *place*.
- 4.2 Traditional techniques and materials are preferred for the *conservation* of significant *fabric*. In some circumstances modern techniques and materials which offer substantial conservation benefits may be appropriate.

## Explanatory Notes

Associations may include social or spiritual values and cultural responsibilities for a place.

Meanings generally relate to intangible aspects such as symbolic qualities and memories.

Interpretation may be a combination of the treatment of the fabric (e.g. maintenance, restoration, reconstruction); the use of and activities at the place; and the use of introduced explanatory material.

The traces of additions, alterations and earlier treatments to the fabric of a place are evidence of its history and uses which may be part of its significance. Conservation action should assist and not impede their understanding.

The use of modern materials and techniques must be supported by firm scientific evidence or by a body of experience.

## Articles

### Article 5. Values

- 5.1 *Conservation of a place* should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.
- 5.2 Relative degrees of *cultural significance* may lead to different *conservation* actions at a place.

### Article 6. Burra Charter process

- 6.1 The *cultural significance* of a *place* and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding cultural significance comes first, then development of policy and finally management of the place in accordance with the policy.
- 6.2 The policy for managing a place must be *based* on an understanding of its *cultural significance*.
- 6.3 Policy development should also include consideration of other factors affecting the future of a *place* such as the owner's needs, resources, external constraints and its physical condition.

### Article 7. Use

- 7.1 Where the *use* of a place is of *cultural significance* it should be retained.
- 7.2 A *place* should have a *compatible* use.

### Article 8. Setting

*Conservation* requires the retention of an appropriate visual *setting* and other relationships that contribute to the *cultural significance* of the *place*.

New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.

## Explanatory Notes

Conservation of places with natural significance is explained in the Australian Natural Heritage Charter. This Charter defines natural significance to mean the importance of ecosystems, biological diversity and geodiversity for their existence value, or for present or future generations in terms of their scientific, social, aesthetic and life-support value.

A cautious approach is needed, as understanding of cultural significance may change. This article should not be used to justify actions which do not retain cultural significance.

The Burra Charter process, or sequence of investigations, decisions and actions, is illustrated in the accompanying flowchart.

The policy should identify a use or combination of uses or constraints on uses that retain the cultural significance of the place. New use of a place should involve minimal change, to significant fabric and use; should respect associations and meanings; and where appropriate should provide for continuation of practices which contribute to the cultural significance of the place.

Aspects of the visual setting may include use, siting, bulk, form, scale, character, colour, texture and materials.

Other relationships, such as historical connections, may contribute to interpretation, appreciation, enjoyment or experience of the place.



## Articles

### Article 9. Location

- 9.1 The physical location of a *place* is part of its *cultural significance*. A building, work or other component of a place should remain in its historical location. Relocation is generally unacceptable unless this is the sole practical means of ensuring its survival.
- 9.2 Some buildings, works or other components of *places* were designed to be readily removable or already have a history of relocation. Provided such buildings, works or other components do not have significant links with their present location, removal may be appropriate.
- 9.3 If any building, work or other component is moved, it should be moved to an appropriate location and given an appropriate use. Such action should not be to the detriment of any *place* of *cultural significance*.

### Article 10. Contents

Contents, fixtures and objects which contribute to the *cultural significance* of a *place* should be retained at that place. Their removal is unacceptable unless it is: the sole means of ensuring their security and *preservation*; on a temporary basis for treatment or exhibition; for cultural reasons; for health and safety; or to protect the place. Such contents, fixtures and objects should be returned where circumstances permit and it is culturally appropriate.

### Article 11. Related places and objects

The contribution which *related places* and *related objects* make to the *cultural significance* of the *place* should be retained.

### Article 12. Participation

*Conservation, interpretation* and management of a *place* should provide for the participation of people for whom the place has special *associations* and *meanings*, or who have social, spiritual or other cultural responsibilities for the place.

### Article 13. Co-existence of cultural values

Co-existence of cultural values should be recognised, respected and encouraged, especially in cases where they conflict.

## Explanatory Notes

For some places, conflicting cultural values may affect policy development and management decisions. In this article, the term cultural values refers to those beliefs which are important to a cultural group, including but not limited to political, religious, spiritual and moral beliefs. This is broader than values associated with cultural significance.

# Conservation Processes

### Article 14. Conservation processes

*Conservation* may, according to circumstance, include the processes of: retention or reintroduction of a *use*; retention of *associations* and *meanings*; *maintenance*, *preservation*, *restoration*, *reconstruction*, *adaptation* and *interpretation*; and will commonly include a combination of more than one of these.

There may be circumstances where no action is required to achieve conservation.

### Article 15. Change

- 15.1 Change may be necessary to retain *cultural significance*, but is undesirable where it reduces cultural significance. The amount of change to a *place* should be guided by the *cultural significance* of the place and its appropriate *interpretation*.
- 15.2 Changes which reduce *cultural significance* should be reversible, and be reversed when circumstances permit.
- 15.3 Demolition of significant *fabric* of a *place* is generally not acceptable. However, in some cases minor demolition may be appropriate as part of *conservation*. Removed significant fabric should be reinstated when circumstances permit.
- 15.4 The contributions of all aspects of *cultural significance* of a *place* should be respected. If a place includes *fabric*, *uses*, *associations* or *meanings* of different periods, or different aspects of cultural significance, emphasising or interpreting one period or aspect at the expense of another can only be justified when what is left out, removed or diminished is of slight cultural significance and that which is emphasised or interpreted is of much greater cultural significance.

When change is being considered, a range of options should be explored to seek the option which minimises the reduction of cultural significance.

Reversible changes should be considered temporary. Non-reversible change should only be used as a last resort and should not prevent future conservation action.

### Article 16. Maintenance

*Maintenance* is fundamental to *conservation* and should be undertaken where *fabric* is of *cultural significance* and its maintenance is necessary to retain that *cultural significance*.



## Articles

### Article 17. Preservation

*Preservation* is appropriate where the existing *fabric* or its condition constitutes evidence of *cultural significance*, or where insufficient evidence is available to allow other *conservation* processes to be carried out.

### Article 18. Restoration and reconstruction

*Restoration* and *reconstruction* should reveal culturally significant aspects of the *place*.

### Article 19. Restoration

*Restoration* is appropriate only if there is sufficient evidence of an earlier state of the *fabric*.

### Article 20. Reconstruction

20.1 *Reconstruction* is appropriate only where a *place* is incomplete through damage or alteration, and only where there is sufficient evidence to reproduce an earlier state of the *fabric*. In rare cases, reconstruction may also be appropriate as part of a use or practice that retains the *cultural significance* of the *place*.

20.2 *Reconstruction* should be identifiable on close inspection or through additional *interpretation*.

### Article 21. Adaptation

21.1 *Adaptation* is acceptable only where the adaptation has minimal impact on the *cultural significance* of the *place*.

21.2 *Adaptation* should involve minimal change to significant fabric, achieved only after considering alternatives.

### Article 22. New work

22.1 New work such as additions to the *place* may be acceptable where it does not distort or obscure the *cultural significance* of the *place*, or detract from its *interpretation* and appreciation.

22.2 New work should be readily identifiable as such.

## Explanatory Notes

Preservation protects fabric without obscuring the evidence of its construction and use. The process should always be applied:

- where the evidence of the fabric is of such significance that it should not be altered;
- where insufficient investigation has been carried out to permit policy decisions to be taken in accord with Articles 26 to 28.

New work (e.g. stabilisation) may be carried out in association with preservation when its purpose is the physical protection of the fabric and when it is consistent with Article 22.

⇒ Adaptation may involve the introduction of new services, or a new use, or changes to safeguard the *place*.

New work may be sympathetic if its siting, bulk, form, scale, character, colour, texture and material are similar to the existing fabric, but imitation should be avoided.

## Articles

### Article 23. Conserving use

Continuing, modifying or reinstating a significant *use* may be appropriate and preferred forms of *conservation*.

### Article 24. Retaining associations and meanings

- 24.1 Significant *associations* between people and a *place* should be respected, retained and not obscured. Opportunities for the *interpretation*, commemoration and celebration of these associations should be investigated and implemented.
- 24.2 Significant *meanings*, including spiritual values, of a *place* should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.

### Article 25. Interpretation

The *cultural significance* of many places is not readily apparent, and should be explained by *interpretation*. Interpretation should enhance understanding and enjoyment, and be culturally appropriate.

## Conservation Practice

### Article 26. Applying the Burra Charter process

- 26.1 Work on a *place* should be preceded by studies to understand the place which should include analysis of physical, documentary, oral and other evidence, drawing on appropriate knowledge, skills and disciplines.
- 26.2 Written statements of *cultural significance* and policy for the *place* should be prepared, justified and accompanied by supporting evidence. The statements of significance and policy should be incorporated into a management plan for the place.
- 26.3 Groups and individuals with *associations* with a place as well as those involved in its management should be provided with opportunities to contribute to and participate in understanding the *cultural significance* of the place. Where appropriate they should also have opportunities to participate in its *conservation* and management.

### Article 27. Managing change

- 27.1 The impact of proposed changes on the *cultural significance* of a *place* should be analysed with reference to the statement of significance and the policy for managing the place. It may be necessary to modify proposed changes following analysis to better retain cultural significance.
- 27.2 Existing *fabric*, *use*, *associations* and *meanings* should be adequately recorded before any changes are made to the *place*.

## Explanatory Notes

These may require changes to significant fabric but they should be minimised. In some cases, continuing a significant use or practice may involve substantial new work.

For many places associations will be linked to use.

The results of studies should be up to date, regularly reviewed and revised as necessary.

Statements of significance and policy should be kept up to date by regular review and revision as necessary. The management plan may deal with other matters related to the management of the place.



## Articles

### Article 28. Disturbance of fabric

- 28.1 Disturbance of significant *fabric* for study, or to obtain evidence, should be minimised. Study of a *place* by any disturbance of the fabric, including archaeological excavation, should only be undertaken to provide data essential for decisions on the *conservation* of the place, or to obtain important evidence about to be lost or made inaccessible.
- 28.2 Investigation of a *place* which requires disturbance of the *fabric*, apart from that necessary to make decisions, may be appropriate provided that it is consistent with the policy for the place. Such investigation should be based on important research questions which have potential to substantially add to knowledge, which cannot be answered in other ways and which minimises disturbance of significant fabric.

### Article 29. Responsibility for decisions

The organisations and individuals responsible for management decisions should be named and specific responsibility taken for each such decision.

### Article 30. Direction, supervision and implementation

Competent direction and supervision should be maintained at all stages, and any changes should be implemented by people with appropriate knowledge and skills.

### Article 31. Documenting evidence and decisions

A log of new evidence and additional decisions should be kept.

### Article 32. Records

- 32.1 The records associated with the *conservation* of a *place* should be placed in a permanent archive and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.
- 32.2 Records about the history of a *place* should be protected and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.

### Article 33. Removed fabric

Significant *fabric* which has been removed from a *place* including contents, fixtures and objects, should be catalogued, and protected in accordance with its *cultural significance*.

Where possible and culturally appropriate, removed significant fabric including contents, fixtures and objects, should be kept at the place.

### Article 34. Resources

Adequate resources should be provided for conservation.

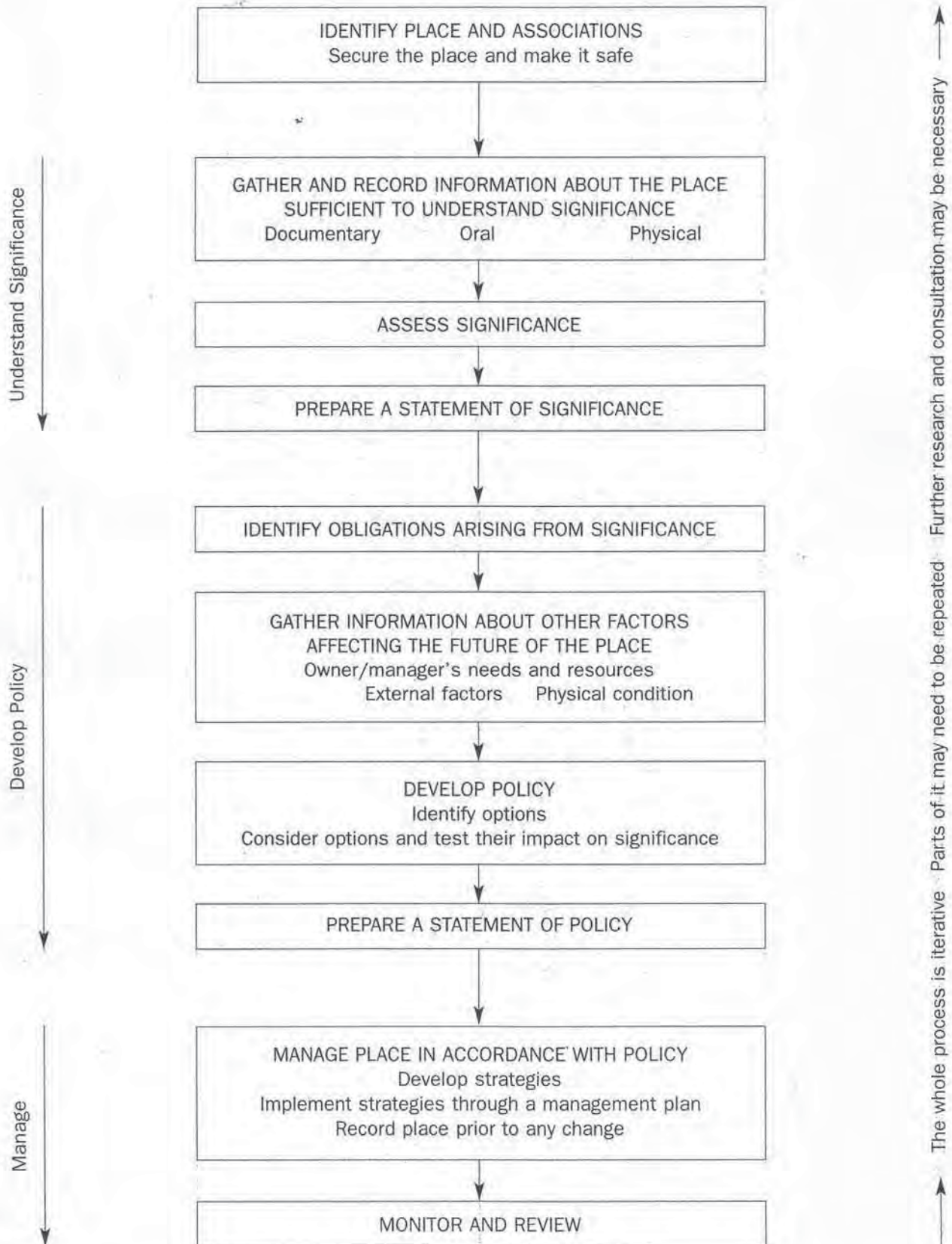
*Words in italics are defined in Article 1.*

## Explanatory Notes

The best conservation often involves the least work and can be inexpensive.

# The Burra Charter Process

Sequence of investigations, decisions and actions





**Appendix B: Flora and Fauna Assessment**

**FLORA AND FAUNA ASSESSMENT  
OF BAR ISLAND,  
HAWKESBURY RIVER**

**PREPARED FOR HORNSBY SHIRE COUNCIL**

**BY**

***ACTINOTUS ENVIRONMENTAL CONSULTANTS***

**2/61A WILLS RD.  
WOOLOOWARE  
NSW 2230**

**7 TOWNSEND AVE.  
FRENCHS FOREST  
NSW 2086**

**OCTOBER 2002**



## **Actinotus Environmental Consultants**

Peter Stricker BSc. (Hons) (Syd)\*

Tony Smith-White BSc. (Syd), CertHEd., MSc., PhD. (UNSW)\* # +

### **Sub-consultant**

Margaret Smith-White BSc. (Mcq)+^  
(Bird survey and scat analysis and identification)

- \* Member Ecological Consultants Association of NSW Inc.
- # Member of Flora Foundation of Australia.
- # Member of Linnean Society of NSW.
- + Member of Bird Atlassers Association of NSW
- ^ Member Birds Australia

### **Consultants experience**

The principals of ‘Actinotus Environmental Consultants’ have collectively worked in the area of floristic impact assessment and bushland health and management services for a period of greater than 20 years. They also have over 20 years of experience in scientific research (ecological, genetic) and teaching in biological science.

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## 1 INTRODUCTION

### 1.1 Background

Hornsby Shire Council is currently preparing a Draft Plan of Management for Bar Island. Bar Island is a small island of approximately 3.8 hectares (Jean and Lavelle 1995) that lies at the mouth of Berowra Creek and Marramarra Creek at their junction with the Hawkesbury River (Figure 1). The island has historical value, firstly as a site of Aboriginal occupation and secondly as the site of a church and burial ground for European settlers of the Hawkesbury River during the late nineteenth and early twentieth century. Extended occupation by local aborigines over many thousands of years is evidenced by a very large kitchen midden on the northern point of the island. European artifacts on the island include the stone chimney remains of the church and an assortment of graves centrally located on the north-facing slope of the island.

The northern section of this island, Lots 22A and 23A in DP 752040, is now owned by Hornsby Council following a land exchange with the Anglican Church, but the southern section, Lot 24 in DP 752040, is Crown land under Councils care and management.

As a contribution to the Draft Plan of Management, Actinotus Environmental Consultants were commissioned by Hornsby Council to investigate and describe issues concerning the geology and soils, floristics and extant fauna of the island.

The scope of this survey and assessment (Appendix 1) includes an account of the vegetation communities, as well as a comprehensive census of indigenous and exotic plant and fauna species, including identification of any threatened (*TSC Act 1995*), RoTAP species (Briggs & Leigh 1996) or regionally or locally significant plant species (Draft Flora and Fauna Assessment Guidelines, Hornsby Shire Council, (unpub.), Hornsby Shire Threatened Biota Conservation plan (1999)).

The fauna survey lists all species observed as well as the occurrence of species determined from secondary evidence. The site is also assessed as habitat or potential habitat for local threatened fauna species.

### 1.2 Significance of Bar Island

Bar Island is significant for the following reasons:

- it exists as a natural island environment in the Hawkesbury River System with potential for scientific, educational and recreational usage.
- it provides habitat for a rare plant *Platysace clelandii* that occurs in limited distribution in the area.



- it supports Red Ash (*Alphitonia excelsa*), a plant of restricted distribution within the area. Red Ash is a locally significant, small to medium (or tall) tree found in rainforest or protected drier gullies, usually about 6 – 10m high, with smooth grey bark. The leaves of *Alphitonia excelsa* (Red Ash) were apparently used widely by Aboriginal communities in different parts of Australia for many varied purposes. These included as a skin disinfectant, liniment, a gargle for toothache, a tonic drink (Robinson 1991) and in the Hornsby area as a fish poison (Lembit 2002 - Campbell *pers. comm.*)
- it supports a small saltmarsh community that is considered regionally significant.
- it supports Narrabeen Slopes Forest which is considered significant within the Hornsby Local Government area. This particular assemblage of Narrabeen Slopes Forest includes a range of canopy, understorey, twiner, vine and ground cover species, the composition apparently related to aspect and fire history. This assemblage is considered diverse compared with most other plant communities in the Hornsby Shire (Lembit 2002, Campbell *pers. comm.*).
- it provides suitable habitat and/or food trees for a number of animal species listed as threatened under the NSW *Threatened Species Act* (1995). These include the Regent Honeyeater, the Glossy Black Cockatoo, the Grey headed Flying Fox and at least three micro bats which utilise tree-holes for roosting.
- it provides potential habitat for a rare Land Snail.
- it provides habitat for a number of migratory bird species protected by international treaties
- it contains relics of early European settlement including a cemetery and the ruins of a church.
- The northern end of the island contains a large aboriginal midden that has archaeological value in a physical sense and also possibly a spiritual sense to descendants of the original people of the area.

## **2 SOIL AND WATER ISSUES**

### **2.1 Physical context of Bar Island in the Hawkesbury River system**

Bar Island lies within the drowned river valley complex of the lower Hawkesbury River estuary system. Situated off Fisherman's Point at the mouth of Berowra Creek and Marramarra Creek, the estuarine water surrounding the island is subject to both natural and non-natural inputs and influences. Studies by Williams and Watford (1987), suggest high volumes of mud are washed into Berowra Creek and Marramarra Creek from the Hawkesbury River, contributing significantly to the extensive mud flat areas of Big Bay, Back Bay and other shallow areas of these estuaries. Additionally, vibracore samples taken from surface sediments near Bar Island revealed high levels of nutrient in the form of total nitrogen (TKN) and total phosphorus (TP). Such elevated levels, thought to be associated with nutrient laden sediments from the Hawkesbury River, are responsible for algal blooms which periodically occur in the estuary. Other pollutants include faecal coliforms and heavy metals such as chromium, copper, zinc, lead, and arsenic which probably derive from point sources such as sewage overflows and boat antifouling, and also from non-point sources such as urban run-off.

### **2.2 Geology and soils**

The geological parent substrate of the local landform of Bar Island is the Newport Formation of the Narrabeen Sandstone Group, which occurs on and around footslopes above saltwater estuaries and the foreshores of local creeks draining into the Hawkesbury River in this region (Benson & Howell 1994, Thomas & Benson 1991). These strata characteristically include medium-grained quartz and quartz lithic sandstone sediments interbedded with narrow red-brown claystone and shale laminate bands (Bryan *et al* 1966, Chapman & Murphy 1989, Thomas & Benson 1991).

The Soil Landscape Series derived from this geological substrate is the Erina Soil Landscape (Chapman & Murphy 1989). This erosional soil landscape is characterised by undulating to rolling rises and low hills. Local relief is generally < 60m asl and hill slope gradients < 20% (Chapman & Murphy 1989). Crests are generally narrow and rounded with moderately inclined side slopes (Chapman & Murphy 1989).

Soil material formed from differential erosion and weathering of Narrabeen Sandstone substrates varies from moderate to deep yellow podsolics on sandstone crests and slopes; moderately deep red podsolics on shale crests and slopes; yellow podsolics on lower shale slopes and gradational yellow earths on footslopes (Chapman & Murphy 1989).



### **2.3 Climate and water catchment for Bar Island**

The climate of the Berowra estuary is warm temperate. The average annual rainfall of the Berowra Creek Catchment is between 1000 – 1100 mm and the average daily temperature in summer and winter is 27 and 17 degrees celsius respectively (Webb, McKeon & Assocs. 2000).

Bar island has no natural topographic facility for water storage. Being roughly convex in shape (Fig 1) with no significant depressions of the land surface, all precipitation would either be absorbed into the soil surface layers or would run off directly into the surrounding river system.

During surveys of the site for flora and fauna, no evidence was determined of either ephemeral or perennial streams and none would be expected in view of its size and topography.

Reference by Jean & Lavelle (1996) to a large pit, on the eastern side of the island level with the southern end of the cemetery, being possibly a natural feature caused by erosion following rain is unlikely. The shape and soil structure around the pit would indicate it was more likely dug as a pit-toilet, as Jean & Lavelle (1996) preferentially suggest, during European habitation of the island.

### **2.4 Soil management issues**

- **Foreshore erosion** – Rock formations and large boulder masses extending to the low water line for most of the island perimeter have limited the potential for wave action erosion of the island. Only on the north-eastern point is there evidence of high-energy wave erosion (Figure 2) resulting in undercutting of the shore line and removal of beach sand.

**Recommendation** – Discuss with NSW Waterways Authority feasibility and value of erecting signs for water vehicle speed restrictions within 100m of the island.

- **Midden erosion** – the current track to the church ruins and cemetery from the derelict jetty passes over the main aboriginal midden creating a water pathway during wet periods. Low level erosion of the midden has occurred due to track usage and water action.

**Recommendation** – Management issues related to the islands natural environment, and anthropological value, will depend on Councils plans for future visitation. Ideally the islands intrinsic value would be best preserved with visitation being discouraged. However should Council plan to encourage visitation then issues of track erosion and midden disturbance will need to be addressed. Jean and Lavelle (1996) suggest a boardwalk be constructed over the midden or alternatively a new track made around the midden joining up with the existing track further uphill. The track should be modified

on steeper sections with log-reinforced steps and regularly maintained and monitored for signs of erosion or degradation.

**2.5 Recommendations for future management and monitoring, timetable and estimate of costs for recommended work and maintenance.**

Should council adopt a policy of encouraging visitation to the island, then both track maintenance and midden protection should be given a high priority.

Estimates of cost for track repair and modification is \$10,000 with approximately \$2000 annually for maintenance.

Estimate of cost of boardwalk over the midden is \$10,000 - \$12,000.



### 3 VEGETATION ISSUES

#### 3.1 Literature review

Currently existing information on ‘Threatened Flora of the Locality’, defined as a 10km square area around the site, was accessed from the NPWS Atlas of NSW Wildlife (1:100,000 map sheet 9130 Sydney), and RoTAP (Briggs & Leigh, 1996) databases. Other literature that detailed regionally and locally threatened and significant flora, as well as endangered populations and plant communities of the study area, included NSW Scientific Committee Final Determinations (1996-2002), Benson & Howell (1994), Draft Flora and Fauna Assessment Guidelines, Hornsby Shire Council (unpub) and the Hornsby Shire Threatened Biota Conservation Plan (1999).

#### 3.2 Site survey methods

The surveyed area was inspected between 22<sup>nd</sup> and 29<sup>th</sup> June 2002 and a comprehensive floristic inventory of indigenous species recorded (Appendix 2). The assessment involved a comprehensive survey on foot of the entire area of the island. As well, data from five discrete quadrats of area 20 x 20m were recorded at various locations on the island. Four quadrat locations were chosen by a procedure of restricted randomization such that a single quadrat was randomly located at each aspect (west, south, east & north), the island being relatively uniform in direction of topographic orientation (Appendix 2). Additionally, a quadrat was recorded in bushland in the vicinity of the ruined church location (Appendix 2).

The survey included a targeted survey for species of conservation significance in an assessment of the presence, or likelihood of occurrence, of any threatened (endangered, vulnerable), rare (RoTAP), or regionally or locally significant plant species, or plant community, occurring on the island.

#### 3.3 Plant communities and species

- ◆ The predominant vegetation community occurring on the crest and slopes of Bar Island is relatively natural woodland with trees generally attaining heights of 18 – 20m, with some trees up to 25m tall. Dominant tree canopy species include *Eucalyptus punctata* (Grey Gum) and *Allocasuarina torulosa* (Forest She-oak) with *Angophora floribunda* (Rough-barked Apple) and *Eucalyptus tereticornis* (Forest Red Gum) occurring less frequently (Figs 1, 2, 3 & 5, Appendix 2).

The plant community established on the island is part of the Narrabeen Slopes Forest community identified by Benson & Howell (1994). The community is specifically described as: ‘**Open-woodland/open-forest: *Angophora floribunda* – *Allocasuarina torulosa* (map unit 9h)**’, (Benson & Howell 1994). This community has also been previously described by Thomas & Benson (map codes 6 & 7) (1985).

This woodland/open-forest community ‘characteristically occurs on dry north facing hillsides and slopes as well as slopes exposed to sea breezes’ (Benson & Howell 1994). The canopy cover varies from 20 – 30% with trees of *Eucalyptus punctata*, *Angophora floribunda* and *Allocasuarina torulosa* attaining heights of 15 – 20m (Figs 1, 2, 5, 6 & 7).

A relatively open mid-storey generally includes smaller trees of species such as *Eucalyptus punctata*, *Allocasuarina torulosa* and *Banksia integrifolia* (Coast Banksia).

An open understorey to 2m in height includes a diverse assemblage of shrub and small tree species. Commonly occurring species include *Ozothamnus diosmifolius* (Sago Bush), *Elaeocarpus reticulatus* (Blueberry Ash), *Leucopogon parviflorus* (White Beard), *Breynia oblongifolia* (Coffee Bush), *Pultenaea flexilis* (Graceful Bush-pea), *Acacia implexa* (Hickory Wattle), *A. ulicifolia* (Prickly Moses), *Bursaria spinosa* (Blackthorn), *Persoonia linearis* (Narrow-leaf Geebung), *Exocarpus cupressiformis* (Native Cherry), *Notelaea longifolia* (Mock-olive) and *Dodonaea triquetra* (Hopbush) (Appendix 2).

A well-developed and diverse ground stratum to 0.5 – 1m tall and to about 85% cover is established, with some rock outcropping and leaf litter also contributing to the ground cover. Commonly occurring species include *Pteridium esculentum* (Bracken), *Actinotus helianthii* (Flannel Flower), *Stylidium graminifolium* (Grass Triggerplant), *Gahnia aspera* (Rough Saw-sedge), *Lepidosperma laterale* (Variable Sword-sedge), *Lomandra longifolia* (Spiny-headed Mat-rush), *L. confertifolia* (Slender Mat-rush), *L. filiformis* (Wattle Mat-rush), *L. multiflora* (Many-flowered Mat-rush), *Dianella caerulea* (Blue Flax Lily), *Xanthorrhoea arborea* (Broad-leaved Grass-tree), *Xanthorrhoea media* (Forest Grass-tree) and grass species *Themeda australis* (Kangaroo Grass), *Aristida vagans* (Threeawn Speargrass), *Cleistochloa rigida*, *Entolasia stricta* (Wiry Panic), *Imperata cylindrica* (Blady Grass) and *Microlaena stipoides* (Weeping Grass) (Appendix 2).

A diverse vine, climber and twiner assemblage is well developed among ground, shrub and mid-storey canopies. Species commonly contributing to this assemblage include *Pandorea pandorana* (Wonga Wonga Vine), *Parsonsia straminea* (Common Silkpod), *Desmodium brachypodium* (Large Tick-trefoil), *Glycine clandestina* (Love Creeper), *Hardenbergia violacea* (False Sarsaparilla), *Cassytha glabella* (Slender Devil’s Twine), *Billardiera scandens* (Appleberry), *Cayratia clematidea* (Slender Grape), *Cissus hypoglauca* (Five-leaf Water-vine), *Smilax glycyphylla* (Sweet Sarsaparilla) and *Eustrephus latifolius* (Wombat Berry) (Appendix 2).

- ◆ At the northern section of the island there is a small patch of low woodland dominated by *Casuarina glauca* (Swamp She-oak) (Fig 4).
- ◆ Parts of the island are fringed by patches of low closed forest comprised of *Aegiceras corniculatum* (River Mangrove) (Figs 3 & 4).

Appendix 2 lists 92 indigenous plant species that occur in the surveyed area with reference to their relative frequency of occurrence. Plant species nomenclature follows that described in Harden (1990 – 2002).



### 3.4 Plant species of conservation significance

Appendix 3 is a comprehensive list of plant species of conservation significance occurring in the vicinity or near the locality of Bar Island. This list was compiled from lists documented in the *TSC Act* (1995), *EPBC Act* (1999), RoTAP species (Briggs & Leigh 1996), Draft Flora and Fauna Assessment Guidelines for Hornsby Shire Council (unpub), Hornsby Shire Threatened Biota Conservation Plan (1999) and the Atlas of NPWS Wildlife (most current records).

Appendix 3 also includes an account of the likelihood, according to known location and habitat specificity, as to which of these species may potentially occur on Bar Island. The following 25 such species include:

- Acacia hispidula** A low sandpaper-leaved plant to 1m tall with wiry, much-branched stems. Uncommon, occurs in woodland and open forest often on dry rocky slopes, widespread occurrences have been recorded around the coastal zone.
- Acacia stricta** An open shrub up to 3m tall. Locally uncommon, though having been recorded on the coast mainly north of the harbour in open forest, often on dry hillsides.
- Alphitonia excelsa** A locally significant, small to medium (or tall) tree found in rainforest or protected drier gullies, usually about 6 – 10m high, with smooth grey bark.
- Ancistrachne maidenii** A very rare creeping grass found on moist creek banks, known from collections along Berowra Creek, Cowan Creek and nearby parts of the Hawkesbury River.
- Austromyrtus tenuifolia** A sprawling dense or erect shrub to 1.5m tall. Scattered in sheltered areas in woodland and forest, north of the harbour.
- Boronia fraseri** An erect shrub to about 1.5m tall, on moist sheltered slopes and sandstone gullies in woodland and forest in northern coastal bushlands of Sydney.
- Bertya brownii** A slender shrub to 3m tall found in moist sheltered areas of woodland and forest. Locally uncommon and occurs in coastal districts north of the harbour, recorded at Mt Colah and Katandra Sanctuary, Mona Vale.
- Caladenia tessellata** A small spider orchid, usually only evident after fire. Occurs in sheltered moist areas of scrub and forest. Uncommon north of the harbour, recorded at Middle Harbour and Berowra.

- Darwinia peduncularis** A rare spreading shrub to 1.5m tall. Occurs on shallow sandy soils in woodland and open forest between or near rocky outcrops on the Hornsby Plateau and the Hawkesbury River.
- Darwinia procera** A rare, erect shrub to 2m tall. Occurs on sandy soils on forested slopes in coastal areas, mainly around the Hawkesbury River, Cowan Creek and Berowra Creek.
- Dipodium variegatum** A leafless, saprophytic terrestrial orchid to 80cm tall, common in sandy coastal forests.
- Epacris crassifolia** An uncommon, low spreading shrub less than 30cm tall. Confined to damp sheltered crevices and ledges on sandstone cliffs in gullies in the Sydney area.
- Epacris purpurascens var purpurascens** An uncommon, stiff, prickly shrub to 1.5m tall. Occurs on damp soils in woodland and forest on sandstone, shale or rocky sites, confined to coastal plateaus in the Sydney region.
- Eucalyptus globoidea** A stringybark eucalypt to 15m tall. Occurs in forests on higher nutrient soils, particularly with some clay influence in valleys on the coast.
- Eucalyptus robusta** A widespread, medium sized eucalypt to 30m tall. Occurs in saline, marshy soils and estuarine margins, often in association with *Casuarina glauca*.
- Eucalyptus sieberi** A very variable form of eucalypt up to 45m tall. Occurs in a wide variety of soils and forest types, preferring sandy, well-drained soils on moist valley slopes. Uncommon near Sydney and restricted to higher rainfall areas on sandstone ridges.
- Eucalyptus umbra ssp umbra** A small to medium sized tree to 8m tall. Usually occurs on sandy or rocky sites near the sea and the edges of broken sandstone scarps in coastal areas of northern Sydney.
- Genoplesium baueri** A small slender saprophytic midge orchid occurring in shady areas in woodland, mainly north of the harbour.
- Hydrocotyle geraniifolia** A lax, trailing herb to 30cm tall. Occurs in the sheltered understories of forests on the coast with records from Patonga and the Colo River.
- Leucopogon amplexicaulis** A weak shrub to 1m tall. Occurs in sheltered, unburnt woodland or forest sites, often beneath rocky outcrops in coastal districts of Sydney. Records include Brisbane Water National Park, Cowan Creek and Muogamarra Nature Reserve.

**Micromyrtus blakelyi** A compact, spreading shrub to 30cm tall. Occurs in crevices or depressions in flat sandstone platforms or outcrops near the Hawkesbury River (eg Cowan Creek, Muogamarra Nature Reserve).

**Platysace clelandii** A very rare, much-branched, scrambling shrub to 50cm tall. Occurs in open forests on sandy soils, formerly only known from the Berowra Creek area, restricted to the Hornsby Plateau and the Colo – Wollemi area.

**Pultenaea linophylla** A spreading shrub to 1m tall. Occurs in woodland or open forest on sandy soils, particularly on the coast.

**Pultenaea polifolia** A weak, ascending or spreading shrub to 1m tall. Occurs uncommonly but over a wide area in woodland or open forest on sandy soils, recorded north of the harbour (eg Ku-ring-gai National Park, Hornsby).

**Zieria involucrata** A rare, robust shrub to 2m tall. Occurs in a few moist gullies in Marramarra National Park and near Colo Heights. Restricted to the Sydney region.

- A population of ***Platysace clelandii***, a RoTAP species (Code: 2RCa) occurs on the southern section of the island (Appendix 2). This species is defined as rare and having a restricted distribution, though adequately represented in National Parks, State Recreation Areas and Reserves (Marramarra NP, Parr SRA, Wollemi NP and Yengo NP) (Briggs & Leigh 1996). In the Sydney area the species has been recorded in the vicinity of Berowra Creek, at Mount Orient, Berrilee in 1918 (Jean & Lavelle 1996).
- A small population of the tree ***Alphitonia excelsa*** occurs on the western section of the island. This species has a widespread distribution over many parts of Australia but is locally restricted in distribution. The leaves of *Alphitonia excelsa* (Red Ash) were used by different Aboriginal communities for many varied purposes including as a skin disinfectant, liniment, gargle for toothache, tonic drink (Robinson 1991) and in the Hornsby area as a fish poison (Lembit 2002 - Campbell *pers.comm.*)

No other plant species of any denoted conservation significance (Appendix 3) was identified in the surveyed area.

### 3.5 Exotic plant species

A generally low frequency of 29 species of exotic plants was found in the surveyed area. The more common weed species include *Aster subulatus* (Bushy Starwort), *Bidens pilosa* (Cobblers Peg), *Tagetes minuta* (Stinking Roger), *Ochma serrulata* (Mickey Mouse Plant), *Plantago lanceolata* (Plantain) and *Verbena bonariensis* (Purpletop) (Appendix 2). A rampant specimen of *Pereskia aculeata* (Blade Apple), possibly originally planted (Jean and Lavelle 1996), was recorded on the eastern side of the island beneath the cottage site.



Exotic grass species include *Andropogon virginicus* (Whiskey Grass), *Eragrostis curvula* (African Lovegrass), *Digitaria sanguinalis* (Summer Grass), *Ehrhata erecta* (African Veldtgrass), *Paspalum dilatatum* (Paspalum), *Setaria gracilis* (Slender Pigeon Grass), *Sporobolus indicus* var *capensis* (Parramatta Grass) and *Stenotaphrum secundatum* (Buffalo Grass) (Appendix 2).

Three species of noxious weeds occur on the island, these being *Lantana camara* (Lantana), *Protasparagus aethiopicus* (Ground Asparagus) and *Ochna serrulata* (Mickey Mouse Plant), *Lantana camara* occurring in relatively common frequency (Appendix 2).

### 3.6 Vegetation weed management

It is strongly recommended that all weed species, particularly noxious species, be removed from the island. An exception may be for the far northern section of the island containing an area of the Aboriginal midden that is currently stabilised by a rhizomatous population of Buffalo Grass. A management program of weed species removal, monitoring and control (Buchanan 1989) should be implemented and maintained in this culturally significant and natural area.

Bush regeneration and weed control management on Bar Island was implemented in 1990 (Jean & Lavelle 1996). However the island is currently showing signs of significant weed incursion.

Assemblages of mainly grass, herbaceous and some woody weed species occur at the northern section of the island. These weeds are particularly associated with the former landing jetty and Aboriginal midden areas, as well as along the track that leads to the ruins of the cemetery, grave sites and cottage sites (Jean & Lavelle 1996).

The most significant weed management issue for the island is the scattered but frequent occurrence of *Lantana camara* (Fig 5, Appendix 2). This woody weed is defined as a noxious weed of national significance (National Weeds Strategy) and is aggressively invasive, out-competing indigenous woody shrub species.

It is recommended to implement a persistent, continuous eradication program to remove *Lantana* from the island, followed by a consistent monitoring and control program to ensure that re-infestation does not occur. This is particularly significant in the first 2 – 3 years after removal of adult plants as seeds remain viable in the soil and germinate vigorously in the presence of opportunistic gaps in the canopy.

Eradication of *Lantana* should occur before plants are in full flower, ensuring a new seed crop is not established, mature plants being cut at stump level. The stumps should be pasted with a growth inhibitor such as undiluted Roundup (UBM 1996) or Garlon (1:50 distillate) (Buchanan 1989, Agdex 1997). The dead plants may be retained among the canopy to inhibit rapid seed germination, though there is a possibility that root suckering may occur from cut branches and this should be monitored. Seedlings of *Lantana* that may establish in the immediate vicinity of adult plants should be hand-pulled and removed from the site.

The only other relatively large noxious woody weed that may present a significant potential incursion into natural bushland is *Ochna serrulata*. This weed occurs only in limited frequency and can be treated similarly to *Lantana*, with a program of periodic monitoring implemented to assess future incursion.

Given time, natural regeneration of endemic species in sites formerly occupied by these woody weeds should occur, probably not requiring any assisted restoration programs involving planting of indigenous species.

The remaining weed species established on the island are associated with European cultural sites of significance and the Aboriginal kitchen midden site and are addressed in following sections of this report.

### **3.7 Fire regimes on Bar Island**

All natural species of plants occurring on Bar Island are adapted in specific ways to the presence of fire, particularly fire regimes that include a periodicity of fires of at least five years or greater.

The relatively mesic component of the natural vegetation of the island ensures a natural fire frequency that has a periodicity probably greater than at least 10 years.

All natural plant species occurring on the island will respond to fire either by vegetatively resprouting from epicormic or other perennating buds (vegetative resprouters) or establish from soil-stored seed (obligate-seeders) (Benson & M<sup>c</sup>Dougall 1993 – 2002).

A periodicity of fire, particularly high intensity fires, of 5 years or less may disadvantage some obligate-seeding species. A periodicity from between 50 – 100 years, however, may disadvantage relatively short-lived species, regardless of whether they be obligate-seeders with a limited soil-stored seedbank, or small life-form vegetative resprouters that may not be sufficiently adapted to low light intensities.

Therefore it is likely that a fire-periodicity of between about 10 and 50 years will probably not disadvantage the life history, viability or persistent establishment of any of the currently occurring indigenous plant species of Bar Island.

A periodicity of fire between 5 and 50 years is likely to have been associated with the evolution of much of the sclerophyllous flora of Australia. This periodicity of fire is likely to continue either through natural ignition events, or by human negligence or interference, regardless of theoretically emplaced or formulated fire management strategies.

A program of periodic monitoring of the frequency or presence/absence of species (every 5 years or so) can be implemented using fixed quadrats over an extended time period comparing unburnt control areas with fixed areas of similar floristic composition that are moderately burnt every 20 or so years. This comparison would assist in both the qualification and quantification of the effect of fire on this relatively uniform vegetation type.

Effective fire protection or buffer zones around any specific structure of historical cultural significance would need to be around 30m in width. Complete clearing of this extent of bushland would seem impracticable for all areas of cultural significance occurring on the northern slopes of the island.

A compromise management option may be to underscrub an area within 30m of a perimeter around the culturally significant sites such as the ruined church, cottage and cemetery. This would minimise the effects of a low or moderate burn on these areas as a fire of low to moderate intensity would more likely burn out where there is very little underscrub to maintain a hot fire front. An intense wildfire however, would most likely burn through the vegetation regardless of underscrubbing.



### **3.8 Vegetation maintenance**

#### **3.8.1 Church, monument, grave sites**

All weeds in the vicinity of the monument, church and grave site ruins (Appendix 2) should eventually be removed by hand weeding. Exotic grasses around the culturally significant grave sites could be temporarily managed by whipper-snipper until finally all removed. Indigenous grasses such as *Themeda australis*, *Aristida vagans*, *Imperata cylindrica* and *Microlaena stipoides* should be encouraged and could be introduced from plantings taken from local seed-stock.

Once weeds, including exotic grasses, have been removed from culturally significant sites and other areas such as along the sides of tracks, it is essential to implement a periodic monitoring program to assess and remove any future incursions. Monitoring and prompt removal will be more practicable after the initial suite of weeds has been removed.

#### **3.8.2 Aboriginal midden site**

The Aboriginal kitchen midden site at the far northern section of the island is to some extent stabilised by the soil-binding grass *Stenotaphrum secundatum* (Buffalo Grass).

It is recommended to initially remove all other weed species, such as *Verbena bonariensis* (Appendix 2), from the midden site but to maintain the cover of Buffalo Grass to stabilise the structure of the midden. Stocks of locally occurring indigenous tussock grass species such as *Themeda australis* (Kangaroo Grass), *Microlaena stipoides* (Weeping Grass), *Austrodanthonia linkii* var *fulva* (Wallaby Grass) and even *Cynodon dactylon* (Couch), grown from seed or from rootstock taken from populations occurring at Bar Island, should progressively be introduced into the midden soil. These indigenous grasses will most likely eventually outcompete the Buffalo Grass and maintain the stability of the culturally significant midden site. *Sporobolus virginicus* is a salt tolerant grass and the genetic race growing behind mangroves on the northern tip of the island is one which efficiently binds sand and helps prevent beach erosion (Smith-White 1988). This grass could be utilised on the seaward side of the midden at the high water level as part of the rehabilitation process.

### **3.9 Timetable and estimate of costs for vegetation management programs**

It is recommended to implement an initial program of active periodic weed removal (~ 5 days/week for up to 10 weeks) for two years. This period should be followed by a further program of monitoring and follow-up weed removal (~5 days/week for up to 4 weeks) for at least another three years to assess the potential extent of future weed incursion.

As such, a total cost of \$32,000 over a period of at least five years, is estimated to remove the current suite of weed species and control further incursions of weeds in the short term.

The following timetable and estimates of costs for a vegetation management program is recommended:

<b>Year</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Action</b>					
Weed removal and monitoring (Lantana and other weeds)	\$10,000	\$10,000	\$4,000	\$4,000	\$4,000
5 days /week for:	10 weeks	10 weeks	4 weeks	4 weeks	4 weeks

## 4 FAUNA ISSUES

### 4.1 Literature Review

Existing information on the 'threatened' fauna of the locality, defined as a 10 kilometre radius around Bar Island, was obtained from the National Parks and Wildlife Service Atlas of NSW Wildlife database (1:100,000 map sheets 9130 Sydney). Other literature that detailed regionally and locally threatened and significant fauna, included *Berowra Creek Estuary Management Study and Management Plan* (Webb, McKeon and Associates P/L 2000), *Bar Island Hawkesbury River Conservation Plan* (Jean & Lavelle 1996), NSW Scientific Committee Final Determinations (1996 - 2002), Draft Flora and Fauna Assessment Guidelines, Hornsby Shire Council (unpub) and the Hornsby Shire Threatened Biota Conservation Plan (1999).

### 4.2 Survey methods

The island was surveyed for extant fauna over three non-consecutive days.

A dedicated ground search of the whole island was undertaken as well as a dedicated census of extant birds. The survey involved different search strategies and protocols but for each, all fauna or evidence of fauna was recorded.

The littoral (intertidal) zone was inspected for visible fauna during a period of low tide.

#### Aves

The search strategy employed for birds was based on utilising periodic observation stations or "point counts" as described by York *et al.* (1991) along an imaginary line around the perimeter of the island, about 20m in from the shore. Distance between stations or points was approximately 50m and time spent at each station was usually about ten minutes. Birds present in trees or shrubs were recorded as were those heard nearby or observed flying overhead. Tree canopies were inspected for nests and large trees examined for spouts and hollows which could provide potential nesting sites. Opportunistic sightings of birds at times other than during systematic surveys were also recorded.

#### Mammalia

Diurnal searches utilised opportunistic sightings. Nocturnal searches using spotlights followed a transect from the derelict jetty to the monument and also across the island in the vicinity of the cemetery. Canopy and trunk searches were made for arboreal fauna such as small possums.

Many fauna groups show reduced activity during winter (eg. many reptiles, amphibians, microchiropteran bats) and should ideally be surveyed between September and February for optimum evidence of occurrence.

Six 100mm hair tubes and five, bandicoot size Elliot traps were concealed at various locations for two nights. Both hair tubes and Elliot traps were baited with dough comprising peanut butter, fish oil and rolled oats.

Scats were collected in resealable plastic bags for later examination. Gross characteristics noted were size, shape, colour, texture and odour. Analysis of scat contents included an examination of composite matter e.g. vegetative material, bone fragments, feathers etc. and particularly hair types. Hairs extracted were mounted on microscope slides and photographed



using an Olympus digital camera (Camedia 3040 zoom) attached to a Zeiss compound microscope. Hair identity was determined mainly from scale and banding patterns. Scat identity was determined from gross morphology in association with all internal elements.

### **Reptilia and Amphibia**

Reptiles and amphibians were surveyed by hand searching both opportunistically and systematically and nocturnal spotlight searches. Along transect lines ground matter, including leaf litter, small rocks, hollow logs etc. thought likely to provide refuge habitat were inspected.

### **Limitations of data**

Species recorded along transect lines and random meander foot searches during this survey may not be interpreted as forming a definitive list for the area. Observations made over a relatively short time during the autumn–winter period when many fauna exhibit dormant behaviour will obviously not detect all species present and certainly not those that may be seasonal visitors. Seasonal and annual fluctuations in animal populations, weather variables (including drought) and food/shelter resources may influence the potential occurrence of a species within an area. Habitat disturbances are also likely to influence a species' presence, distribution and occurrence.

Ideally bird surveys should be conducted over two seasons, both winter and summer and surveys for microchiropteran bats between September and April. Diurnal searches and spotlighting for reptiles and amphibians is also more likely to detect species occurrences if conducted between September and February. Many reptiles become inactive during the colder months of the year, hibernating in secluded locations.

## **4.3 Survey results**

### **4.3.1 Habitats**

The main plant community of the island being open-woodland/open-forest provides potential habitat for numerous terrestrial and arboreal species. The tallest trees, *E. punctata* and *E. tereticornis* provide canopy habitat for birds and arboreal mammals but do not appear to contain significant hollows or spouts. Older specimens of *Allocasuarina torulosa*, however, do commonly contain hollows which could be utilised by small birds and small arboreal mammals such as Brush-tail possums and microbats. The seeds of *Allocasuarina torulosa* are one of the most favoured by Glossy Black Cockatoos, a species listed as vulnerable on the *TSC Act* (1995). As these trees are plentiful, the island is prime habitat for the species.

The minority habitat, the mangrove/littoral community mainly occurs around the northern tip of the island and in scattered locations on the eastern and western sides. The habitat is generally defined as that between high and low tide levels. It includes mangroves, salt marsh and mud flat areas uncovered at low tide.

### 4.3.2 Fauna recorded

#### Woodland habitat

Numbers of fauna species identified were not high, possibly reflecting the islands isolation from mainland habitats, limited space, food and water availability and the season during which the survey was conducted.

Birds were the most numerous faunal group with *Manorina melanocephala* (Noisy Miner) the most prolific species. A pair of *Haliastur sphenurus* (Whistling Kite) with juvenile was found to be resident with a large stick nest high in a tall *Eucalyptus punctata* (Grey Gum) on the eastern side of the island (see Fig 3). These large birds feed on carrion, small mammals, reptiles, fish, crustaceans and large insects.

Only one *Psophodes olivaceus* (Eastern Whip bird) was seen during the survey which may represent the islands limit as the species is reputed to occupy territorial ranges of 5 -10 hectares (Schodde and Tideman 1997).

Both *Pseudocheirus peregrinus* (Ring-tailed Possum) and *Trichosurus vulpecula* (Brush-tailed Possum) were active with frequent sightings at dusk and at night. Numbers recorded during spotlighting sessions were six (6) *Trichosurus vulpecula* and five (5) *Pseudocheirus peregrinus* all of which were feeding within approximately a 50 metre range, centrally on the island. *Trichosurus vulpecula* occurs in areas with trees large enough to contain day time dens, ranging from rainforest to eucalypt woodland. It is also known to live in shrubland and den in the ground hollows of other fauna. The home range of a male is 5.4 hectares and a female 2.4 hectares. Population densities have been calculated to range from 0.23 to 4 individuals per hectare (How 1981). Since Bar Island is approximately 3.8 hectares, the maximum number of males expected on the island is about 16. *Trichosurus vulpecula* is a solitary animal, dispersion apparently maintained by mutual avoidance, occasionally reinforced by contact encounters.

None of the Elliot traps were triggered during two nights on the island. Hair samples collected from some of the hair tubes proved to be *Pseudocheirus peregrinus* (Ring-tail Possum). Three dreys (nests made by Ring-tail Possums) were sighted in trees of *Allocasuarina torulosa* in the vicinity of the cemetery. Ring-tail Possums utilise bacterial fermentation as part of the digestion process and this limits their diet to one of mainly eucalyptus leaves.

The only reptile sighted was *Lampropholis guichenoti*, the Garden Skink. This skink was found in leaf and bark litter in the open woodland habitats on the island and also in long grass fringing the mangrove community.

Holes noted on the south-eastern side of the island may have been excavated either by lizards or Bush rats (*Rattus fuscipes*). A suggestion by Jean & Lavelle (1996) that the holes may have been dug by Long-nosed Bandicoots is unlikely, as the holes are small and narrow and not cone shaped.

A list of all species recorded is included in Appendix 4.

Other fauna not sighted during this survey, but with some potential to be on the island if having crossed from the mainland during seasonally low tides, on drifting logs or by swimming would include common local reptiles such as the *Tiliqua scincoides* (Sydney Bluetongue Lizard), *Psuedechis porphyriacus* (Red-bellied Black Snake) and *Pseudoaja textilis* (Eastern Brown Snake).

There was no evidence of any large macropod (eg wallaby, euro or kangaroo) on the island. Also no feral animal species were recorded.

#### **Mangrove/littoral habitat**

Species identified included the Sydney rock oyster (*Saccostrea commercialis*), a bivalve which is common on small rocks and shoreline boulders exposed during low tide.

*Bembicium auratum*, a mollusc with a flat base and a conical shell with rough spiral ribs on the whorls is also common on sandstone bedrock within the mangrove zone. This mollusc is variable in colour, but is often brown mottled with grey. It is mostly found on hard substrates such as sandstone rocks at about the high tide level (Ross 1995).

*Pyrazus ebeninus*, the Sydney Mud Welk is also quite common around the northern tip of Bar Island.

*Holoecius cordiformis* is the common mangrove crab. It was located at the northern tip of the island and also behind mangroves along the north-western zone. These crabs live in burrows on the mud floor which they close at high tide (Ross 1995). Underwood and Chapman (1993) point out that crabs, through their burrowing and feeding behaviour modify the habitat, gradually raising the surface level.

In places along the eastern shore a thick carpet of filamentous green algae binds the mud surface. This is a mixture of two algae *Rhizodonium* sp. and *Enteromopha intestinalis* (Underwood and Chapman 1993).

Other animals often associated with *Aegiceras corniculatum*, include the barnacle species, *Elminius covertus* (common on the trunk and leaves) and an insect, *Kallitambinea australis* which seems to live entirely on mangroves, particularly the black river mangrove (Underwood and Chapman 1993).

Frequently found on the lower branches of mangroves are the large rounded webs of orb-spiders, particularly *Nephila* sp. (the Golden orb-spider). These in turn often attract small insect eating birds to the mangrove habitat (Underwood and Chapman 1993).

In the upper branches of mangroves, above levels reached by normal tides, small pointed snails (*Littorina scabra*) are common feeding on microalgae.

#### **4.3.3 Threatened and significant species in the area**

Searches of the National Parks and Wildlife Service Atlas of NSW Wildlife database revealed two species of amphibians, two species of reptiles, fourteen species of birds and thirteen species of mammals, listed as “threatened” under the state *TSC Act* (1995), that have been recorded within 10km of Bar Island. Some were also listed under the national *EPBC Act* (1999) (Appendix 5). As well, a number of migratory bird species with potential to occur



were found to be listed under the CAMBA and JAMBA Treaties for the protection of migratory birds (Appendix 6).

Cross referencing data from NPWS records for Muogammarra Nature Reserve, Marramarra National Park and Hornsby LGA indicates that a number of ‘threatened’ species have potential to utilise Bar Island. These are species which could access the site by flight eg. birds or bats. The Glossy-black Cockatoo has most potential to visit the island as it contains an abundant food reservoir in the *Allocasuarina torulosa*. Recent reports of Regent Honeyeater in the vicinity (P. Thompson *pers comm.*) (NPWS wildlife database) suggests undisturbed areas of the Hawkesbury may providing refugia for this species.

Grey-headed flying fox feed almost exclusively on blossoms, such as those produced by eucalypts at certain times of the year, and so may include the Bar Island within their foraging range.

The Hornsby Shire Threatened Biota Conservation Plan (1999) lists four ‘threatened’ microchiropteran bat species recorded within or close to Hornsby LGA, that utilise tree hollows as roost sites. These four are *Scoteanax ruepelli* (Greater Broad-nosed Bat) (one record from south Dural), *Falsistrelle tasmaniensis* (Eastern Falsistrelle) (one record from Ku-ring-gai Chase National Park), *Saccolaimus flaviventris* (Yellow-bellied Sheath-tail Bat) (one record from near Wiseman’s Ferry) and *Mormopterus norfolcensis* (Eastern Freetail-bat) (one record from Maroota). Although sightings of these microbats are limited in the general area, Bar Island contains many trees with hollows which could be utilised as roosting sites and for this reason must be considered potential habitat.

Also mentioned in the ‘Hornsby Shire Threatened Biota Conservation Plan (1999)’ as important are the land snails *Meridolum middenensis* and *Meridolum duralensis*. These species have not as yet been nominated for listing in the TSC Act (1995) because of ongoing research on their taxonomy and distribution but are already recognised as worthy of protection (Stephanie Clarke *pers comm.*).

*Meridolum middenensis* is associated with sandy shore line habitats and particularly sites with aboriginal middens and therefore may occur on Bar Island even though not sighted during this current survey (Stephanie Clarke *pers comm.*).

Threatened species considered to have potential to occur on Bar Island are addressed as follows:

**Glossy-black Cockatoo** (*Calyptorhynchus lathami*)

The Glossy Black Cockatoo feeds almost exclusively on the fruits of She-oaks and nests in large tree hollows. Breeding pairs, often with a juvenile, can travel over large distances in search of food. Bar Island provides considerable potential for foraging and is likely on occasions to have visitor individuals.

**Regent Honeyeater** (*Xanthomyza phrygia*)

The Regent Honeyeater is a rare winter visitor to the region, feeding on winter flowering Eucalypts and Banksias.

**Grey-headed Flying Fox** (*Pteropus poliocephalus*)

This species occurs throughout Victoria and along the east coast of eastern Australia to Rockhampton in Queensland (Churchill 1998). The species congregates in large camps and is found in a variety of habitats including rainforest, mangroves, Melaleuca swamps, wet and dry sclerophyll forests and also cultivated areas. The Grey-headed Flying-fox feeds on the blossoms of more than 80 plant species. The major plant food is Eucalyptus blossom and the native fruits of a number of tree species.

**Greater Broad-nosed Bat** (*Scoteanax ruepelli*)

This large microbat species also roosts in tree hollows but is generally found in moist gullies in mature coastal forest (Churchill 1998) and so probably has little if any potential to be found on Bar Island.

**Eastern Falsistrelle** (*Falsistrelle tasmaniensis*)

The Eastern Falsistrelle occurs throughout Tasmania, eastern Victoria and along the east coast of New South Wales to south-eastern Queensland (Churchill 1998). The species congregates in colonies of up to 36 individuals, usually of the same sex. They generally roost in hollows of Eucalypt trees and forage from dusk feeding on moths, rove beetles, chafers, weevils, flies and ants (Churchill 1998). Breeding occurs in late spring with young born from December.

**Yellow-bellied Sheathtail Bat** (*Saccolaimus flaviventris*)

This insectivorous species is common in northern Australia but is a rare late summer-autumn visitor to NSW and Victoria (Menkhorst 2001). Churchill (1998) reports individuals have only been sighted in southern Australia between January and June. Roosting in tree hollows, usually singularly but sometimes in small groups (Churchill 1998), these bats fly fast and direct above the canopy and so are rarely captured in traps (Menkhorst 2001).

**Eastern Freetail-bat** (*Mormopterus norfolcensis*)

Occurring in coastal eastern Australia from the Illawarra in NSW to near Brisbane (Menkhorst 2001), little is known of the biology of this species but it is reported to roost singly or in small groups in tree-holes and rock crevices (Strahan 1996).

#### **4.3.4 Management issues**

It is recommended that Bar Island be managed as a wildlife habitat so that the natural balance of the ecological system is maintained. Some visitation is clearly expected,

particularly by people with *a priori* connection to the island or whom have relatives buried within the cemetery, and as such the island fauna will always be at some risk.

Safeguards for the island must include:-

- i) the complete ban of domesticated dogs and cats from the island.  
The presence of such exotic fauna on the island would significantly disrupt native species territorial boundaries by scent marking and faecal deposits. Domesticated cats are known to be a major predator for the Ring-tailed Possum (Walton and Richardson 1989).
- ii) No overnight stays or camping.(signs to this effect).
- iii) No rubbish bins is the preferred option but if utilised then each must have an animal safe lid and be regularly serviced. People should be encouraged to take their rubbish away off the island (signage).
- iv) A toilet facility is not recommended unless high level human visitation is expected. Such a facility would possibly have a negative affect on the extant fauna, and may even encourage over use of the island by river tourists.
- v) Fauna on the island should be surveyed again in summer (November – March) to determine seasonal visitors (fauna) and those that may be on the island but currently in a state of hibernation. It is expected that the number of bird species would be significantly higher in summer, as would the ctivity of microchiroptern bats.
- vi) Installation of some device to monitor diurnal human visitation.
- vii) Signage to warn of damage which can be caused by walking in mangrove areas, particularly in such a small and localised habitat as occurs on Bar Island. Mangroves of the Hawkesbury have breathing roots or pneumatophores which grow up vertically to about 100mm above the mud surface. Constant trampling can seriously damage these roots and can lead to the death of the plant and fauna associated with the habitat.

**Timetable and costs of recommendations**

The following timetable and estimates of costs for a fauna management program is recommended:

Monitoring surveys for terrestrial fauna

Year	1	2	3	4	5
<b>Action</b>					
Signage	@ cost				
Diurnal survey	\$3,000	nil	\$3,000	nil	\$4,000
3 days /week for:	one week		one week		one week



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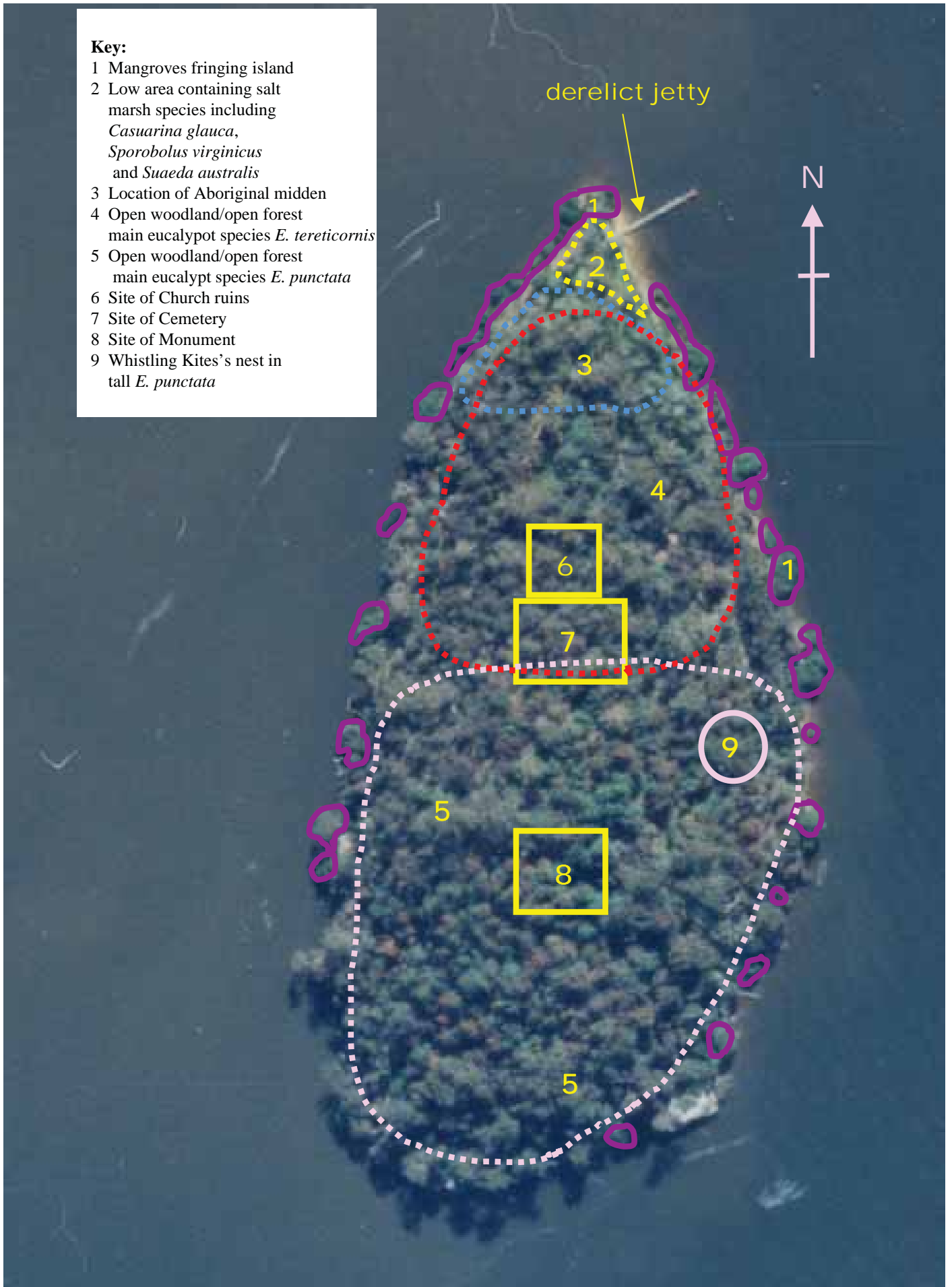




Figure 1 Bar Island, Hawkesbury River, with remains of derelict jetty in foreground.



Figure 2 Bar Island - north eastern shore at site of derelict jetty. Embankment undercut by wave action.



**Figure 3** Aerial photograph of Bar Island with overlays for some vegetation features, location of the Aboriginal Midden, Church ruin, cemetery, and monument



Figure 4 Bar Island, Hawkesbury River - northern tip. Grasses include *Sporobolus virginicus* and *Stenotaphrum secundatum*. Trees are *Casuarina glauca* and mangroves *Aegiceras corniculatum*.



Figure 5 Bar Island – Church site looking towards the south-east. Light green vegetation behind is noxious weed *Lantana camara*.





Figure 6 Cemetery area with mature trees of *Eucalyptus teriticornis* and *Allocasuarina torulosa*



Figure 7 Bar Island – monument located at the summit of the island. Constructed c. 1974 to the memory of John Sandell and Malcolm Buckman.

## **APPENDIX 1**

Issues to be addressed by Actinotus Environmental Consultants as part of the contract report on Bar Island for Hornsby Council:

### **1) SOIL AND WATER ISSUES**

- Describe the physical context of the Island in the Hawkesbury River system, the Islands water catchments, ephemeral or perennial streams, geology, landforms, soil landscapes and their characteristics.
- Describe soil and water management issues including potential shoreline degradation, other potential erosion issues, eutrophication, water usage etc.
- Make recommendations for future management and monitoring, providing a timetable and estimate of costs for any work recommended and maintenance.

### **2) VEGETATION ISSUES**

- Investigate, describe and map the structure and floristics of the native vegetation (terrestrial and estuarine\*).
- Evaluate the conservation significance of the vegetation.
- Describe and map the extent and cover of weeds, and make recommendations for a program of assisted bushland regeneration and restoration as applicable.
- Discuss other vegetation management issues including a recommended fire regime to conserve the vegetation of the Island and recommend fire protection zones and other protection measures /methods to protect culturally significant areas from bushfire.
- Make recommendations for a maintenance program for vegetation around the church, graves and monuments area, and specific instructions regarding weed control around the Aboriginal midden.
- Provide a timetable and estimate of costs for a vegetation management program.

### **3) FAUNA ISSUES**

- Investigate and describe terrestrial and aquatic\* fauna habitats, communities, populations and species present or likely to be present.
- Carry out field investigations of fauna as required.
- Assess the conservation significance of the fauna.
- Discuss management issues including feral animal control and visitation by domestic animals.
- Make recommendations for the conservation, management and monitoring of native fauna and wildlife habitat.
- Provide a timetable and estimate of costs for any fauna management recommended.

## APPENDIX 2 Indigenous and exotic plant species list for Bar Island

Key:								
Status								
* - Exotic species								
N - Noxious weeds (National Weeds Strategy Executive Committee 2002)								
Occurrence of sampling site								
Total area of island								
1 - Western aspect								
2 - Southern aspect								
3 - Eastern aspect								
4 - Northern aspect (above cemetery)								
5 - Northern aspect (from datum point, below cemetery)								
Frequency of occurrence								
c - common								
o - occasional or scattered								
u - uncommon								
					20 X 20m quadrats			
STATUS	SCIENTIFIC NAME	COMMON NAME	TOTAL AREA	1	2	3	4	5
	<b>FILICOPSIDA</b>							
	<b>Adiantaceae</b> <i>Adiantum aethiopicum</i>	Common Maidenhair Fern	o					
	<b>Aspleniaceae</b> <i>Asplenium flabellifolium</i>	Necklace Fern						
	<b>Dennstaedtiaceae</b> <i>Pteridium esculentum</i>	Bracken	c		c		o	
	<b>Sinopteridaceae</b> <i>Cheilanthes sieberi</i>	Rock Fern	o			o	o	
	<b>MAGNOLIOPSIDA: MAGNOLIDAE</b>							
	<b>Acanthaceae</b> <i>Pseuderanthemum variabile</i>							



**APPENDIX 2 continued**

STATUS	SCIENTIFIC NAME	COMMON NAME	TOTAL AREA	20 X 20m quadrats				
				1	2	3	4	5
	<b>Aizoaceae</b> <i>Tetragonia tetragonoides</i>	Warrigal Cabbage	u					
	<b>Apiaceae</b> <i>Actinotus helianthii</i>	Flannel Flower	c	c			u	
	<i>Platysace clelandii</i>		o		c			
	<b>Apocynaceae</b> <i>Parsonsia straminea</i>	Common Silkpod	c			o		
*	<i>Vinca major</i>	Periwinkle	u					
*	<b>Asclepiadaceae</b> <i>Gomphocarpus fruticosus</i>	Narrow-leaf Cotton Bush	o					
*	<b>Asteraceae</b> <i>Aster subulatus</i>	Bushy Starwort	o					
*	<i>Bidens pilosa</i>	Cobbler's Pegs	o					o
	<i>Brachycome sp</i>							
*	<i>Ozothamnus diosmifolius</i>	Sago Bush	c			o		
*	<i>Roldana petasitis</i>		u					
*	<b>Asteraceae (cont)</b> <i>Sonchus oleraceus</i>	Common Sowthistle	o				o	
*	<i>Tagetes minuta</i>	Stinking Roger	o					
	<b>Bignoniaceae</b> <i>Pandorea pandorana</i>	Wonga Wonga Vine	c	o	c	o	o	o
*	<b>Brassicaceae</b> <i>Lepidium pseudohyssopifolium</i>	Peppergrass	o					
*	<b>Cactaceae</b> <i>Pereskia aculeata</i>	Blade Apple	u					
	<b>Campanulaceae</b> <i>Wahlenbergia gracilis</i>	Slender Bluebell	o					
*	<b>Caryophyllaceae</b> <i>Stellaria media</i>	Common Chickweed	u					
	<b>Casuarinaceae</b> <i>Allocasuarina torulosa</i>	Forest Sheoak	c	o	c	c	c	c
	<i>Casuarina glauca</i>	Swamp Sheoak	o					
	<b>Chenopodiaceae</b> <i>Suaeda australis</i>	Seablite	u					
	<b>Convolvulaceae</b> <i>Dichondra repens</i>	Kidney Weed	o					

**APPENDIX 2 continued**

STATUS	SCIENTIFIC NAME	COMMON NAME	TOTAL AREA	20 X 20m quadrats				
				1	2	3	4	5
	<b>Dilleniaceae</b> <i>Hibbertia obtusifolia</i>	Grey Guinea Flower	o		o		o	o
	<b>Elaeocarpaceae</b> <i>Elaeocarpus reticulatus</i>	Blueberry Ash	o		o			
	<b>Epacridaceae</b> <i>Leucopogon parviflorus</i>	White Beard	o	o		o	o	
	<i>Monotoca elliptica</i>	Tree Broom-heath	o		u	o		
	<b>Euphorbiaceae</b> <i>Breynia oblongifolia</i>	Coffee Bush	c	o		o	o	o
	<i>Phyllanthus hirtellus</i>	Thyme Spurge	o		o		o	
	<b>Fabaceae</b> <i>Daviesia ulicifolia</i> ssp <i>stenophylla</i>	Gorse Bitter Bush	o					
	<i>Desmodium brachypodum</i>	Large Tick-trefoil	c					
	<i>Glycine clandestina</i>	Love Creeper	o		o		o	
	<i>Hardenbergia violacea</i>	False Sarsaparilla	o			o		c
	<i>Hovea linearis</i>	Narrow-leaved Hovea	o	o		o	o	
	<i>Indigofera australis</i>	Native Indiga	o					o
	<i>Pultenaea flexilis</i>	Bush-pea	o				o	
	<b>Goodeniaceae</b> <i>Dampiera purpurea</i>	Blue Dampiera						
	<i>Goodenia bellidifolia</i>	Daisy-leaved Goodenia	o					
	<i>Goodenia ovata</i>	Hop Goodenia	o		o			
	<b>Lamiaceae</b> <i>Plectranthus parviflorus</i>	Cockspur Flower	u					u
	<b>Lauraceae</b> <i>Cassytha glabella</i>	Slender Devil's Twine	o					
	<b>Lobeliaceae</b> <i>Pratia purpurascens</i>	Whiteroot	o	o				c
	<b>Malvaceae</b> * <i>Lagunaria patersoni</i>	Norfolk Island Hibiscus	o					
	* <i>Sida rhombifolia</i>	Paddy's Lucerne	o					
	<b>Mimosaceae</b> <i>Acacia brownii</i>							
	<i>Acacia implexa</i>	Hickory Wattle	c	o			u	
	<i>Acacia ulicifolia</i>	Prickly Moses	o	o	o		o	
	<b>Moraceae</b> <i>Ficus rubiginosa</i>	Port Jackson Fig	o	o				

**APPENDIX 2 continued**

STATUS	SCIENTIFIC NAME	COMMON NAME	TOTAL AREA	20 X 20m quadrats				
				1	2	3	4	5
	<b>Myrsinaceae</b>							
	<i>Aegiceras corniculatum</i>	River Mangrove	c					
	<i>Rapanea variabilis</i>	Muttonwood	o					
	<b>Myrtaceae</b>							
	<i>Angophora floribunda</i>	Rough-barked Apple	o				u	o
	<i>Backhousia myrtifolia</i>	Grey Myrtle	o					
	<i>Eucalyptus punctata</i>	Grey Gum	c	o	o		o	
	<i>Eucalyptus tereticornis</i>	Forest Red Gum	o					u
	<b>Ochnaceae</b>							
*	<i>Ochna serrulata</i>	Mickey Mouse Plant	o					
	<b>Oleaceae</b>							
	<i>Notelaea longifolia</i> forma <i>longifolia</i>	Large Mock-olive	c		o	o	o	
	<b>Pittosporaceae</b>							
	<i>Billardiera scandens</i>	Appleberry	o	c		o	o	o
	<i>Bursaria spinosa</i>	Blackthorn	c	o	o		o	o
	<b>Plantaginaceae</b>							
*	<i>Plantago lanceolata</i>	Plantain	o					
	<b>Proteaceae</b>							
	<i>Banksia integrifolia</i>	Coast Banksia	o					
	<i>Persoonia linearis</i>	Narrow-leaved Geebung	o				o	
	<b>Ranunculaceae</b>							
	<i>Clematis aristata</i>	Old Man's Beard						
	<b>Rhamnaceae</b>							
	<i>Alphitonia excelsa</i>	Red Ash	o			u	u	
	<b>Rosaceae</b>							
	<i>Rubus parvifolius</i>	Native Raspberry						
	<b>Rubiaceae</b>							
	<i>Pomax umbellata</i>	Pomax	o			o	o	
	<b>Santalaceae</b>							
	<i>Exocarpos cupressiformis</i>	Native Cherry	c		c	o		o
	<b>Sapindaceae</b>							
	<i>Dodonaea triquetra</i>	Hop Bush	o	c			o	
	<b>Solanaceae</b>							
	<i>Solanum prinophyllum</i>	Forest Nightshade	o					
	<b>Stylidiaceae</b>							
	<i>Stylidium graminifolium</i>	Grass Triggerplant	o		o			



**APPENDIX 2 continued**

STATUS	SCIENTIFIC NAME	COMMON NAME	TOTAL AREA	20 X 20m quadrats				
				1	2	3	4	5
	<b>Thymeliaceae</b>							
	<i>Wikstroemia indica</i>	Wikstroemia	u				u	
	<b>Ulmaceae</b>							
	<i>Trema aspera</i>	Poison Peach						
	<b>Verbenaceae</b>							
	<i>Clerodendrum tomentosum</i>	Hairy Clerodendrum	o					
N	<i>Lantana camara</i>	Lantana	c				o	c
*	<i>Verbena bonariensis</i>	Purpletop	o					
	<b>Violaceae</b>							
	<i>Viola hederacea</i>	Native Violet	o					
	<b>Vitaceae</b>							
	<i>Cayratia clematidea</i>	Slender Grape	o				o	
	<i>Cissus hypoglauca</i>	Five-leaf Water Vine	o					
	<b>MAGNOLIOPSIDA: LILIDAE</b>							
	<b>Anthericaceae</b>							
	<i>Arthropodium milleflorum</i>	Vanilla Lily						
	<i>Laxmannia gracilis</i>	Wire Lily	o					
	<b>Asparagaceae</b>							
N	<i>Protasparagus aethiopicus</i>	Sprenger's Asparagus	o					
	<b>Cyperaceae</b>							
	<i>Gahnia aspera</i>	Rough Saw-sedge	o	o		c	c	
	<i>Lepidosperma laterale</i>	Variable Sword-sedge	o	c	o	o	o	
	<b>Iridaceae</b>							
*	<i>Freesia refracta</i>	Freesia	o					
*	<i>Gladiolus angustus</i>	Gladiolus	o					
	<b>Lomandraceae</b>							
	<i>Lomandra confertifolia</i> ssp <i>pallida</i>	Slender Mat-rush	o	o				
	<i>Lomandra filiformis</i> ssp <i>filiformis</i>	Wattle Mat-rush	o					
	<i>Lomandra multiflora</i>	Pale Mat-rush	o	c				
	<i>Lomandra longifolia</i>	Spiky-headed Mat-rush	c		o	c	c	c
	<b>Luzuriagaceae</b>							
	<i>Eustrephus latifolius</i>	Wombat Berry	c		o		o	o
	<i>Geitonoplesium cymosum</i>	Scrambling Lily						

**APPENDIX 2 continued**

STATUS	SCIENTIFIC NAME	COMMON NAME	TOTAL AREA	20 X 20m quadrats				
				1	2	3	4	5
*	<b>Musaceae</b> <i>Strelitzia parvifolia</i>	Bird Of Paradise Flower	u					
	<b>Orchidaceae</b> <i>Acianthus fornicatus</i>	Pixie Caps	o					
	<i>Cryptostylis erecta</i>	Large Tongue Orchid	o			o		
	<i>Dendrobium linguiforme</i>	Tongue Orchid	o					
	<i>Pterostylis longifolia</i>	Tall Greenhood	o					
	<i>Pterostylis nutans</i>	Nodding Greenhood	o		o			
	<b>Phormiaceae</b> <i>Dianella caerulea</i> var <i>caerulea</i>	Blue Flax Lily	c	o		c	c	c
	<i>Dianella caerulea</i> var <i>producta</i>	Blue Flax Lily	o		o			
	<i>Dianella longifolia</i>	Smooth Flax Lily	o					
	<i>Dianella revoluta</i>	Black-anther Flax-lily	o	o		c	c	c
	<i>Stypandra glauca</i>	Nodding Blue Lily	o	o	o			
	<b>Poaceae</b> *	<i>Andropogon virginicus</i>	o					o
	<i>Anisopogon avenaceus</i>	Oat Spear Grass	o					
	<i>Aristida vagans</i>	Threawn Speargrass	c					
	<i>Austrodanthonia linkii</i>	Wallaby Grass						
	<i>Chloris truncata</i>	Windmill Grass	o					
	<i>Cleistochloa rigida</i>		o	c				
	<i>Cymbopogon refractus</i>	Barbwire Grass						
	<i>Cynodon dactylon</i>	Couch	o					
	<i>Digitaria parviflora</i>							
	* <i>Digitaria sanguinalis</i>	Summer Grass	o				o	
	<i>Echinopogon caespitosus</i>	Tufted Hedgehog Grass	o					
	<i>Entolasia marginata</i>	Bordered Panic	o					
	<i>Entolasia stricta</i>	Wiry Panic	c	c	c	c	c	o
	<i>Eragrosis brownii</i>	Brown's Lovegrass	o					
	* <i>Eragrostis curvula</i>	African Lovegrass	o					
	* <i>Ehrhata erecta</i>	Panic Veldtgrass	o					
	<i>Imperata cylindrica</i>	Blady Grass	c					c
	<i>Microlaena stipoides</i> var <i>stipoides</i>	Weeping Grass	c		o	c		
	<i>Oplismenus imbecilis</i>	Basket Grass	o					
	<i>Paspalidium distans</i>		o					
	* <i>Paspalum dilatatum</i>	Paspalum	o					
	<i>Poa affinis</i>							
	* <i>Setaria gracilis</i>	Slender Pigeon Grass	o					
	* <i>Sporobolus indicus</i> var <i>capensis</i>	Parramatta Grass	o					
	<i>Sporobolus virginicus</i>	Sand Couch	o					
	* <i>Stenotaphrum secundatum</i>	Buffalo Grass	o					
	<i>Themeda australis</i>	Kangaroo Grass	c	c	c	o	c	c
	<b>Smilacaceae</b> <i>Smilax glyciphylla</i>	Sweet Sarsaparilla	o		o			
	<b>Xanthorrhoeaceae</b> <i>Xanthorrhoea arborea</i>	Broad-leaf Grass-tree	o					
	<i>Xanthorrhoea media</i>	Forest Grass-tree	o		o	o		o

**APPENDIX 3 - Plant species of conservation significance in the Bar Island/  
Muogamarra National Park/Hornsby Shire area**

<b>Scientific name</b>	<b>Likelihood of occurrence</b>	<b>Conservation status</b>	<b>Source</b>
<i>Acacia bynoena</i>	Unlikely	E	<i>TSC Act (1995)</i>
<i>Acacia gordonii</i>	Very unlikely	E	<i>TSC Act (1995)</i>
<i>Acacia hispidula</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Acacia stricta</i>	Possible	RS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Ancistrachne maidenii</i>	Possible	V	<i>TSC Act (1995)</i>
<i>Amperea xiphoclada</i> var. <i>pappilata</i>	Unlikely	RoTAP - 3KC	Briggs & Leigh (1996)
<i>Asterolasia elegans</i>	Unlikely	E	<i>TSC Act (1995)</i>
<i>Austromyrtus tenuifolia</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Bertya brownii</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Blechnum ambiguum</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Boronia fraseri</i>	Possible	RoTAP - 2RCa	Briggs & Leigh (1996)
<i>Boronia serrulata</i>	Very unlikely	RoTAP - 2RC-	Briggs & Leigh (1996)
<i>Caladenia tessellata</i>	Possible	V	<i>TSC Act (1995)</i>
<i>Callistemon linearifolius</i>	Unlikely	V	<i>TSC Act (1995)</i>
<i>Christella dentata</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Darwinia biflora</i>	Very unlikely	V	<i>TSC Act (1995)</i>
<i>Darwinia fascicularis</i> var. <i>oligantha</i>	Very unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Darwinia peduncularis</i>	Possible	V	<i>TSC Act (1995)</i>
<i>Darwinia procera</i>	Possible	RoTAP - 2RCa	Briggs & Leigh (1996)
<i>Dichondra</i> sp. A	Unlikely	RS	Smith & Smith (1997)
<i>Dipodium variegatum</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Epacris crassifolia</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Epacris purpurascens</i> var. <i>purparescens</i>	Possible	V	<i>TSC Act (1995)</i>
<i>Eucalyptus acmenioides</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)



Scientific name	Likelihood of occurrence	Conservation status	Source
<i>Eucalyptus agglomerata</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Eucalyptus camfieldii</i>	Very unlikely	V	TSC Act (1995)
<i>Eucalyptus capitellata</i>	Very unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Eucalyptus</i> sp. Cattai	Very unlikely	E	TSC Act (1995)
<i>Eucalyptus globoidea</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Eucalyptus leuhmanniana</i>	Very unlikely	RoTAP - 2RCa	Briggs & Leigh (1996)
<i>Eucalyptus multicaulis</i>	Very unlikely	RS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Eucalyptus robusta</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Eucalyptus sieberi</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Eucalyptus squamosa</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Eucalyptus umbra</i>	Possible	RS	Smith & Smith (1997)
<i>Genoplesium baueri</i>	Possible	RoTAP - 3RC-	Briggs & Leigh (1996)
<i>Glochidion ferdinandi</i> var. <i>pubescens</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Gonocarpus salsaloides</i>	Unlikely	RoTAP - 3RCa	Briggs & Leigh (1996)
<i>Grevillea longifolia</i>	Very unlikely	P13	NPW Act (1974)
<i>Grevillea parviflora</i> var. <i>supplicans</i>	Very unlikely	V	TSC Act (1995)
<i>Haloragis exalata</i> ssp. <i>exalata</i>	Unlikely	V	TSC Act (1995)
<i>Hibbertia nitida</i>	Unlikely	RoTAP - 2RC-	Briggs & Leigh (1996)
<i>Hydrocotyle geraniifolia</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Kunzea rupestris</i>	Very unlikely	V	TSC Act (1995)
<i>Lasiopetalum joyceae</i>	Very unlikely	V	TSC Act (1995)
<i>Leptospermum deanei</i>	Unlikely	V	TSC Act (1995)
<i>Leptospermum grandifolium</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Leucopogon amplexicaulis</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Lomandra brevis</i>	Unlikely	RoTAP - 2RC-	Briggs & Leigh (1996)

Scientific name	Likelihood of occurrence	Conservation status	Source
<i>Lomandra fluviatilis</i>	Unlikely	RoTAP - 3RC-	Briggs & Leigh (1996)
<i>Melaleuca deanei</i>	Very unlikely	V	<i>TSC Act (1995)</i>
<i>Micromyrtus blakelyi</i>	Possible	V	<i>TSC Act (1995)</i>
<i>Olearia cordata</i>	Unlikely	V	<i>TSC Act (1995)</i>
<i>Persoonia hirsuta</i>	Unlikely	E	<i>TSC Act (1995)</i>
<i>Persoonia mollis</i> ssp. <i>maxima</i>	Very unlikely	E	<i>TSC Act (1995)</i>
<i>Pimelea curviflora</i> var. <i>curviflora</i>	Unlikely	V	<i>TSC Act (1995)</i>
<i>Platysace clelandii</i>	Possible	2RCa	Briggs & Leigh (1996)
<i>Pultenaea linophylla</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Pultenaea polifolia</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Schizaea dichotoma</i>	Possible	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Senecio bipinnatisectus</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Sprengelia incarnata</i>	Very unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Tetratheca glandulosa</i>	Unlikely	V	<i>TSC Act (1995)</i>
<i>Tristania neriifolia</i>	Unlikely	LS	Hornsby Shire Thr. Biota Cons. Plan (1999)
<i>Zieria involuocrata</i>	Possible	V	<i>TSC Act (1995)</i>

**KEY:**

<b>E – ‘Endangered’</b>	<i>Threatened Species Conservation Act (1995)</i>
<b>V – ‘Vulnerable’</b>	<i>Threatened Species Conservation Act (1995)</i>
RoTAP - Rare	Rare or threatened Australian plant (Briggs & Leigh 1996)
RS - Regionally significant in Sydney	Natural area survey of Warringah's bushland (Smith & Smith 1997)
LS - Locally significant in Hornsby Shire	Hornsby Shire Threatened Biota Conservation Plan (1999)

**APPENDIX 4** Fauna species observed on Bar Island.

Scientific Name	Common Name	Details
<b>Mammals</b>		
<i>Psophodes olivaceus</i>	Ring-tail Possum	+ scats + dreys
<i>Trichosurus vulpecula</i>	Brush-tail Possum	+ scats
<b>Birds</b>		
<i>Anas castanea</i>	Chestnut Teal	sighted on island
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo	sighted on island
<i>Corvus coronoides</i>	Australian Raven	sighted on island
<i>Cracticus torquatus</i>	Grey Butcher Bird	sighted on island
<i>Dacelo novaeguineae</i>	Laughing Kookaburra	sighted on island
<i>Haliastur sphenurus</i>	Whistling Kite	sighted on island
<i>Malurus cyaneus</i>	Superb fairy wren	sighted on island
<i>Manorina melanocephala</i>	Noisy Miner	sighted on island
<i>Platycercus eximius</i>	Eastern Rosella	sighted on island
<i>Pelecanus conspicillatus</i>	Australian Pelican	sighted above
<i>Phalacrocorax melanoleucos</i>	Little Pied Cormorant	opposite foreshore
<i>Psophodes olivaceus</i>	Eastern Whipbird	heard
<i>Ptilonorhynchus violaceus</i>	Satin Bowerbird	sighted on island
<i>Sterna bergii</i>	Crested Turn	sighted above
<i>Strepera graculina</i>	Pied Currawong	sighted on island
<b>Reptiles</b>		
<i>Lampropholis guichenoti</i>	Garden Skink (ID not 100%)	long grass & leaf litter
<b>Crabs</b>		
<i>Heloecius cordiformis</i>	Semaphore crab	Behind mangroves
<b>Molluscs</b>		
<i>Bemecium auratum</i>	conical snail	littoral zone
<i>Pyrazus ebeninus</i>	Sydney Mud Welk	littoral zone
<i>Saccostrea commercialis</i>	Sydney rock oyster	littoral zone
<i>Xenostrobus securis</i>	small mussel	littoral zone



## APPENDIX 5

### Threatened fauna (Source: NPWS NSW Atlas of Wildlife database)

Scientific Name	Common Name	Status	10k	Mu	Ma	Hornsby LGA	Potential
<i>Dugong dugon</i>	Dugong	E1	1				
<i>Isoodon obesulus</i>	Southern Brown	E1	4				
<i>Macronectes giganteus</i>	Southern Giant-Petrel	E1 *	1				
<i>Pterodroma leucoptera</i>	Gould's Petrel	E1	1				
<i>Xanthomyza phrygia</i>	Regent Honeyeater	E1 *	7			#	#
<i>Heleioporus australiacus</i>	Giant Burrowing Frog	V *	21	#	#	#	
<i>Pseudophryne australis</i>	Red-crowned Toadlet	V	29	#	#	#	
<i>Dermochelys coriacea</i>	Leathery Turtle	V *	2			#	
<i>Varanus rosenbergi</i>	Rosenberg's Goanna	V	4			#	
<i>Anseranas semipalmata</i>	Magpie Goose	V	1				
<i>Ixobrychus flavicollis</i>	Black Bittern	V	1				
<i>Pandion haliaetus</i>	Osprey	V	3	#		#	
<i>Haematopus longirostris</i>	Pied Oystercatcher	V	1				
<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V	3				
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	V	41		#	#	#
<i>Neophema pulchella</i>	Turquoise Parrot	V	2			#	
<i>Ninox connivens</i>	Barking Owl	V	1			#	
<i>Ninox strenua</i>	Powerful Owl	V	12	#	#	#	
<i>Tyto novaehollandiae</i>	Masked Owl	V	8	#		#	
<i>Tyto tenebricosa</i>	Sooty Owl	V	2			#	
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V *	15			#	
<i>Phascolarctos cinereus</i>	Koala	V	20			#	
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V	6		#	#	
<i>Petaurus norfolcensis</i>	Squirrel Glider	V	1				
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V *	2			#	#
<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	V	1			#	#
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V	1				#
<i>Miniopterus schreibersii</i>	Common Bentwing-bat	V	3			#	
<i>Myotis adversus</i>	Large-footed Myotis	V	1				
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V	2				
<i>Pseudomys gracilicaudatus</i>	Eastern Chestnut Mouse	V	1				
<i>Saccolaimus flaviventris</i> ++	Yellow-bellied Sheathtail	V	1				#

### **Key for Appendix 5**

E1 - Endangered (TSC Act)

V - Vulnerable (TSC Act)

10k - number of sightings within ten kilometres of Bar Island

Mu - number of sightings in Muogamarra Nature Reserve

Ma - number of sightings in Marramarra National Park

Hornsby LGA - number of sightings in Hornsby Local Government Area

Potential - species considered to have some reasonable potential to either be extant on or to visit Bar Island

\* also listed under Commonwealth Environmental Protection and Biodiversity Conservation Act 1999

++ listed in the 'Hornsby Shire Threatened Biota Conservation Plan' as occurring in the LGA

**APPENDIX 6** Migratory bird species subject to International Treaties that are listed on NP Wildlife database within 10k of Bar Island

<b>Scientific name</b>	<b>Common name</b>	<b>status</b>	<b>sightings</b>	<b>Treaty</b>
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	P	13	C
<i>Hirundapus caudacutus</i>	White-throated Needletail	P	2	C
<i>Puffinus tenuirostris</i>	Short-tailed Shearwater	P	1	J
<i>Sterna bergii</i>	Crested Tern	P	4	J
<i>Ardea ibis</i>	Cattle Egret	P	1	J, C
<i>Numenius madagascariensis</i>	Eastern Curlew	P	1	J, C
<i>Numenius phaeopus</i>	Whimbrel	P	1	J, C

**P** Protected under the National Parks & Wildlife Act (1974)

**J** Australian Treaty Series 1981 No. 6 *Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds and their Environment.*

**C** Australian Treaty Series 1988 No. 22 *Agreement between the Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment.*



**Appendix C: Community Consultation – Minutes of Public Meeting**

## **Minutes of Community Meeting on the Plan of Management for Bar Island**

### **1.0 Administration:**

The meeting was held at the Mooney Mooney Workers Club, 5 Kowan Road, Mooney Mooney on Saturday 14<sup>th</sup> December 2002, with Councillor Steve Russell chairing the meeting which commenced at 2.10 pm. Minutes were taken by Diane Campbell.

### **2.0 Attendees:**

Councillor Steve Russell, John OGrady of Pittendrigh Shinkfield Bruce, Gavan Mathieson Hornsby Council Manager Bushland and Biodiversity, Diane Campbell Hornsby Council Biodiversity Officer, John Powell of The Hawkesbury River Environment Protection Society, Bruce Kennedy, Marie Brown resident, Bob White resident, Marni Lachmaiya-Mayiparr - Aboriginal of Hornsby Aboriginal Residents for Reconciliation, John Gallard of Darug Custodial Aboriginal Corporation, Bob Salt of Hornsby Conservation Society and Association for Berowra Creek, Winnie Bakon resident, Paul Pigneguy of Melvys Wharf Fishermans Point, Rod Miljoen of Petes Bite Restaurant, Patricia Dewey of Hornsby Shire Historical Society, Colin Gale of Darug Tribal Aboriginal Corporation, Bill Poole, Beverley Poole.

### **3.0 Apologies:**

Alan and Edna Watson of the Darug Custodial Corporation, Lyn and Jean Bolton of Association of Berowra Creek, Tom Richmond.

### **4.0 Declaration of Interest:**

Rod Miljoen declared that he was representing Ian Gowrie-Smith. Colin Gale declared that the Darug Tribal Corporation had a Native Title Claim on Berowra Creek that potentially included Bar Island.

### **5.0 Introductions:**

Councillor Steve Russell invited the attendees to introduce themselves and indicate their organisations and gave an opening address to the meeting.

### **6.0 Briefing:**

John OGrady gave an overhead presentation, see tabled overheads attached.

### **7.0 Open discussion/ workshop:**

The following is a summary of individual comments and questions made by workshop participants.

Is the Plan for the whole Island? PSB indicated that it was.

How are you proposing movement access if there is no boardwalk? PSB indicated that the Cultural Heritage consultants indicated that a crushed sandstone path would have less impact on the midden than a boardwalk.

What was meant by the church using the graves? PSB indicated that the scattering of ashes was considered appropriate but no other activity.

There was a hut on the Island somewhere and Aboriginal people used to live there and look after the church. The hut location should be shown on the map.

Aboriginal heritage issue of the directional marker on the pathway and also the top of the hill is significant. These should be shown on the map.

The hut was European occupied by European people and I think that Aboriginal and European heritage should be treated separately and that Aboriginal people who were buried in a Christian graveyard shouldn't be treated as Aboriginal.

Speaking as a private person, the trend of the plan of management represents the views of the locals. I would like to add to the uses permitted on the Island be the spreading of ashes. I would also add to the list of prohibitions, being no consumption of liquor, no food, no toilets and no water be provided.

I would like to clarify the proposal by Ian Gowrie-Smith. He wishes to rebuild and operate a church. The report to Council stating that it is a commercial proposal is incorrect. He is not an entrepreneur and it is not a commercial idea, but a philanthropic one. It took Council 3 months to send an acknowledgement to his letter. I have seen the Island degenerate over the last 30 years and a friend from an adjoining property wishes to start and finance a trust to restore the Island as a living heritage site and to pay for the reconstruction of the Church. The Parish and the Church have indicated they would love to have a vintage church. The offer is \$270k upfront and \$500k over the period of time. There will be guaranteed management performance under a Trust.

The letter from Ian Gowrie-Smith was read to the meeting.

Ian Gowrie-Smith was not individually invited to the meeting and would have attended if he was invited.

Are we looking at the whole of Bar Island? How can this be if the Darkinjung Local Aboriginal Land Council have an Aboriginal Land Claim over the Crown land? Under the Aboriginal Land Rights Act the land once owned, the Land Council can do all sorts of things whereas with a Native Title Claim the land is still a community resource.

Can the Aboriginal representatives indicate that if the area is a sacred site to them as their people are buried there, would they respect the European people buried there?

There are 2 Darkinjung graves. We do not want the site disturbed. There are 2 Darug people buried there. Aboriginal people looked after the Church and the children; it was an inoculation site and there is a midden.

The offer by Ian Gowrie-Smith is a generous one but he should have spoken to the Church before they sold the land to Council.

Would there be merit in Council owning the whole Island? Can staff investigate this?

There is concern by Aboriginal groups about a Land Claim under the Land Rights Act; there is a range of views from different Aboriginal groups.

How can a Plan of Management progress if there is an Aboriginal Land Claim? Staff explained that the two matters are different matters and would progress separately under different Acts.

What is the status of the Gowrie- Smith proposal?

21 year lease is not allowed.

Mr Gowrie-Smith is available over the next few weeks to discuss the proposal.



It is a generous proposal but immediately raises issues. Why not give the funds to Council? A lease would raise suspicions. The Church only held an annual service there for many years to retain its rights to the land. I can't see it happening. Berowra Church handed the land over to Council.

Council has embarked on the Plan of Management process. The proposition needs to be exhibited at the same time as the Plan of Management. The proposition can't abrogate the Plan of Management process. This is the first I've heard of it. We cannot vote on the proposal today. The Association of Berowra Creek would need to consider its views but I cannot see them being happy with a lease. If he is happy to make a donation that would be good but a lease is another matter altogether. It could involve Council land and the Crown land, an Aboriginal site of significance, a possible Aboriginal Land Claim and a Native Title Claim, and a National Trust site.

The Island has been a place of worship for thousands of years. Aboriginal people recognise Baiyami as the same God as everyone else recognises. There is a very interesting book "One Blood" by John Harris which states that the First Fleet didn't bring God to the Aborigines, that He was already here.

There is a beautiful old weatherboard Church on Hamilton Island.

For Aboriginal people it is ignoring the indigenous issues on the Island to rebuild the Church. If it is leased we don't have the same rights to the land as other people.

As the current zoning prohibits the construction of a Church, would Mr Gowrie-Smith still be interested if there was no Church involved?

As a commercial operator there will be ongoing expenses. In Russell there is the oldest church in New Zealand which is free to enter and walk around. In the area there are many Maori sites that are free but there is the aspect of donations. Bar Island could be used commercially and could be a facility that is ongoing and available to produce an income for the place. With the existing jetty a boat could get there.

There have been representations from Gordon Mann of the Macquarie Princess.

It has a 6 foot tide and would need the whole jetty length reconstructed for a boat to get in.

It is a spiritual place for Aboriginal people.

What would happen to interred remains? Recently on the ABC there was a pioneer cemetery in South Australia where all the bodies were disinterred and all the graves were rebuilt in conjunction with students from the University of Adelaide.

We don't want our relatives being dug up.

## **8.0 Close**

There being no further business the meeting closed at 4.30 pm.

## Appendix D: Cost Estimates For Implementation Of The Plan

### Preliminary Opinion of Probable Cost for Bar Island Plan of Management

Action/Task	Timing	Cost
Weed removal and monitoring	Year 1: 5days/week for 10 weeks	\$10 000
	Year 2: 5days/week for 10 weeks	\$10 000
	Year 3: 5days/week for 4 weeks	\$4 000
	Year 3: 5days/week for 4 weeks	\$4 000
	Year 4: 5days/week for 4 weeks	\$4 000
	Year 5: 5days/week for 4 weeks	\$4 000
Diurnal fauna survey	Year 1: 3days/week for 1 week (Nov-Mar)	\$3 000
	Year 3: 3days/week for 1 week (Nov-Mar)	\$3 000
	Year 5: 3days/week for 1 week (Nov-Mar)	\$3 000
Track repair and modification	Year 1: priority	\$10 000
Inspection by 2 representatives of LALC for track construction		\$250 per day
Track maintenance	Annually	\$2 000
Jetty reconstruction: new runners and deck on existing jetty		\$400 per lineal metre
Chimney conservation:		
<ul style="list-style-type: none"> <li>Assessment of stone requirements for repair of chimney by stone mason</li> </ul>	1 day	\$660
<ul style="list-style-type: none"> <li>Repair of chimney</li> </ul>	2 weeks	TBA
Cemetery conservation:		
<ul style="list-style-type: none"> <li>Repair of broken headstones – inventory no's. 4.2, 4.16, 4.19, 4.20, 4.21, 4.24, 4.26, 4.27</li> </ul>	2 weeks	\$16 500
<ul style="list-style-type: none"> <li>Reinstatement of loose elements – inventory no's. 4.8, 4.12, 4.15, 4.22</li> </ul>	1 day	\$660
Repair of memorial lookout	1 week	\$6 050