















### GOAT ISLAND Conservation Management Plan

### Volume 2 Contextual History

June 2011

NSW National Parks and Wildlife Service The Office of Environment and Heritage NSW





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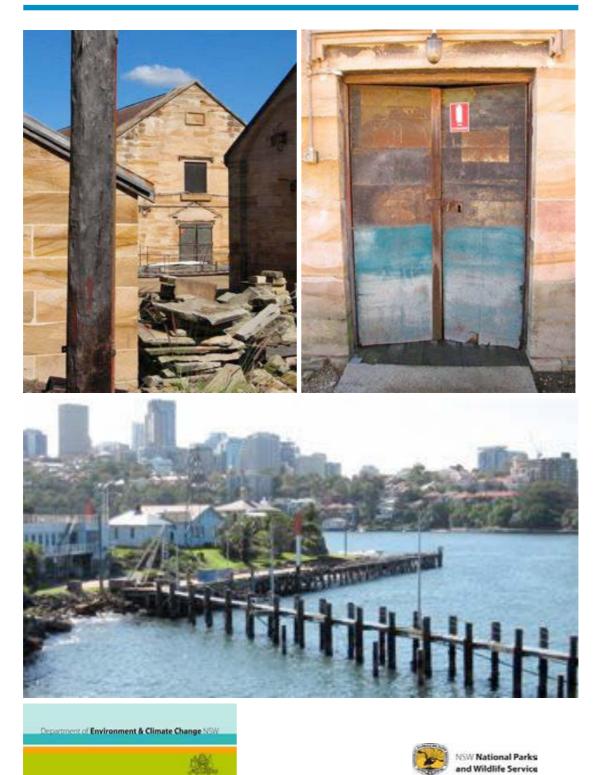
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## **Goat Island**

Sydney Harbour National Park

### A Contextual History



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## Introduction



Goat Island is one of a small number of island sites located within Sydney Harbour National Park (SHNP). Sited to the immediate west of the landmark Harbour Bridge and overlooking the sheltered, inner-harbour waters of Port Jackson, the island retains a spectacular historic landscape that provides a dramatic counterpoint to the nearby mainland residential, commercial and industrial suburbs that fringe the harbour.

The human history of the island dates back thousands of years to when Aboriginal people were the sole guardians and users of this resource-rich maritime locale. Aboriginal history and association with the area is largely intangible, with the landscape predominantly marked and dominated by the structural remains of Colonial incursion and settlement - the manifestations of a long maritime industry.

Among the significant heritage features that characterise the island and bear witness to a unique and varied history are:

- An Aboriginal midden
- Convict period structures and features
- Nineteenth century colonial buildings (including a Water Police station & gunpowder storage magazines)
- Twentieth century Sydney Harbour Trust and Maritime Services Board facilities (including a Harbour Master's residence, shipyards & wharfage)

The island has been managed by the NSW National Parks & Wildlife Service (NPWS), a division of the Department of Conservation and Climate Change (DECC) since the early 1990s.

#### Refer figures 1 - 5.

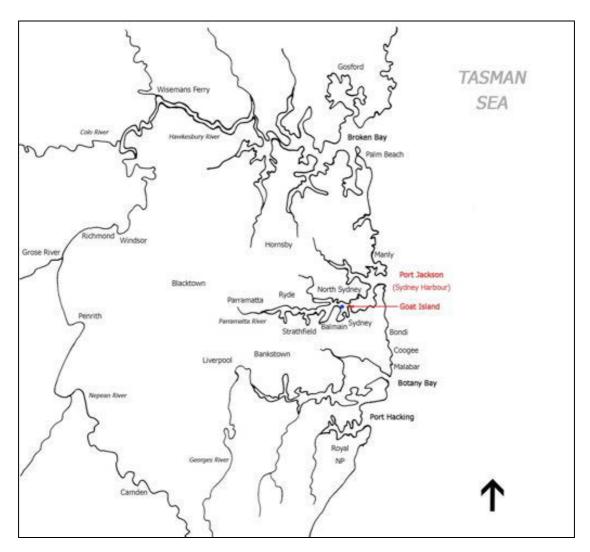


Figure 1: Contextual Map showing the Greater Sydney Region (2007) (Dan Tuck 2007)

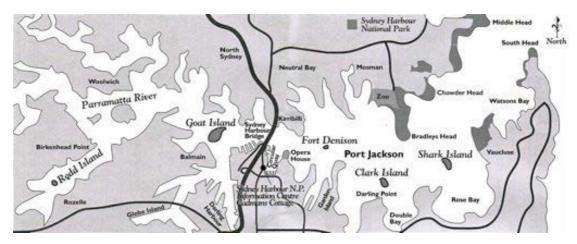


Figure 2: Plan of the location of Goat Island within Port Jackson (DECC Brochure Image)



#### Figure 3: Goat Island Site Plan (2007)

(Plan provided by the DECC)



Figure 4: Sydney Harbour showing Goat Island – view ESE (2006) (DECC Image)



Figure 5: Goat Island – view NNE (2006) (DECC Image)

#### Objectives

This report presents a contextual 'shared' history of Goat Island that addresses both Aboriginal (pre and post-contact) and European occupation and use of the place.

The purpose of this history is threefold:

- Update and synthesize the histories presented in a range of conservation documents prepared over the past 20 years.
- Provide contextual background for a revised Conservation Management Plan (CMP).
- Present new information relating to perceived gaps in the island's historic record particularly in relation to use of the location for plague research; connections with the Painters & Dockers Union; and late period management and use of the island (including Maritime Services Board management and disposal in the 1980s/90s, and the subsequent acquisition and management of the site by the National Parks & Wildlife Service after 1992).

#### Methodology

In order to meet the objectives outlined above, this history has been formulated from a review of contemporary and modern historical documentary resources, complemented with material obtained from new research conducted specifically for this project.

Resources and archives utilized in the preparation of this report were varied and included:

- DECC (Parks & Wildlife Division) collections Greycliffe House, Nielsen Park
- State Libraries of New South Wales (SLNSW) and Victoria (SLV)
- State Records of New South Wales (SRNSW)
- Sydney University Libraries
- City of Sydney Archives
- National Archives of Australia (NAA)
- Australian War Memorial (AWM)
- National Library of Australia (NLA).

#### Themes

This history is presented chronologically - with subdivision based on key localities, events, groups and individuals. This approach is somewhat counter to the thematic histories that prevail in many heritage reports but was deemed appropriate given DECC project management's desire for an accessible and engaging narrative.

While the history is presented chronologically, a number of broad national and state historical research themes are acknowledged and addressed throughout the body of this history. These include the following:

Relevant National & State Historic Themes		
Australian Themes	NSW Themes	
Tracing the natural evolution of Australia	Environment (naturally evolved & modified)	
Peopling Australia	Aboriginal culture & Aboriginal-European interactions Convicts	
Developing local, regional & national economies	Environment (cultural landscape) Transport & communication Industry Science Events	
Building settlements, towns & cities	Towns, suburbs & villages Land tenure & accommodation Utilities	
Developing Australia's cultural life	Leisure	
Working	Industry Labour	
Governing	Law & order Defence Welfare	
Developing Australia's cultural life	Domestic life & leisure Social institutions	
Marking the phases of life	People Birth & death	

#### Presentation

	Report Layout		
Sec	tion	Details	Division
I	Introduction	The project	Introduction
2	Place	The site and its setting	History
3	First People	Aboriginal history	
4	Early Colonial Interest	Initial post-contact history	
5	Transformation	Early development	
6	Consolidation	Growth	
7	Plague	1900 - 1901	
8	Sydney Harbour Trust	1900 - 1935	
9	Maritime Services Board	1935 - 1995	
ю	Transition	Tourism & the working Island	
п	Revitalisation	Current Situation	
Refe	erences	List of works consulted	References
Appendices		Supplementary material	Appendices

This report is laid out in the following manner:

The **appendices** section includes a *glossary of terms and abbreviations* (1); a summary *chronology - timeline* (2); plans showing the *evolution of Goat Island* (3); and a sequence of select *air photos* (4).

#### Authorship

This report was researched and written by Dan Tuck (archaeologist & heritage consultant), with select contributions (particularly related to military heritage) incorporated from material provided by Robert Newton (DECC Ranger – Goat Island).

Members of the Goat Island Project Control Group (GIPCG) provided valuable review and commentary, as well as some of the images presented in the latter sections of this document.

#### Acknowledgments

The author would like to thank the following people for their valued input:

- Robert Bird (NPWS Goat Island Project Project Manager)
- Robert Newton (NPWS Ranger Goat Island)
- Margaret Bailey (NPWS Area Manager Harbour North)
- Ray Jackson (former MSB employee)
- Zenon Michniewicz (former MSB Manager Property & Planning)
- Geoff Huntley (NSW Maritime Records)
- Mick Thaux (former shipwright)
- James Semple Kerr
- Alan Edenborough

#### **A Note on Referencing**

This history uses a hybrid Footnote (documentary–note)/Harvard (author-date) referencing system. This provides for an in-text footnote number that relates to a footnote displaying author-date information at the bottom of the page. Details of each footnote reference can thereafter be obtained from the *References* section at the end of the document.

At the request of the DECC, each reference is quoted in full in the first instance.

### Place



Goat Island is the largest of a number of sandstone islands sited in the central reaches of Port Jackson.<sup>1</sup> Its evolution, like the other islands, is a consequence of the various geological and climatic processes that shaped the Sydney Basin and created its unique, picturesque harbour.

#### Sydney Basin

Port Jackson exists within the Sydney Basin - a broad geological formation composed of modified sedimentary deposits originally laid down in the Permian – Triassic period (290 Ma - 200 Ma).<sup>2</sup> Part of the much larger Sydney-Gunnedah-Bowen Basin, this formation extends from approximately Batemans Bay (in the south) to the New England fold belt (north of New-castle), and accounts for an inshore area of approximately 44 000km<sup>2</sup>.<sup>3</sup>

Post-depositional uplift and warping of the Basin created a series of distinct geomorphologic areas or units. Greater Sydney is located primarily on the Cumberland Plain – a gently undulating landscape below 100 metres above sea level, and bordered to the north by the Hornsby Plateau, the south by the Woronora Plateau, and the east by the majestic Blue Mountains.<sup>4</sup>

<sup>&</sup>lt;sup>1</sup> In 1788 there were 14 islands in Port Jackson. Since 1788 5 islands have been connected to the mainland via reclamation (Berry, Garden, Bennelong, Glebe and Darling Islands) and two small islands have been joined (Spectacle island). Eight Islands remain – Fort Denison, Rodd, Cockatoo, Snapper, Shark, Clark, Spectacle and Goat

<sup>&</sup>lt;sup>2</sup> http://www.amonline.net.au/geoscience/earth/sydbasin.htm

<sup>&</sup>lt;sup>3</sup> http://www.dpi.nsw.gov.au/minerals/geological/overview/regional/sedimentary-basins/sydbasin

<sup>&</sup>lt;sup>4</sup> Branagan, D., Herbert, C., & Langford-Smith, T. 1979. *An Outline of the Geology and Geo-morphology of the Sydney Basin.* Science Press, Sydney: 49

#### Port Jackson

Port Jackson is one of the most striking features of the Sydney Basin and is among the landforms referred to as the 'rias of the Sydney region' – long narrow inlets formed by the partial submergence of river valleys.<sup>5</sup>

Twenty thousand years ago, at the height of the last major period of glaciation, the climate was colder and more arid than it is today and Port Jackson existed as a rocky valley incised with freshwater streams. At this time, Goat Island is likely to have been an inland hilltop with the waters of the coast some 15 kilometres to the east of their present location and up to 120 metres below current sea level.<sup>6</sup>

This 'ice age' gave way to a contrasting period of global warming that featured melting polar icecaps and associated marine transgression. 6000 years ago the sea had reached its current level - Port Jackson has been flooded and Goat Island had been transformed from a hillock into an island.<sup>7</sup> Refer **figure 6**.



Figure 6: Sydney Waters – Changing Sea levels (18k, 11k & 6k years ago) (Australian Museum Online - http://www.amonline.net.au/exhibitions/catching/sealevels.htm)

#### Goat Island

Goat Island is a sandstone formation covering an area of 5.4 hectares (13.34 acres). Rising to a height of approximately 40 metres, the island is crowned with an open grassy ridge, dotted with numerous structures including buildings and wharfage, and fringed with a rocky fore-shore. Historic development on the island has been extensive and post-settlement clearing, leveling and construction has served to somewhat obscure the natural features and former nature of the island.

**Figure** 7, a watercolour by early colonial artist George Evans, shows the island within its harbour context, a little over a decade prior to its first major use by European settlers.

<sup>&</sup>lt;sup>5</sup> Branaghan et al 1979: 55

<sup>&</sup>lt;sup>6</sup> Australian Museum Online - http://www.amonline.net.au/exhibitions/catching/sealevels.htm

<sup>&</sup>lt;sup>7</sup>NSW NPWS. 1998. Sydney Harbour National Park Plan of Management: 10



Figure 7: George Evan's painting of Sydney Harbour (1809) This watercolor image, captured from near South Head, shows Goat Island to the immediate right of the fledgling settlement of Sydney. The painting pre-dates European use of the island and depicts it as a broad, low, tree covered atoll.

(ML SLNSW PXD 388.3 f1)

#### Geology

Like most of the islands of the harbour, Goat Island geology features skeletal remnant topsoils and subsoils (A & B-horizons), which overlay massive Hawkesbury Sandstone beds (Chorizon).<sup>8</sup> Investigation into the nature of the sandstone that forms Goat Island has revealed that the island's bedrock stratigraphy consists of five main sandstone beds:

- 1. Coarse grained weathered sandstone (o 1.om)
- 2. Medium to coarse massive sandstone (1.0 4.5/5.0m)
- 3. Cross-bedded medium sandstone (4.5/5.0 6.0/6.5m)
- 4. Medium sandstone (6.0/6.5 6.5/7.0m)
- 5. Medium to course massive sandstone with fine cross-bedding  $(6.5/7.0 9.5/10.0m)^9$

#### See figure 8.

<sup>&</sup>lt;sup>8</sup> NSW NPWS 1998: 10

<sup>&</sup>lt;sup>9</sup> Franklin, B. 1997. *Report on Goat Island Stonework Conservation: Geology of the Sandstone*. Report prepared for NSW Department of Public Works



Figure 8: Sandstone at Goat Island (2007) (Photographs by Dan Tuck 2007)

#### <u>Flora</u>

Prior to European use of the island in the early 19<sup>th</sup> century, the island was tree covered and the aforementioned geology is likely to have supported bushland similar to that growing in reserve and park areas on adjacent islands and mainland foreshores.<sup>10</sup> Species thought to be indigenous to the island include:

- Smooth-barked apple (*Angophora costata*)
- Coastal banksias/honeysuckle (Banksia integrifolia)
- Wattle (Acacia longifoli, A. suaveolens, A. terminalis, A. binervia, A. ulicifolia)
- Port Jackson fig (*Ficus rubiginosa*)
- Bangalay (*Eucalyptus botryoides*)
- Lomandra (*Lomandra longifolia*)<sup> $\pi$ </sup>

Most of the island's native vegetation was extensively cleared during the first century of Colonial occupation. Consequently, vegetation on the island today consists of an array of cultural plantings featuring both exotic and native species – the latter including both the formerly indigenous and non-indigenous. Refer **figure 9**.

<sup>&</sup>lt;sup>10</sup> Kerr, J. 1985. *Goat Island: An Analysis of Documentary & Physical Evidence and an Assessment of Significance*. Report prepared for the NSW Maritime Services Board: 44

 $<sup>^{\</sup>rm n}$  Pratten and Benson cited in Kerr 1985: 45-47



Figure 9: Port Jackson Fig roots Port Jackson fig roots morphing with an historic sandstone retaining wall near the barracks building on the southwestern tip of Goat Island.

(Dan Tuck 2007)

#### Fauna

The nature and extent of pre-settlement fauna on Goat Island is not well known. It is clear however that as with the indigenous vegetation, the suite of fauna on Goat Island is likely to have declined significantly once European development of the island commenced in the early 19<sup>th</sup> century. Today, faunal species indigenous to the island are limited and are known or thought to include:

- Eastern Water Rat (*Hydromys chrysogaster*) possibly the only indigenous mammal<sup>12</sup>
- Grey-headed Flying Fox (*Pteropus poliocephalus*) a regular nocturnal visitor who utilises mainland day roosting sites in such as the Royal Botanic Gardens<sup>13</sup>
- Several insectivorous bat species including the Eastern Bent Wing bat (*Miniopterus schreibersii oceanensis*)<sup>14</sup>, Large Forest Bat (*Vespadelus darlingtoni*) and Gould's Wattled Bat (*Chalinolobus bouldii*)<sup>15</sup>
- Two varieties of skink (Eulamprus tenuis and Lampropholis delicata)
- Striped Marsh Frog (Limnodynastes peronii) recorded breeding in a garden pond
- A number of common birds including five species that breed on the island

<sup>&</sup>lt;sup>12</sup> The Eastern Water Rat's status on the island is uncertain – there was one recording of the animal in 2000

<sup>&</sup>lt;sup>13</sup> Species currently listed under the NSW Threatened Species Conservation Act (1995)

<sup>&</sup>lt;sup>14</sup> Species currently listed under the NSW Threatened Species Conservation Act (1995)

<sup>&</sup>lt;sup>15</sup> It is uncertain if these bat species breed (or simply roost) on the island

#### Chapter 2 - Place

Species introduced to the island include the ubiquitous Black Rat (*Rattus rattus*) and the domestic/feral cat (*Felis*). The former remains on the island while the latter was last recorded in 2003.<sup>16</sup>

#### The Waters

When Europeans arrived in Sydney Harbour in 1788 the waters were literally teeming with fish. Post- settlement harbour and port development, landclearing and runoff, harbour traffic, industrial pollution and overfishing have all contributed to the decline in harbour fish varieties and stocks over the past two centuries. Despite this, the harbour remains home (or a place of visitation) to over 550 fish species.<sup>17</sup>

The open waters surrounding Goat Island feature seasonal pelagic (surface feeding) fish such as salmon, tailor and kingfish. The rocky sandstone shorelines also support populations of common East Coast species bream, mullet, whiting, luderick, flathead, groper, cod and the ubiquitous leather jacket. Other marine dwelling flora and fauna in the Goat Island waters include brown kelp, prawns, and shellfish.

The resources of the Port Jackson waterway and the location of Goat Island in the heart of the harbour are likely to be two of the reasons why Aboriginal people are likely to have made use of the location for many thousands of years prior to European settlement. The following section addresses the Aboriginal pre and early-post contact history of the island.

<sup>&</sup>lt;sup>16</sup> Graham Brooks & Associates Pty Ltd. 2006. *Goat Island Conservation Management Plan (Exhibition Draft)*. Report prepared in association with Taylor Brammer Landscape Architects Pty Ltd & Mary Dallas Consulting Archaeologists for NSW NPWS: 19

<sup>&</sup>lt;sup>17</sup> http://www.amonline.net.au/fishes/fishfacts/sydney.htm - number of recorded species as at August 2005 (572)

# First People



Prior to the annexation of Australia by the British, Aboriginal people had been the sole guardians of the Sydney region and had occupied the Port Jackson harbour area and its islands for thousands of years. The following section presents a brief account of Aboriginal Association with Goat Island in the pre and early post-contact periods set against the broader Aboriginal history of the Southeast Sydney region.

This section been prepared from a review of modern and contemporary documentary sources including the writings of early colonial observers and diarists, official government correspondence, and the formal and informal observations and reports of newspaper journalists and missionaries.

For additional information the reader is directed to the **references** section and the numerous documents relating to Sydney Harbour and Goat Island Aboriginal cultural heritage includ-ing:

- Attenbrow, V. 2002. *Sydney's Aboriginal Past: Investigating the Archaeological & Historical Records*. University of NSW Press, Sydney.
- Rich, B. 1985. *Goat Island Archaeological Survey and Assessment of Aboriginal Sites*. Elizabeth Rich for Schwager/Brooks and Partners Pty Ltd.

#### Memel

Goat Island is known to have had a number of Aboriginal names, all of which appear to have been variations of the word 'memel'. The exact meaning of the word is unknown and suggestions have ranged from 'a place from which you can see far'<sup>18</sup> to 'eye(s)'<sup>19</sup>. The following table lists the various Aboriginal names for Goat Island as recorded by early colonial diarists and commentators between 1788 and 1850.

Aboriginal Names for Goat Island		
Location	Name	Source
Goat Island	Me-mil	Vocabulary of the language of NSW
	Memil	Philip in Hunter 1793 [1968]: 313
	Me-mel	Collins, 1798 [1975]: 497
	Mimil	Larmer, 1832 [1898]: 228
	Mimil	Mitchell, c1848: 419
Goat Island (western tip)	Wariwal <sup>20</sup>	Dawes, 1790 <sup>21</sup>

Though the Aboriginal names of the island are known, and the island is a prominent feature of the harbour, little is known of the specific purposes for which Aborigines utilized Goat Island prior to European settlement.

One of the reasons for our collective limited knowledge is that the Goat Island landscape has been heavily impacted by European development since the early 19<sup>th</sup> century to such an extent that the only recorded and listed Aboriginal cultural heritage site on the island is a disturbed Aboriginal shell midden (1.2 metres long) associated with a slight rock overhang on the eastern side of the island.<sup>22</sup> Refer **figure 10**.

<sup>&</sup>lt;sup>18</sup> Sharing Sydney Harbour Website <u>www.sydneyharbour.nsw.gov.au;</u> Jenny Munroe cited in NSW Dept. of Urban Affairs and Planning 1999

<sup>&</sup>lt;sup>19</sup> Sydney Morning Herald 5 October 2002. Article regarding Keith Smith titled Nudged by a smudge to revisit indigenous Sydney by Debra Jopson. Keith Smith is a journalist, historian and author who studied 18th-century Sydney Aboriginal language and life for his Masters degree at Macquarie University; Clarke, M. & Clarke, J. 2000. The Islands of Sydney Harbour. Simon & Schuster, East Roseville: 10

<sup>&</sup>lt;sup>20</sup> Smith has suggested that wariwal means 'spear point'

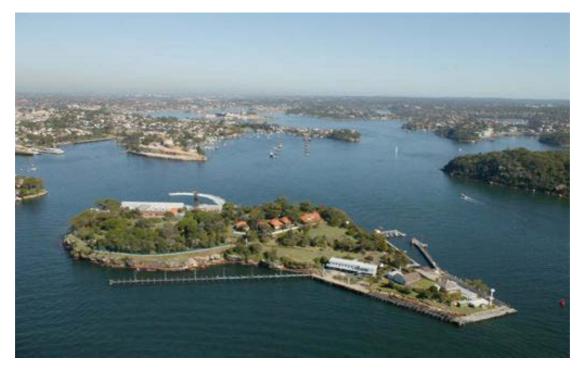
<sup>&</sup>lt;sup>21</sup> Annotated on a smudged map on the inside of Dawes 1790 book

<sup>&</sup>lt;sup>22</sup> Rich, B. 1985. *Goat Island Archaeological Survey and Assessment of Aboriginal Sites*. Elizabeth Rich for Schwager/Brooks and Partners Pty Ltd; Anglin Associates. 1990

Unfortunately, the degree of European landscape transformation ensures that it near impossible to determine the pre-development suite of Aboriginal cultural heritage sites on the island and their former extent. The period and intensity of use of the island by Aboriginal people in the past is therefore similarly difficult to establish.

#### Figure 10: General view of the eastern end of Goat Island – view W (2006)

The remains of a disturbed Aboriginal shell midden are located on the eastern side of the island. (DECC Image)



#### Language, Groups & Boundaries

The language and language sub-groups (dialects) spoken by the Aborigines of the Sydney area at the time of first European contact is uncertain. Generally, there are two considered hypotheses regarding Sydney Aboriginal coastal languages<sup>23</sup>:

1. Those in the Port Jackson region (and extending north beyond the Sydney Peninsula and inland as far to the Blue Mountains) belonged to the Darug language group.<sup>24</sup> Within this group there were at least two dialectic sub-divisions - a coastal dialect spoken between Botany Bay and Port Jackson; and a hinterland dialect to the west on the Cumberland Plain.<sup>25</sup>

<sup>&</sup>lt;sup>23</sup> Sydney Coast being defined as the principal bays with their respective estuarine reaches and tributaries

<sup>&</sup>lt;sup>24</sup> Darug also spelt Darook & Darug (refer Attenbrow, V. 2002. *Sydney's Aboriginal Past: Investigating the Archaeological & Historical Records.* University of NSW Press, Sydney: 32

<sup>&</sup>lt;sup>25</sup> Kohen, J. 1993. *The Darug and their Neighbours: The Traditional Owners of the Sydney Region*. Darug Link in association with the Blacktown and District Historical Society: 10 – summarized in Attenbrow 2002: 34

#### Chapter 3 - First People

2. Sydney coastal language was quite distinct from the Darug language.<sup>26</sup>

Without wishing to wade too heavily into the ongoing Aboriginal language debate, it is perhaps best to acknowledge that our understanding of pre and early post-contact Aboriginal languages and language boundaries is fragmentary at best. Sydney region archaeologist and historian Val Attenbrow has wisely cautioned:

'Any boundaries mapped today for these languages or dialects can only be indicative at best. This is not only because of an apparent lack of detail about such boundaries in the historical documents, but because boundaries between language groups are not always precise lines?<sup>27</sup>

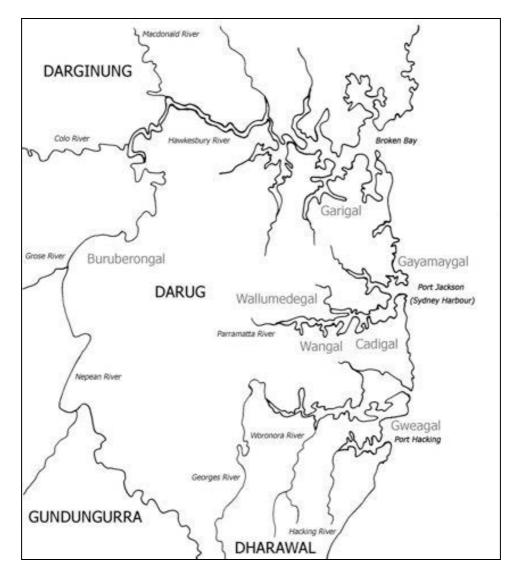


Figure 11: Indicative Map of the locations of Sydney Aboriginal clans in the early 19<sup>th</sup> century (Dan Tuck 2007 – after Attenbrow 2002; Haglund 1989; Capell 1970; & Tindale 1974)

<sup>&</sup>lt;sup>26</sup> Ross. A. 1988. 'Tribal and Linguistic Boundaries: A Reassessment of the Evidence' in Aplin, C (ed.). 1988. *Sydney Before Macquarie: A Difficult Infant*. New South Wales University Press, Sydney. Pp: 42-53

<sup>&</sup>lt;sup>27</sup> Attenbrow 2002: 34

#### Eora

Some researchers refer to the people who occupied the Sydney region at the time of contact not by specific language affiliations, but simply as the Eora. This term appears to have been that used by local Aboriginal people when referring to themselves and is thought to mean 'the people'.<sup>28</sup> Use of the term, like most labels applied to early contact Aboriginal groups, remains controversial. Refer **figure 11**.

#### Clans

Despite the absence of precise knowledge about the language group affiliations of precontact Sydney Aboriginal society we do know that this society was organized around clan groupings - clans being extended family or decent groups with complex territorial and/or social affiliations with a given area.

When Europeans arrived in 1788, the Colony's first Governor, Arthur Phillip, identified more than 1500 people living in the area from Botany Bay to Broken Bay and as far west as Parramatta. Phillip recorded that those Aboriginal people he witnessed belonged to a number of clan groups including the Cadigal, Wangal, Wallumedegal, Boromedegal, Gameragal, Borogegal, Birrabirragal and Gayamaygal.<sup>29</sup> Phillips's initial population estimate is probably unreliable (understated), though his recognition of Sydney Aboriginal social organization based on numerous clan groupings appears to have been valid.

The Aboriginal history of the harbour area appears to be most closely linked with three of the above clans reported by early colonial observers in the late 18<sup>th</sup> century, namely the:

- Cadigal
- Wangal
- Gamaragal.

Neighbouring groups of the Cadigal, Wangal and Gamaragal included the Bediagal (about the Cooks River) to the east, and the Gweagal to the south of Botany Bay.<sup>30</sup> Refer following **text box**.

<sup>&</sup>lt;sup>28</sup> Smith, K. 2006. 'Highways in the Stream' in *atmitchell* 2(2): 3-5

 $<sup>^{29}</sup>$  Dispatch from Phillip to Sydney, 13 February 1790 in  $H\!R\!A$  1(1)

<sup>&</sup>lt;sup>30</sup> Turbet, P. 2001a. *The Aboriginals of the Sydney District before 1788.* Kangaroo Press, Sydney: 21-23; Attenbrow 2002: 24-26

#### Cadigal, Wangal & Gamaragal

#### Cadigal

Most of the Aborigines who occupied the greater Sydney area (particularly the central part of Sydney) appear to have been of the Cadigal group.<sup>31</sup> Governor Phillip noted in 1790, that the Cadigal occupied:

"... from the entrance to the Harbour [Port Jackson], along the south shore".

Later, Governor Philip Gidley King also mentioned the Cadigal, noting that the Cadigal (men) and Gadigal-*leon* (women) occupied the land of Cadi, which he defined as extending from the south side of Port Jackson to Long Cove (Darling Harbour).<sup>33</sup>

Generally, Cadigal territory is accepted as having extended from South Head to the northern shores of Botany Bay and possibly as far west as Petersham.<sup>34</sup>

#### Wangal

It is generally believed that a clan group called the Wangal lived to the west of the Cadigal. Where the Cadigal territory ended and Wangal territory commenced however, is uncertain, as pre-contact Aboriginal territorial boundaries, like language boundaries, remain uncertain and it is likely that there was considerable overlap in some areas.<sup>35</sup>

Governor Philip referred to the Wangal as the Wann, which he recorded as an Aboriginal group who occupied the south side of Sydney Harbour from the cove adjoining settlement (Sydney Cove) to Rose Hill (Parramatta).<sup>36</sup> Governor King mentioned the Wanne, the same group as the Wann, who occupied the south side of the Harbour from Long Cove (Darling Harbour) to Rose Hill (Parramatta).<sup>37</sup>

The notable Bennelong is believed to have been a Wangal and his strong association with Goat Island, has lead to suggestions that this island was part of *Wangal* territory.<sup>38</sup>

#### Gamaragal

The Gameragal appeared to have utilized the area on the northern shores of Port Jackson, particularly the area about the northwest part of the harbour.<sup>39</sup>

<sup>&</sup>lt;sup>31</sup> Also Gadigal

<sup>&</sup>lt;sup>32</sup> Phillip, 13 February 1790 [1892] cited in Attenbrow 2002: 24

<sup>&</sup>lt;sup>33</sup> King in Hunter 1793 [1968]. An Historical Journal of Transactions at Port Jackson & Norfolk Island including the Journals of Governors Phillip and King, and of Lieutenant Ball. Australiana Facsimile Edition, Libraries Board of South Australia: 412

<sup>&</sup>lt;sup>34</sup> Turbet 2001a: 21

<sup>&</sup>lt;sup>35</sup> This is the spelling according to King in Hunter 1793 [1968]: 412. Alternate spellings include Won-gal & Wongal-leon in King in Hunter 1793 [1968]: 411; Wanngal in Philip 13 February 1790 cited in Attenbrow 2002: 26

<sup>&</sup>lt;sup>36</sup> Philip 13 February 1790 [1892] cited in Attenbrow 2002: 26

<sup>37</sup> King in Hunter 1793 [1968]: 412

<sup>&</sup>lt;sup>38</sup> Turbet, 2001a: 21

<sup>&</sup>lt;sup>39</sup> King in Hunter, 1793 [1968]: 411; Attenbrow 2002: 25; Also spelt Cam-mer-ray-gal, Camera-gal, and Kamarigal

#### Tribes

The various 'tribes' referred to by colonists in the 19th Century were resultant of major postcontact social re-organization. The breakup of traditional clan groups due to disease and dislocation was a consequence of European settlement and forced the remnants of formerly disparate Aboriginal bands to combine in order 'to provide mutual protection and to maintain viable social and economic units'.<sup>4°</sup> Some researchers have argued that by as early as the 1820s, the pre-contact clans and bands no longer existed as identifiable groups.<sup>41</sup>

Despite significant changes following European settlement, these 'tribes' continued to adhere to certain rules governing social organization and boundaries, as Dr John Dunsmore Lang, an early principal of the Sydney College, noted in the 1830s:

The whole race is divided into tribes, more or less numerous, according to circumstances, and designated from the localities they inhabit; for although universally a wandering race, their wanderings are circumscribed by certain well defined limits, beyond which they seldom pass, except for purposes of war or festivity. In short every tribe has its own district, the boundaries of which are well known to the natives generally.<sup>42</sup>

Groups referred to as greater Sydney district tribes by Europeans in historical documents such as blanket returns and census papers include the Sydney Tribe, Botany Bay Tribe, Parramatta Tribe and the Georges River Tribe (refer **figure 12**).<sup>43</sup> Significant members of the Sydney Tribe included Bungaree and Bennelong. Bennelong appears to have had traditional association with Goat Island and is discussed in detail in the ensuing section.



Figure 12: William Westall's sketch 'Port Jackson, a Native' (c.1802)

(NLA PIC R4292 - Westall box 4. Digital image nla.pic-an4562332-v.jpg)

<sup>41</sup> Attenbrow 2002

42 Letter from John Lang in *APB* 1839, volume V: 140-142

43 e.g.: Attenbrow 2002: 22; 30

<sup>&</sup>lt;sup>4°</sup> Kohen, J. 1985. *Aboriginals in the West: Prehistory to Present.* Western Sydney Project, Armidale; Ross 1988: 49. Lt. David Collins suggested in 1798 that there were only three Cadigal clan members left after the smallpox epidemic of 1791 - prior to this there had been 50 to 60 people in the Sydney area

#### Bennelong & the Sydney Tribe

The so called Sydney Tribe, also referred to as the Sydney Blacks, appears to have formed from an amalgamation of survivors of the remnant clan groups from around Port Jackson in the years following European settlement.

In the very earliest days of settlement (prior to the 1820s), there is some evidence that the Sydney Tribe was a distinct group, different to tribes from elsewhere.

One newspaper account, presented in the *Sydney Gazette*, 18 March 1804, detailed an Aboriginal conflict in the Sydney region. In this article, the reporter makes a clear distinction between the Sydney Aborigines and those of Parramatta, stating:

The native champions of Parramatta have thought it prudent to retire from their post to a remote location. The cause assigned for this movement is, that owing to a recent fracas in which several of their party were deliberately wounded by their Sydney adversaries, unabating rancour rages upon both sides; wherefore, their inferiority of number rendering the event of another contest doubtful, a council of war was held, and the salutary manoeuvre adopted 'nemine contradicente' (without dissent).

By the 1830s however, it was clear that the Sydney Tribe was a mixed band of Sydney locals and those who had moved into the Sydney district from elsewhere. Mahroot (Boatswain) in giving evidence to the Select Committee on the Condition of Aborigines in the 1840s confirmed that the groups around Sydney at that time, were amalgams of Sydney locals and others from elsewhere including 'the country tribes'.<sup>44</sup>

#### Bennelong

Bennelong is perhaps one of the best known of the Aboriginal men recorded during the early post-contact period in the Sydney region (**figure 13**).<sup>45</sup> Bennelong was a member of the Sydney Tribe (and later the Kissing Point Tribe) and is believed to have been a Wangal man.

The writings of early colonial diarists indicate that Bennelong had a strong association with the harbour and Goat Island. He claimed descent-based property rights and ownership of the island in a conversation with Lieutenant David Collins in the late 18th century:

<sup>&</sup>lt;sup>44</sup> Minutes of evidence taken before the select committee on the Aborigines, Monday 8 September, 1845 P.2-3 (Aboriginal Reports – SLNSW ML FM4/9857A)

<sup>&</sup>lt;sup>45</sup> Hunter recorded that Bennelong was known by a variety of names including Bannelon, Bundebunda, Wollewarre, Boinda, Bunde-Bunde, and Woge Trowey. Bennelong's name, according to Collins, was that of a 'large fish'

"But strange as it may appear they also have their real estates. Ben-nil-long, both before he went to England and since his return, often assured me that the island Me Mel (called by us Goat Island) close by Sydney Cove was his father's and that he should give it to By-gone his good friend and companion. To this little spot he seemed much attached; and we have often seen him and his wife Ba-rang-a-roo enjoying themselves on it. He told us of other people who possessed this kind of hereditary property which they retained undisturbed".<sup>46</sup>

Bennelong's apparent affiliations with the Wangal clan and his claim to land rights with regards to Goat Island have lead some commentators to suggest that the island was part of Wangal territory.<sup>47</sup>



#### Figure 13: Portraits of Bennelong Neele's engraving of 'Ben(n)elong' 1804 (I); Bennelong n.d. (centre) & the Port Jackson Painter's Bennelong (r). (SLV RARELTF 919.44 G767. Digital image pb000328.jpg; ML SLNSW digital image a1256013h.jpg; NLA nla.pic-an5600803-v.jpg)

#### The Life of Bennelong

The principle reason for Bennelong's prominence as an historic figure is due to the fact that he was one of the Aborigines captured by Governor Phillip in an effort to 'open an intercourse' with the natives in the late 1780s – all other efforts at establishing positive inter-racial relations having failed. Bennelong was captured by Lieutenant Bradley, acting under instruction from Governor Phillip on 25 November 1789, in what the officer described as 'the most unpleasant task I was ever ordered to execute'. Bennelong and a companion Colby were snatched from a large group of Aborigines camping and fishing in the Manly area, and were later shackled to prevent their escape.<sup>48</sup>

<sup>&</sup>lt;sup>46</sup> Collins, D. 1975 [1798]. *An Account of the English Colony in New South Wales*. Volume 1. A.H. & A. W. Reed in association with the Royal Australian Historical Society, Sydney: 497

<sup>&</sup>lt;sup>47</sup> Turbet 2001a: 21

<sup>&</sup>lt;sup>48</sup> Kenny, J. 1973. *Bennelong: First Notable Aboriginal*. A report from original sources by John Kenny, RAHS

#### Chapter 3 - First People

While a dialogue of sorts was established between Phillip and Bennelong, five months after his capture, Bennelong was released from his shackles and subsequently absconded with Colby. He remained at liberty for four months. When located at Manly during a whale feast, he fled with Colby after a friendly encounter with Governor Phillip ended with the Governor speared by another Aborigine (Willemering) from the large feastings party.<sup>49</sup>

Despite this encounter, Phillip continued to seek out Bennelong and encourage him to facilitate discourse with the Aboriginal people about the Sydney area. As part of his attempts to woo him, Phillip gave Bennelong gifts of clothing and alcohol and built him a small hut at Bennelong Point (near the present site of the Opera House on the eastern side of Sydney Cove).

During the early 1790s, Bennelong became something of an enforced Aboriginal ambassador visiting Norfolk Island with King in 1791 and meeting King George III during a trip to England in 1793. Bennelong returned, homesick, from England in September 1795 and ultimately reverted to a semi-traditional lifestyle.

There is little information relating to Bennelong from 1795 to the time of his death. Bennelong died on 3 January 1813 at the age of approximately 49 years. Contemporary descriptions of Bennelong described him as a '... stout, well made man' with powers of the mind 'certainly far above mediocrity'.<sup>50</sup> Despite his physical and mental prowess however, Bennelong's fondness for alcohol lead to a decline in his health, which commenced soon after his capture and contributed to his ultimate demise.

Bennelong died in January 1813 and was buried at brewer James Squires' property (near his inn, on the banks of the Parramatta River) at Kissing Point (Ryde).<sup>51</sup>The exact nature of his relationship with ex-convict Squires is unknown, though Nanberee was also buried on the property and Squires is believed to have been something of a patron of marginalised Sydney Aborigines in the early 19<sup>th</sup> century.<sup>52</sup> Refer **figure 14**.

<sup>&</sup>lt;sup>49</sup> McBryde, I. 1989. *Guests of the Governor: Aboriginal Residents of the First Government House*. Friends of the First Government House Site

<sup>&</sup>lt;sup>50</sup> Hunter 1793 [1968]; Tench, W. 1789-1793 [1979]. Sydney's First Four Years. Library of Australian History, Sydney

<sup>&</sup>lt;sup>51</sup> Sydney Gazette 9 January 1813

<sup>&</sup>lt;sup>52</sup> McBryde 1989: 29

#### Figure 14: Bennelong

Framing this side-on portrait of Bennelong are a number of hunting and fighting weapons including shields, spears, hafted hatchets, and clubs.

(NLA digital image nla.pic-an7566576-v.jpg)



#### Bennelong's Family.

During his lifetime, Bennelong had numerous wives and consorts including Barangaroo (who died in childbirth in 1791) and Garoobarroobolo.<sup>53</sup> It is likely that Bennelong had several children to a number of different women, but there is little known about the lives of his children. The child born to Barangaroo was known as Dilbong (Bell Bird), but he died several days after the death of his mother.<sup>54</sup>

Another of Bennelong's offspring was known by European name Walter Thomas Coke. The main historic reference to Walter is an obituary from the *Hobart Town Gazette and Van Diemans Land Advertiser* 15 March 1823, which presented the following information:

<u>Sydney Feb. 6.</u> On Friday night last, Walter Thomas Coke, an Aboriginal native and son of the renowned Bennelong, departed this life at Wesleyan Aboriginal Mission House in the vicinity of Parramatta, after a short illness. It as an especial duty, we perceive, to record the demise of this interesting youth; his age was somewhere about 20.

<sup>&</sup>lt;sup>53</sup> Barangaroo is also the name for the new Darling Harbour East Development

<sup>&</sup>lt;sup>54</sup> Kenny 1973

When the Reverend Mr Walker first came to the colony [1821] he adopted the deceased as his own son, in the benign view not only of feeding and clothing him, but also in to install into his mind the saving principles of Christianity. A single aberration excepted, the once poor friendless black boy amply compensated his master-friend and brother for the sedulous attention that paid to his interests.

Three or four months since, he was publicly baptised being honoured with the distinguished and humanising name of the immortal Dr Coke.<sup>55</sup> A few weeks since, he was married to a native girl, who had some considerable time previous maternally treated in the family of Mrs Hassell, of Parramatta: her name Maria.

For additional information on the life and character of Bennelong the reader is directed to the following sources:

- Brodskey, I. 1973. *Bennelong Profile: Dreamtime Reveries of a Native of Sydney Cove*. University Co-operative Bookshop, Sydney.
- Kenny, J. 1973. *Bennelong: First Notable Aboriginal.* A report from original sources by John Kenny, Councilor, Royal Australian Historical Society
- McBryde, I. 1989. *Guests of the Governor: Aboriginal Residents of the First Government House*. Friends of First Government House Site, Sydney.
- Smith, K. 2001. *Bennelong: The Coming in of the Eora: Sydney Cove 1788-1792*. Kangaroo Press, East Roseville (Sydney).
- Sheppard, B. 2005. *The life of Bennelong: Living in Two Cultures*. Echidna Books, Carlton (Melbourne)

The **chronology table** on the following page lists some of the principle events in Bennelong's life.

<sup>&</sup>lt;sup>55</sup> Founder of the Methodist Missions

	Bennelong Chronology
Date	Event
25 November 1789	Captured by Lieutenant Bradley
April 1790	Liberated from close custody
3 May 1790	Escaped from Settlement
7 July 1790	Present at the whale feast at Manly when Governor Philip speared
17 July 1790	Visited Governor Phillip and requested a house be built for him
8 October 1790	Visited Governor Phillip and presented him with a shield
November 1790	Bennelong's hut completed and occupied; shield presented
29 December 1790	Returned to settlement after an absence of 10 days
March 1791	Visited by Governor Phillip and party at Bennelong Point
June 1791	Assisted in the rescue of boat passengers after a mishap
October 1791	Taken to Norfolk Island by Lieutenant King
3 December 1791	Philip informs Sir Joseph Banks that he will bring Bennelong to England
December 10-11, 1791	Embarks on the Atlantic with Governor Phillip and sails for England
1791	Wife Barangaroo and child Bilbong die
22 May 1793	Arrived in England
24 May 1793	Presented to King George III
15 February 1795	Leaves England with Governor Hunter aboard the <i>Reliance</i>
7 September 1795	Arrives back in Sydney
October 1795	House at Bennelong Point demolished
December 1797	Threatens to spear Governor Hunter
11 March 1805	Involved in a fight at Parramatta
3 January 1813	Died at Kissing Point
31 January 1823	Child Thomas William Coke dies at Parramatta

Table formatted from text in Kenny 1973; Brodsky, 1973 & Smith, 2001

#### Culture & Lifestyle

Prior to European settlement, the varied landscape of the inner harbour and its immediate hinterland (which included a rugged coastline, giving way to sheltered bays, open forests, heathlands, swamps, and creeks) combined with a mild annual climate to provide an ideal living environment for the Aboriginal people who lived in and visited the area prior to white settlement.

The rich natural reserves of the area included a wide variety of maritime, estuarine and terrestrial resources. The ways in which these varied resources were likely to have been utilised by Aboriginal people, are detailed below.

#### The Waters

The physical environment of the Sydney area is dominated and defined by the spectacular coastline and its natural harbours – Port Jackson, Botany Bay and Port Hacking. It is therefore not surprising that fish and fishing were (and continue to be) of major social, spiritual and economic importance to Sydney Aboriginal people. Early colonial observer and diarist Wat-kin Tench wrote that:

Fishing, indeed, seems to engross nearly all of their time, probably from its forming a chief part of their subsistence.<sup>56</sup>

Early Sydney identity Dr Lang, writing several decades later, similarly recorded:

It is well known that these Aboriginals in no instance cultivate the soil, but subsist entirely by hunting and fishing, and on the wild roots they find in certain localities (especially the common fern), with occasionally a little wild honey; indigenous fruits being extremely rare.<sup>57</sup>

#### Fish

Historical accounts indicate that at the time of first contact, Aboriginal people ate principally snapper (*Pagrus auratus*), bream and mullet. Archaeological evidence however, in the form of fish bones & otoliths (ear stones) from Aboriginal shell middens, indicates that Aboriginal people ate a variety of species depending on season and availability. These included dusky

<sup>&</sup>lt;sup>56</sup> Tench 1789-93 [1979]

<sup>&</sup>lt;sup>57</sup> Letter from John Lang in *APB* 1839, Volume V: 140-142

flathead, eastern blue groper, luderick (blackfish), leatherjacket, morwong, whiting, mulloway (jewfish), wrasse, wirrah, tarwhine and various shark species.<sup>58</sup>

#### Fishing Methods

Australian Angling writer and historian B. Dunn has described Aboriginal fishing techniques as:

...the distillation of thousands of years of experience – a unique mixture of experimentation, mythology and concentrated lore.<sup>59</sup>

The methods utilised by Aboriginal people to obtain fish in the Sydney region were indeed many and varied, however the principle methods appear to have been line fishing from bark canoes, spearing and netting.

First Fleet surgeon George Worgan, of the *Sirius* wrote some general accounts of the Aboriginal people of the Sydney harbours in 1788. In one instance he recorded that:

Each tribe according to their number have 6, 8 or 10 canoes, in these contemptible skiffs (which display very little art or ingenuity) they paddle (with two things like pudding stirrers) from one cove to another even up and down the coast, keeping as close to the rocks as possible. The women make much more use of them than the men do, for they get into them only when they want to cross from one cove to the othe'r.<sup>60</sup>

As observed by Worgan, it was often Aboriginal women who fished from canoes, while the men would often simultaneously engage in spear fishing from rocks, shorelines and headlands.

The spears typically used were multi-pronged and called 'fizz gigs' by early colonists.<sup>61</sup> The shafts of these spears were up to 6 metres long and made of the wood or the stems of flowering *Xanthorroea* grass trees. The prongs of fishing spears were barbed or pointed with stone, shell, hardwood, fish teeth, sharpened animal bone and stingray spines which were bound with two ply rope or plant fibre and coated in plant resin.<sup>62</sup> Generally, it is believed that the

 $<sup>^{58}</sup>$  Notes from the Australian Museum Exhibition 'Catching Sydney Harbour'

<sup>&</sup>lt;sup>59</sup> Dunn, B. 1991. Angling in Australia - Its History & Writings. David Eli Press Pty Ltd, Sydney: 16

<sup>&</sup>lt;sup>60</sup> Worgan, G. 1978 [1788]. *Journal of a First Fleet Surgeon*. Library Council of New South Wales, Sydney: 16-18

<sup>&</sup>lt;sup>61</sup> Notes from the Australian Museum Exhibition 'Catching Sydney Harbour'

<sup>&</sup>lt;sup>62</sup> Notes from the Australian Museum Exhibition 'Catching Sydney Harbour' – 'Making Spears'

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spears were predominantly used in shallow water contexts where stealthily wading fishermen used them to pin mullet, whiting, flathead and bream.<sup>63</sup> Refer **figure 15**.



Figure 15: View of Port Jackson in New Suoth [sic] Wales (c.1790) This engraving, adapted from a vignette on the title page of John White's *Journal of a Voyage to New South-Wales,* shows Aboriginal people spearing fish on a Port Jackson shoreline in the early 19<sup>th</sup> century. (ML SLNSW SSV1/Har/1790-1977/2. Digital image a928854h.jpg)

#### Nets & Traps

Along the Australian East Coast, fish were also caught in casting nets and traps. One method of net fishing (utilised to trap shoaling mullet) involved a 'drive' along shallow creeks and flats where Aboriginal people advanced in line abreast to a netted end point.<sup>64</sup>

#### Shellfish & Crustaceans

The Aboriginal diet based on maritime and estuarine finfish was rounded out with the addition of a range of shellfish (including oysters, mussels, whelks, and cockles) and crustaceans (such as crayfish and prawns).<sup>65</sup> George Thompson of James Cook's *Endeavour* crew recorded that Cook had seen considerable evidence of shellfish and shellfish consumption noting:

<sup>&</sup>lt;sup>63</sup> Dunn 1991: 17

<sup>&</sup>lt;sup>64</sup> Yeates, N. 1993. Coffs Harbour. Volume 1: Pre 1880 – 1945. Banana Coast Printers: 13

<sup>&</sup>lt;sup>65</sup> Attenbrow 2002: 66-69

On the banks of sand and mud there are great quantities of oysters, muscles (sic), cockles and other shell fish...

In one of the places he landed he found several small fires & fresh musules (sic) broiling on them; & here also he found some of the largest oyster shells ever seen.<sup>66</sup>

The large oysters described above are likely to have been the famous Sydney mud oyster (*Ostrea angasi*) - an estuarine species capable of growing to the size of a dinner plate.<sup>67</sup> These oysters were heavily exploited to near extinction in the early years of European settlement and are no longer naturally occurring in the immediate Sydney district.

Governor Phillip provided more detail on Aboriginal use of shellfish in the early post-contact period:

Craw-fish and lobsters they catch in small hoped nets...their huts are generally surrounded by Oyster and mussel shells and their bodies smell of oil.<sup>68</sup>

Aside from providing a valuable foodsource, shellfish remains were also used to fashion hooks and ornaments.

# Fish Mythology

Aside from the obvious economic and dietary importance of fish to the Aboriginal people of the Sydney region, and the prediction of fish runs via environmental indicators, fish also had totemic significance to Aboriginal people. Governor Phillip noted in 1790 that '... we have reason to believe that children are named after the fish they first catch' and the names of at least three well-known Sydney Aboriginal people were associated with fish:

- Ballederry's name signified the leatherjacket (family *Aluteridae*)
- Bennelong was named after a 'large fish'
- Mawberry was named after the gurnard (family *Triglidae*).<sup>69</sup>

<sup>&</sup>lt;sup>66</sup> Thompson 1787: 20; 12

<sup>&</sup>lt;sup>67</sup> Also referred to as 'native' or 'flat' oysters

 $<sup>^{68}</sup>$  Dispatch from Phillip to Sydney 15 May 1788 in HRA 1(1): 28

<sup>&</sup>lt;sup>69</sup> Dispatch from Phillip to Sydney 13 February 1790 in *HRA* 1(1): 161; Notes from the Australian Museum Exhibition 'Catching Sydney Harbour – The Importance of Fish'

## The Land

The land bordering the harbour waters supported a range of birds and animals. On the drier, more open ground and ridgelines the larger macropods and other marsupials such as possums are likely to have been targeted for food by Aboriginal people. On swampier ground, and along watercourses and valleys, it is likely that waterfowl and small macropods (including wallabies) were hunted and trapped (refer **figure 16**).



Figure 16: Natives pursuing kangaroos in the neighbourhood of Sydney (c.1820s) (NLA Rex Nan Kivell Collection NK1350 – digital nla.pic-an7891507-v.jpg)

Aside from providing food and refuge for an array of birds and animals, the flora of the area was used for a multitude of purposes (**figure 1**7).



Figure 17: Boisseau's Nouvelle-Hollande, Port Jackson, famille de sauvages en voyage (c.1825) Image shows gunyahs or bark huts typical of the Port Jackson area. The family in the foreground are carrying the typical accoutrements of everyday life – the woman carries a fishing line and basket/water carrier; the man carries spears and a fighting shield.

(NLA digital image nla.pic-an9032049-v.jpg)

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# The Importance of Trees

Even though land clearing and development has removed many old growth trees in the study area, ethno-historical records indicate that the Aboriginal people of Sydney made use of a variety of tree species for such things as the sourcing of food products, production of huts and canoes, and the manufacture of tools and implements. Several of the uses to which trees and tree products were put, are outlined in the **table** below

Tree products used by Sydney Aboriginal people	
Product	Traditional use
Timber	<ul> <li>Coastal tree species were used for the manufacture of clubs &amp; spears.</li> <li>Bark from select eucalypts was used for the production of canoes, coolemons &amp; shields.</li> </ul>
Bark fibres	<ul> <li>Aboriginal women wove bark fibres from the Hibiscus trees that grew along river &amp; creek margins to produce fishing nets. These were cast over shoals of mullet.</li> <li>Other fibres produced fishing lines, ropes &amp; twine</li> </ul>
Bark Sheets	<ul> <li>Bark shelters or 'gunyahs' were constructed of bark sheets placed over a framework of saplings</li> <li>Babies were wrapped in soft tea-tree bark and slung in woven fibre bags.</li> </ul>
Saps & Gums	Saps & gums were used as adhesives
Flowers, nectars, leaves & fruits	<ul> <li>Flowers, nectars, leaves and fruits were collected for processing as food, drinks and medicaments.</li> <li>Tannin rich leaves of plants such as Acacia were sometimes used in the production fish poisons</li> </ul>

Table formatted from information in Attenbrow 2002; Robinson 1998.

In addition to providing the raw materials needed to produce products that were utilized in everyday life, trees also provided access to the birds and animals that made use of them. Tree climbing allowed Aboriginal people to access a variety of foodstuffs including wild honey, possums, flying foxes, koalas and bird eggs.

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#### Tools

Knowledge of the material culture of the Aboriginal people of the region has come from a variety of sources including the recollections (and collections) of early settlers, the oral history of indigenous locals and the results of archaeological excavations. Within the Southeast Sydney area, raw materials used for making stone tools such as axes and blades included silcrete, silicified wood, quartz and volcanics (including tuff).

In addition to the stone tools, it is likely that the Aboriginal people of the area made use of a range of implements made from wood, bone, fibres, shell and other products available on the coast, hinterland and the plains and mountains to the west. Unlike stone, these items do not survive as readily in the archaeological record and we therefore know less about them. Perishable items are likely to have included nets for fishing and bird catching, wooden spears, carriers for food, fire and water, and animal skin rugs and clothing. Refer **figure 18**.

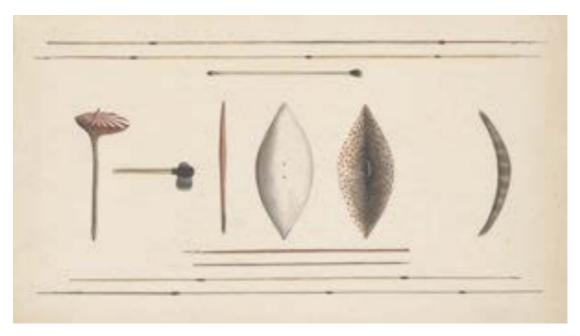


Figure 18: The Port Jackson Painter's Aboriginal hunting implements & weapons (c. 1790) (NLA digital image nla.pic-an6077234-v.jpg)

## Mythology & Ceremony

The pre-contact mythology and ceremony of the Sydney region is not well known. Though there were several recordings of ceremonial activity and spiritual practices in the early contact period such activity declined thereafter (or moved elsewhere). Consequently, how accurately recorded post-contact Aboriginal activity reflected pre-contact activity is also uncertain – most anthropological study into Aboriginal ceremonial/spiritual life took place much later (c.1870s and after) in regional Australia rather than in Sydney proper.

The following dot-pointed table is an incomplete snapshot of Sydney Aboriginal ceremonial and spiritual life and in the early years following settlement:

- Bennelong noted that he had been present at a tooth avulsion and scarification initiation ceremony somewhere on the North Shore in 1790.<sup>70</sup>
- Bennelong and other Sydney coastal Aboriginal people stated that they feared supernatural figures called mane – apparitional figures who snuck up on people with their bodies bent and grabbed them by the throats (or singed their hair and beards).<sup>71</sup>
- Initiation ceremonies took place in the Sydney region. One such event involving tooth extraction, occurred near Farm Cove (Sydney Cove) at the Royal Botanic Gardens site in February 1795. This ceremony, referred to as yoolung erabiung, involved local Aboriginal people as well as Aboriginal people from elsewhere referred to by Collins as 'strangers'.<sup>72</sup> Nanbaree and Caruey were two of the Aboriginal people well known to colonist who took part in this ceremony.<sup>73</sup>
- Collin's also recorded a 'fighting place' for dispute settlement in an area now between Goulburn Street & Central Station.<sup>74</sup>
- An initiation ceremony was recorded to have taken place in 'the middle harbour' (possibly Georges Head) in 1797.<sup>75</sup>
- Both cremations and in-ground burials were witnessed in the Sydney region including the burial of Balladerry who was interred in a canoe with all of his personal adornments and fishing gear.<sup>76</sup>

Refer figure 19.

<sup>&</sup>lt;sup>70</sup> Phillip in Hunter 1793 [1968]: 499-500

<sup>&</sup>lt;sup>71</sup> Collins 1798 [1975]: 465; King in Hunter 1793 [1968]: 412; Attenbrow 2002: 130

<sup>&</sup>lt;sup>72</sup> Collins 1798 [1975]: 466

<sup>&</sup>lt;sup>73</sup> Collins 1798 [1975]: 466-477

<sup>&</sup>lt;sup>74</sup> Collins 1798 [1975]: 486

<sup>&</sup>lt;sup>75</sup> Collins 1802 [1971]: 69

<sup>&</sup>lt;sup>76</sup> Collins 1798 [1975]: 500–502; Attenbrow 2002: 140



Figure 19: The Port Jackson Painter's five half-length portraits of Aborigines (c.1790)

The markings shown on the men pictured are ceremonial designs though the meanings of the individual designs are not well or widely known. The white pigment shown was derived from kaolin (pipe) clays.

(NLA digital image nla.pic-an5576843-v.jpg)

# Early Colonial Interest



Captain James Cook and his crew aboard the bark *Endeavour* reconnoitered the East Coast of Australia in 1770. Port Jackson was largely ignored during Cook's voyage of discovery as Botany Bay was the focus of Sydney investigations and was ultimately chosen as a suitable site for the first settlement of the new British Colony.

Eighteen years later, when Captain Arthur Phillip and the First Fleet arrived in Botany Bay the party of marines and convicts soon abandoned the Bay in favour of Port Jackson to the north. It was here that they established Australia's first European settlement at Farm (Sydney) Cove.

Unfortunately for the new arrivals, the land around the lower reaches of Port Jackson was as unsuitable for European style farming as was the infertile sandy soils of Botany Bay. As a consequence, exploration in search of arable lands commenced, with the harbour and Parramatta River acting as the conduits to better farming lands in the upriver Rosehill (Parramatta) district.

It was during the closing decade of the 18<sup>th</sup> century and the early years of the 19<sup>th</sup> century that Port Jackson was well explored, its harbour charted and its islands mapped. It was also during this time the Colonial administration sought to mark the landscape with its endeavours through growing the fledgling Sydney settlement, and finding appropriate uses for the inner harbour and its islands.

# Goat (Cockatoo) Island

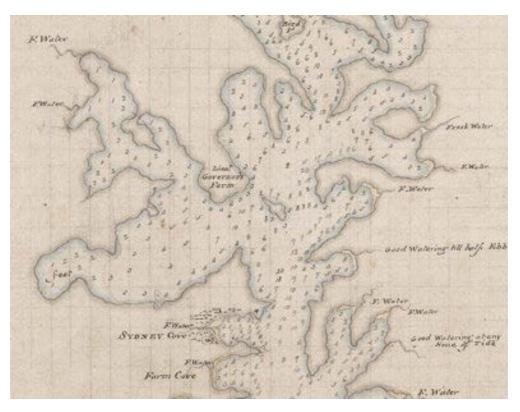
David Collins, deputy judge advocate and lieutenant governor, arrived with the First Fleet with a multitude of duties and responsibilities including crime and punishment, convict labour, health, rations and stores. The first reference to Goat Island appears in his classic text

#### Chapter 4 - Early Colonial Interest

*An Account of the English Colony in New South Wales* published in 1798, which describes life in Sydney in the opening years of British settlement:

November. Since our establishment in this harbour but few accidents had happened to boats. On the 1st of this month, however, the longboat of the Surprise, though steered by one of the people belonging to the settlement, was overset on her passage from the cove to Parramatta, in a squall of wind she met with off Goat Island, with a number of convicts and stores on board. Fortunately, no other loss followed than that occasioned by the drowning of one very fine female goat, the property of Baker the superintendent.<sup> $\pi$ </sup>

Curiously, until around the 1830s, the island was also known as 'Cockatoo Island' – a title that appeared on one of the many tracings of John Hunter's 1788 survey of the entrance of Port Jackson. Both names appear to have remained in collective use until Sydney Harbour's largest island, formerly Bird Island to the west of Goat island, became better known as Cockatoo Island.<sup>78</sup> Refer **figures 20 - 21 & 23**.



#### Figure 20: George Raper's 'Chart of Port Jackson New South Wales' (1788)

Drawn from Captain Hunter's original chart by Midshipman George Raper, this chart shows Goat Island off the northeastern tip of the Lt. Governor's farm (later Balmain). Bird Island (later Cockatoo Island) is shown at the top of frame.

(ML SLNSW ZM2 811.15/1788/1 - Digital Order No.: a127079)

<sup>&</sup>lt;sup>77</sup> Collins 1798 [1975]

<sup>&</sup>lt;sup>78</sup> An unknown writer also referred to Goat Island in the early 1790s as 'the fifth island' – see Vocabulary of the language of NSW in the Neighbourhood of Sydney c.1790 - 1792



Figure 21: Part of Charles Grimes 'A topographical plan of the settlements of New South Wales including Port Jackson, Botany Bay, and Broken Bay' (1815)

(SL SLNSW M3 811.1/1815/2 - Digital Order No.: a928440)

# What to do with an Island?

The early European history of Goat Island relates to three main characteristics of the place:

- 1. Its prominent location within Port Jackson.
- 2. Its proximity to major harbour facilities.
- 3. Its island nature near, yet separate from, the mainland.

Due to these inherent characteristics, Goat Island was the focus of a number of government and private commercial proposals in the early 19<sup>th</sup> century.

## Ralph Darling & the Phoenix

One of the earliest recorded proposals for Goat Island relates to Governor Ralph Darling's intention to use the island as a disposal site for the waste from prisoners aboard the hulk *Phoenix*. Refer **text box** on ensuing page.

# The Hulk Phoenix

The ship *Phoenix* (589 tons) was damaged on 6 August 1824 when she struck the Sow & Pigs reef in Sydney Harbour. Condemned by the Vice - Admiralty Court to be broken up and her stores sold, she was instead bought by the colonial government for £1000, and fitted up in May 1825 as a prison hulk. One of 44 British prison hulks that was to operate in the British colonies and the only one to feature in association with the Australian mainland.

The hulk was established to house the overflow from the Sydney Gaol. Its purpose was to temporarily house prisoners detained for trial and those under sentence of transportation to the penal settlements. The vessel had the capacity to house 200 prisoners and was in operation until 1837.

(References: Archives Authority of NSW, The Concise Guide - Corrective Services, p.73; *Historical Records of Australia* 1(12): 658; Earnshaw 1996)

In 1826, the *Phoenix* was moored with its human cargo in Lavender Bay on Sydney's northern shore to the northeast of the island. The *Sydney Gazette* recorded Darling's visit to the hulk as follows:

His Excellency then directed the barge to be rowed round to Goat Island, where, it is said, there is some intention, at no distant day, of building a capacious dock. To this island it is considered that the filth (excrement not prisoners) might be conveyed.<sup>79</sup>

Whether the island was ever put to this use is uncertain. The 'capacious dock' referred to by the *Gazette* journalist was part of Darling's grander plan to establish a naval arsenal on the west side of Goat Island. Certainly by May of the same year, Darling was intending to moor the aforementioned *Phoenix* off the island and utilize its prisoners during the construction of the arsenal. The *Sydney Gazette* recorded:

Goat Island which lies at the entrance of the Parramatta River and forms the commencement of the harbour west of Sydney Cove, is on the eve of being converted into a naval arsenal and Mr Nicholson, the Master Attendant, who seems highly delighted with the measure, is most anxious that the views of HIS EXCELLENCY may be promptly carried out to the fullest effect.

On the west side of the island, which forms a complete shelter from the southerly gales, there is a depth of water to lazy the largest of vessel in the navy close to the shore. The Phoenix hulk is to be moored off this island, and the prisoners worked on shore.<sup>80</sup>

<sup>79</sup> Sydney Gazette 15 February 1926

<sup>&</sup>lt;sup>80</sup> Sydney Gazette 24 May 1826

Darling's intention to use the site as part of the harbour defence network was not immediately acted upon and other official uses were posed for the island including use as a dockyard, naval hospital, and turnaround point for vessels approaching Balmain.<sup>81</sup>

## Whaling

In the opening decades of the 19<sup>th</sup> century, whaling was an important early colonial industry in the Sydney region. In the late 1820s, Messer's Kemmis and Browne sought permission to establish a land based whaling station at Goat Island. This endeavour was rejected by the Colonial administration – Darling's successor Governor Richard Bourke believing that the island was too important for future defence purposes and stating that the island 'ought be reserved'.<sup>82</sup> Refer **figure 22**.



Figure 22: Unknown artist's portrait of Governor Richard Bourke (c.1835) Governor Bourke was a strong advocate of the use of the island for defence purposes. (ML SLNSW David Scott Mitchell Collection ML 125 - Digital order no.: a928182)

<sup>&</sup>lt;sup>81</sup> Clark & Clarke 2000: 11. For a period it was intended that a large dockyard be established on the Balmain peninsula. Captain Laws (RN) suggested using the southwest corner of the island as a fixed turning point to aid in swinging vessels into the proposed Balmain harbour (refer Mitchell to CS 30 October 1829 cited in Kerr 1985: 3)

<sup>&</sup>lt;sup>82</sup> Bourke to Hay 6 August 1832 in *HRA* 1(16): 693-694. Richard Bourke was Governor from 1831 to 1837

#### Chapter 4 - Early Colonial Interest

#### A Source of Stone

After considerable consternation in the 1820s, the island was finally utilized in an official capacity in May 1831 when the northeastern tip of the island (the later site of the Water Police Station) was established as a quarry. This quarry was opened and overseen by Captain Charles Wilson of the Department of Public Works and the principle purpose of the quarry was to supply high quality sandstone for public buildings in Sydney. The stone was cut by convicts and shipped the short distance (1.4 kilometres) to Sydney Cove where it was utilized.

Use of the quarry was relatively shortlived and ceased in 1832 when both Surveyor General Thomas Mitchell objected to the destruction of a possible defence site and the Colonial administration commenced restructuring of the Department of Public Works.<sup>83</sup> Despite its short period of use, the Goat Island quarry was relatively intensively used – Mitchell wrote in 1831 before its closure that the northeast point had been 'nearly all quarried away'.<sup>84</sup>

**Figure 23** shows Goat Island (with its alternate name Cockatoo Island) in its harbour setting in the years immediately after its first use as a stone quarry.

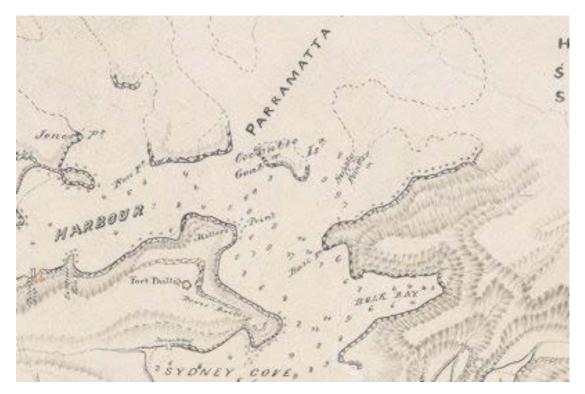


Figure 23: Thomas Florence's 'Port Jackson N. S. Wales' (1834) (ML SLNSW ZM2 811.15/1834/1 - Digital Order No.: a928865)

<sup>&</sup>lt;sup>83</sup> Kerr 1985: 4; Clark & Clark 2000: 11

<sup>&</sup>lt;sup>84</sup> Mitchell to Colonial Secretary 12 November 1831 AO NSW 2/8017.5 cited in Kerr 1985: 3

# Transformation



Gunpowder was widely used for weaponry and industrial purposes in early colonial Sydney and its safe storage was an issue for the Government and the public alike. *Sydney Gazette* editor Robert Howe pondered the need for safe gunpowder storage away from Sydney town in an article in 1827:

We have repeatedly intended, and as often omitted, to bring under the immediate notice of the Authorities what is generally considered to be the extreme danger of permitting the Powder Magazine to be so near, and in fact in the midst of the Town and in such a situation, if any incident were to happen, that would inevitably lay Sydney in ruins.

... we feel assured that the majority of inhabitants would repose much more comfortably were the magazine stationed on some isolated spot, especially as there is Goat Island, and a hundred other favourable sites in the vicinity of Darling Harbour that might be considered perfectly eligible for and altogether safe for the article of gunpowder to be secured.

... Twenty or thirty barrels were landed within the last ten days at Kings Wharf. The boat in which they were brought on shore continued for some time alongside one of the Colonial crafts, which had a blazing fire onboard, and sparks flying in all quarters. It was in the course of the day lodged at the Wharf and a gentleman happening to visit the spot on business, actually discovered a black native in the act of sitting upon a barrel, with a pipe in his mouth, from which the sable gentleman, unconscious of the danger to himself, his fellow creatures, the buildings and the ships, was leisurely puffing forth immense clouds.<sup>85</sup>

By the early 1830s, as Sydney and its population experienced considerable growth, the need to store gunpowder safely became tantamount. To remove the threat of an explosion in the township and centralize the storage of gunpowder for a multitude of purposes, Governor Bourke decided on Goat Island as an appropriate gunpowder repository. The island was near

<sup>&</sup>lt;sup>85</sup> Sydney Gazette 28 November 1827

## Chapter 5 – Transformation

Sydney town and its docks and transport vessels, yet isolated enough to be remove the threat of broad-scale damage from accidental explosions and able to be adequately secured.<sup>86</sup>

## Gunpowder

Gunpowder is a substance that burns very rapidly when ignited. Discovered in Asia nearly 1000 years ago it has been widely used as an explosive and as a weapons propellant. There are essentially two types of gunpowder:

#### **Black powder**

Black gunpowder was invented by the Chinese in the 9th century and was prepared from a mixture of saltpeter (Potassium Nitrate or Sodium Nitrate), sulfur, and hardwood charcoal dust. It was the only widely known and used practical explosive until the 19th Century. It is now primarily used for fireworks, model rocket engines and in reproduction weapons.

#### Smokeless powder

Smokeless gunpowder replaced black powder as a propellant at the end of the 19th century and is used in all modern weaponry.

Gunpowder used in Australia in the 19<sup>th</sup> century was typically black gunpowder, which was stored in large wooden barrels resembling wine barrels. These barrels were made by coopers or barrel makers

(References: wordnet.princeton.edu/perl/webwn; en.wikipedia.org/wiki/Gunpowder; www.firearmsmuseum.org.au/Survey/Glossary/GlosG.htm)

# Queens (Ordnance) Magazine

By January 1833 work had commenced on a gunpowder magazine complex on the western side of Goat Island. At that time, the *Sydney Herald* reported convict iron gangs from the *Phoenix* preparing the site in readiness for construction.<sup>87</sup> Initial works involved the construction of a wharf as well as significant quarrying and leveling. Some of the excavated stone (like that from the 1820's quarry) was again shipped off the island to be used in Sydney's public building program. The wharf appears to have been completed by May 1833.

Despite the completion of the wharf, it was not until May 1835 that the foundations for the first gunpowder magazine on Goat Island were laid – with the structure itself completed in 1837 (the year Queen Victoria ascended the throne in England), and the broader building program finished by 1839.

<sup>&</sup>lt;sup>86</sup> Kerr 1985: 4

<sup>&</sup>lt;sup>87</sup> Sydney Herald 17 January 1833

# Powder Magazine Design in the 18<sup>th</sup> & 19<sup>th</sup> Centuries

Powder magazines were designed to store gunpowder, which had to be kept cool and dry and shielded from fire to prevent spoiling, caking or ignition. A principle tenet of the design of such structures was that in the event of accidental explosion, their destruction would not (in theory) impact any adjoining buildings.

In the 18<sup>th</sup> century, magazine design advanced significantly when the French military engineer Vauban (1633-1707) set a new standard for the construction of powder magazines. Vauban was well qualified in matters of gunpowder, having attended 48 sieges and been responsible for repairing or constructing 160 fortifications.

Vauban's innovative designs centered on a rectangular building (generally 20 x 8 metres) with the side walls reinforced with external buttresses and contrasting thinner, gable walls. Typically, the building sported a 2 metre thick vault supporting a roof of slate (or two layers of tiles) to ensure that it was watertight and weatherproof – with wall ventilation and single doorway access. The magazine was generally sited within a walled enclosure with a single gate guarded by sentry posts.

These design principles were adopted by the British and remained relatively unchanged for the next 150 years. The typical construction of a powder magazine in the 18<sup>th</sup> and 19<sup>th</sup> centuries was as follows;

"By the eighteenth century, a modern ordnance depot powder magazine was usually a rectangular brick or stone barrel-vaulted building, with double skin walls and a raised wooden floor to combat damp and ensure good ventilation. Floorboards were dowelled, while doors, shutters and window frames were copper sheathed. Hinges, locks, handles and ventilation grills were similarly made of non-ferrous metal to reduce the danger of sparks. Above the barrel vault would be a pitched roof, the space between roof and vault sometimes filled with sand if there was considered to be a danger of enemy bombardment, whilst the outside walls usually needed heavy buttresses to support this load and resists the thrust of the vault...Inside the magazine powder barrels were stacked in bays separated by partitions of heavy studding. In the nineteenth century handling of barrels was sometimes aided by a wooden traveling hand-crane running the length of the interior below the apex of the vault..<sup>88</sup>

(References: Farwell, B. 2001. *The Encyclopedia of Nineteenth-Century Land Warfare*. W. W. Norton, New York: 841; Kent County Council. n.d. *The Rise of Artillery 1500-1800* refer <u>http://www.fortifications.org/printfreindly.cfm</u>; Coad, J. 1983. *Historic Architecture of the Royal Navy – An Introduction*. Victor Gollancz Ltd: 131-33.

#### Construction

The sandstone for the Queens Magazine was sourced directly from the island - petrographic analysis of the stone from the Queens Magazine and the Magazine precinct quarry indicates that buildings were almost certainly derived (at least in part) from that location.<sup>89</sup>

While the designer of the magazine has not been identified, the design contains all the attributes and clearly follows the accepted design of ordnance depot magazines constructed across the British Empire. The competence of stone selection and masonry work (and equally any of the defects) can be attributed collectively to Andrew Petrie, Walter Scott and George Barney.

<sup>&</sup>lt;sup>88</sup> Coad, J. 1983. *Historic Architecture of the Royal Navy – An Introduction*. Victor Gollancz Ltd: 131-33

<sup>&</sup>lt;sup>89</sup> Franklin 1997: 8

#### Chapter 5 – Transformation

#### Petrie & Barney

Andrew Petrie, known for his monumental stonework, was appointed as Overseer of Works at Goat Island in 1833 or 1834. By August 1834, he was acting as the Superintendent of Stockade as well undertaking his overseeing role. Discharged for misconduct (reasons unknown) in December 1835, his services were immediately sought by both the Colonial Architect and the Commanding Royal Engineer.<sup>90</sup>

Newly arrived Commanding Royal Engineer Captain George Barney assumed control of the works in January 1836 and immediately commissioned a plan of both the magazine and cooperage already under construction from Thomas Bird. The following month he reported to the Inspector General of Fortifications:

*L..transmit...a plan of the Magazine, Goat Island, for 3,000 barrels of powder now under construction by prisoners of the crown. The plan is defective, but the work is so far advanced as to (effect) its completion by the close of the year with the exception of covering the roof, for which purpose this Country does not offer any proper materials.*<sup>9</sup>

Barney had the building (and the associated cooperage connecting passage) roofed with imported Bangor Rag slate.<sup>92</sup> The 'defects' alluded to by Barney are not recorded though they may be apparent in variations between Bird's plan (**figure 24**) and the completed works – particularly variances in ventilation on the north gable of the magazine and the gable walls of the cooperage. The small size of the cooperage interior, which provided for inadequate storage and workspace, may also have been a defect identified by Barney. A new 'extensive cooperage' was constructed within 2 years of the original.<sup>93</sup>

<sup>&</sup>lt;sup>90</sup> He was later employed as Foreman of Works in charge of the Moreton Bay station he went on to become a distinguished Queensland pioneer – refer A. Morrison's 'Petrie, Andrew (1798 - 1872)', *Australian Dictionary of Biography*, Volume 2, Melbourne University Press, 1967, pp 325-326

<sup>&</sup>lt;sup>91</sup> Letter from the Commanding Royal Engineer to the Inspector General of Fortifications dated 24 February 1836 cited in Kerr 1985: 9

<sup>92</sup> Kerr 1985: 9

<sup>&</sup>lt;sup>93</sup> Kerr 1985: 11

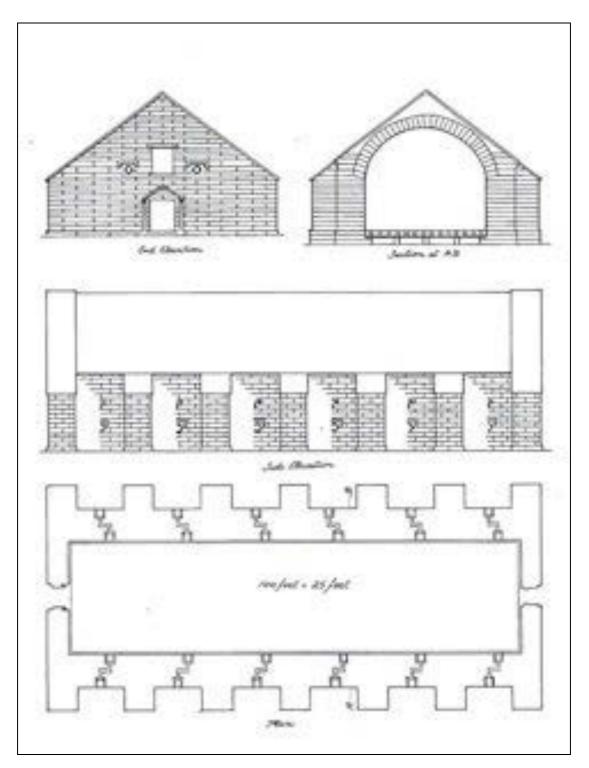


Figure 24: J. S. Kerr's reproduction of a plan of the Powder Magazine showing the building in plan, section and elevation (1836)

(Reproduced from a drawing by Thos. Bird dated 1 February SLNSW ML Reel 1108 – Kerr 1985: 9)

#### Chapter 5 - Transformation

#### **Delays**

While the facility was subject to controversy regarding the appropriateness of its design and capacity, the construction project was also hampered by numerous delays. J. S. Kerr (who produced the first historical analysis of the island in 1985) investigated these delays and determined that they were due to a number of factors – predominantly related to the use of a convict labour force. Chief amongst the causes of these delays were the lack of incentive schemes (resulting in the convicts doing only enough work to remain out of trouble); the hindrance to working mobility posed by working in chains, and time lost moving convicts to and from the island.<sup>94</sup>

The latter problem was alleviated in 1834 when a convict stockade (consisting of three portable wooden houses) was erected on the island to house the convict workforce onsite (**figure 25**).<sup>95</sup> The stockade houses or 'boxes' slept 20 men (five side by side on four trays).<sup>96</sup> The stockade was increased to house 200 men in 1836 and remained on the island until 1839 when it was dismantled and partially removed to Cockatoo Island to the west. Another structure erected on the island at around the same time appears to have been an elongated building located on the southern part of the island – generally believed to have been a temporary barracks for supervising personal.<sup>97</sup>



Figure 25: Reproduction of a convict box (2007) This structure is currently located in the Magazine precinct near the 'new' cooperage'/stores building. (Dan Tuck 2007)

Work pace also improved from 1835 when Governor Bourke ordered that irons be removed from those prisoners working on Goat Island as part of convict reclassifications advised by Secretary for the State of Colonies, Lord Aberdeen.

<sup>&</sup>lt;sup>94</sup> Kerr 1985: 5

<sup>&</sup>lt;sup>95</sup> Sydney Gazette 15 February 1834

<sup>&</sup>lt;sup>96</sup> Clark & Clark 2000: 13

<sup>97</sup> Kerr 1985: 5

Aberdeen's revisions saw the 171 prisoners on Goat Island receive '2<sup>nd</sup> Class' classification – defined as 'transportees from England in irons with no secondary colonial sentence'.<sup>98</sup>

In addition to being relieved of chains, from April 1835 the Goat Island convicts received instruction from a schoolmaster appointed by Bourke. The schoolmaster received pay of £100 per year and taught basic literacy skills to those on the island and those who remained on the *Phoenix*.<sup>99</sup> The schoolmaster also taught (separately) religious instruction and reading to a number of Aboriginal prisoners also detained on the island. This is discussed in detail later in the chapter.

## **Completion**

In January 1839, almost four years after the magazine foundation stones were laid, NSW had a new Governor in George Gipps and the initial building program on Goat Island was 'all completed'.<sup>100</sup> A report in the *Sydney Gazette* in the previous month described the island as:

"...a commodious and very handsome establishment. The buildings are hewn white stone, the foundation of solid rock, the possibility of dangers is carefully avoided, and the design does credit to the care and foresight of its projector?<sup>101</sup>

In addition to the wharfs, powder magazine and its associated cooperage (all mostly completed by 1837), the complex also featured an officer's barracks and kitchen (constructed by 1838), a sentry box, a stone wall around the magazine (and other retaining walls and drainage features), a blacksmiths shop, and possibly a lime kiln (refer **figures 26** – **37**).<sup>102</sup> The date of the latter structure, used to reduce shell lime for mortar, cannot be confirmed however Kerr suggests its construction is similar to other dated kilns from the ct830s to 1840s.<sup>103</sup>

With the first phase of island development completed, the Goat Island convict workforce was dispersed. The majority appears to have been moved *en masse* to Cockatoo Island to erect an 'Imperial convict establishment' and grain silos.<sup>104</sup> The last significant building to be constructed during the closing year of the 1830s was a stone shed built against the quarry wall to

<sup>&</sup>lt;sup>98</sup> Kerr 1985: 6

 $<sup>^{99}</sup>$  Iron Gang Returns December 1836 – SRNSW 4/6272

<sup>&</sup>lt;sup>100</sup> *Sydney Gazette* 15 January 1839 P.2. One of the most significant involved in the completion of the magazine complex wasWalter Scott, who had commenced as Foreman of Works on Goat Island by 1837. He saw the project through to completion in 1839 before joining the Colonial Architect's office

<sup>&</sup>lt;sup>101</sup> Sydney Gazette 27 December 1838 P. 3

<sup>&</sup>lt;sup>102</sup> Clark & Clark 2000: 14; Kerr 1985: 7-8; 12

<sup>&</sup>lt;sup>103</sup> Kerr 1985: 8

<sup>&</sup>lt;sup>104</sup> Kerr 1985: 11

#### Chapter 5 - Transformation

house a new cooperage – the original cooperage being adapted for use as a cartridge assembly laboratory (**figures 35** & **36**).<sup>105</sup> This structure was erected after the original convict workforce had been moved on and was built by a contingent of 27 prisoners on commuted sentences from the Moreton Bay penal settlement off the coast of Brisbane.<sup>106</sup>

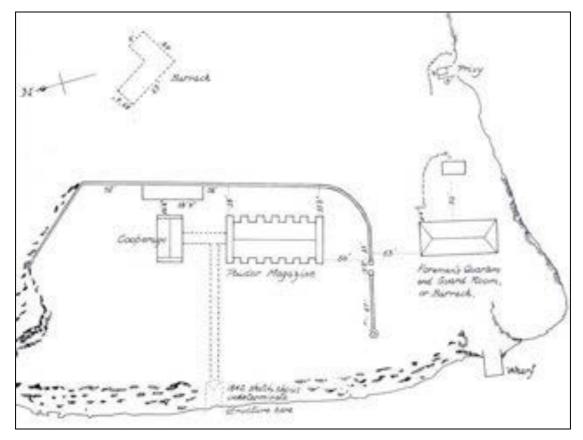


Figure 26: J. S. Kerr's sketch of the southwestern part of Goat Island (c.1844)

(Sketch based on information in field survey book of August 1842 [SLNSW ML B1441] and a sketch plan of the island dated November 1844 [PRO, WO 55.853] – Kerr 1985: 12)

<sup>&</sup>lt;sup>105</sup> Clark & Clark 2000: 14

<sup>&</sup>lt;sup>106</sup> Kerr 1985: 11; Sydney Gazette 7 September 1839



Figure 27: Queens Magazine & Cooperage/Cartridge Magazine (October 1923) This image predates transformation of the area by the Harbour Trust to create a shipyard in the mid 1920s. (SRNSW Digital ID:9856\_a017\_A017000035)



Figure 28: Image titled 'Powder magazine, built in 1836, in use as a naval store for the Sydney Harbour Trust, Goat Island (NSW)' (n.d.)

This image is similar to another photograph dated 1943. It shows the magazine with the gantry crane shed constructed (c. 1931) to the immediate left with SHT Trust shipyard tramways in the foreground (1925 – 1931).

(SRNSW Digital ID:9856\_a017\_A017000037)

# Chapter 5 – Transformation



Figure 29: Queens or Ordnance Magazine – view SSW (2007) (Dan Tuck 2007)



Figure 30: Queens or Ordnance Magazine – view SSE (2007) (Dan Tuck 2007)

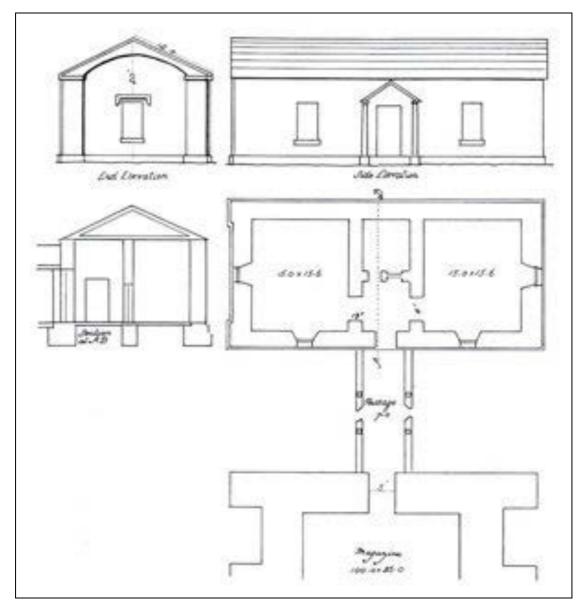


Figure 31: J. S. Kerr's sketch of The Cooperage, Goat Island (1836)

(Sketch redrawn from an enclosure to a letter from Captain George Barney to the Inspector General of Fortifications dated 23 February 1836 SLNSW WO 85.552 Reel 1108)

# Chapter 5 – Transformation



Figure 32: Cooperage/Cartridge Laboratory – view NNW (2007) (Dan Tuck 2007)

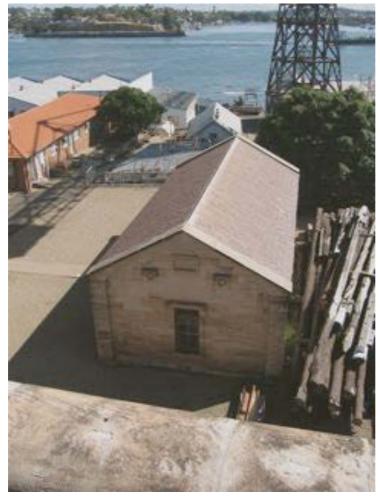


Figure 33: Cooperage/Cartridge Laboratory – view WNW (2007) (Dan Tuck 2007)

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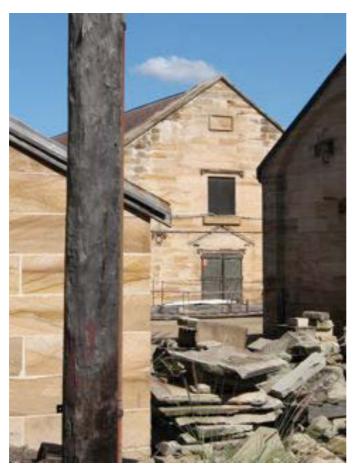


Figure 34:

Stone shed ('new' Cooperage), Queens Magazine & 'old' Cooperage/Cartridge Lab – view S (2007)

(Dan Tuck 2007)

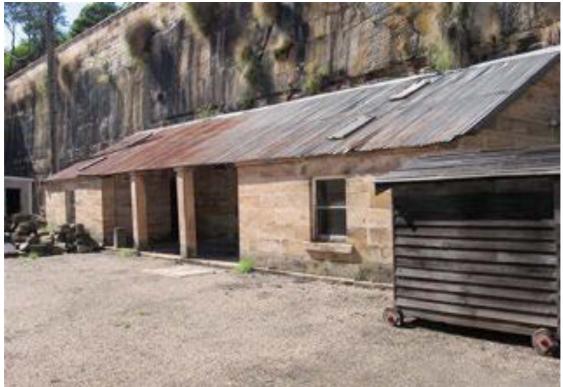


Figure 35: Stone shed (cooperage) built against the quarry wall in 1839 – view NE (2007) The structure was later used as a Trust mess room (post - 1925). The MSB reproduction of a c.1830s portable convict sleeping quarters is visible to the right of frame.

(Dan Tuck 2007)



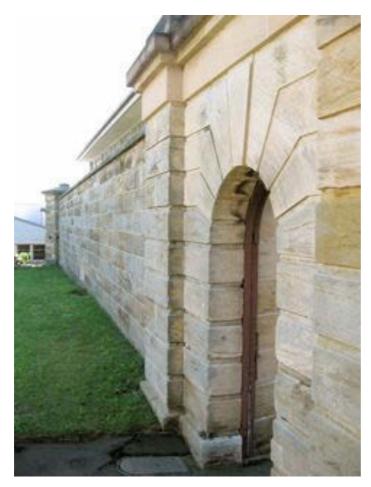


Figure 36: Perimeter wall around the magazine precinct - view WNW (2007)

(Dan Tuck 2007)



Figure 37: Foreman's Quarters or 'barracks' constructed in c.1838 – view ESE (2007) (Dan Tuck 2007)

# **Goat Island Prisoners**

Between 1833 and 1838, Goat Island was outfitted as a colonial magazine and barracks complex designed to safely house the gunpowder required for public works in the Sydney area. During the period of the construction of these works, colonial convicts were accommodated on Goat Island where they were engaged in such tasks as quarrying, construction and labouring. Perhaps the most famous (and tragic) prisoner to live on the island was Charles 'Bony' Anderson.

# Charles 'Bony 'Anderson

In 1834, 18-year-old ships apprentice Charles 'Bony' Anderson was sentenced to be transported to Sydney Cove for 7 years for involvement in an Exeter housebreaking. He had previously been in the Navy and had received brain damage on active duty, which resulted in periodic violence (particularly when drunk).

When Anderson arrived in Australia aboard the *Howard Tanner* he was put in irons on account of him being difficult to manage. With 17 of his shipmates he was then sent to Goat Island.

Over the next 2 to 3 years Anderson was constantly in trouble – attempting to escape three times, using 'blasphemous language' and assaulting guards and fellow prisoners. He received innumerable floggings and in 1837 was chained to a rock cavity on the southern side of the island – Andersons couch (see below).



The length of the period during which Anderson was tethered to 'Andersons couch' is difficult to determine. By August 1838 he had certainly been released - having been charged with attempted murder and shipped to the convict settlement at Moreton Bay. Camp commandant Maconochie attempted to reform Anderson and by 1845 he was working on nearby Cockatoo Island, being granted a ticket-of-leave in 1848. He was granted his freedom in 1854.

(References: Rosen & Manns. 2003. 'Who owns Callan Park? A Cautionary Tale' in *Australasian Psychiatry* 11 (4), 446-451; Clark & Clark 2000: 14-16; Hughes 1998: 473-474; Image of Anderson's couch on the southern part of the island (view W) - Dan Tuck 2007.

# **Other Prisoners**

Other less well-known prisoners of the Crown who spent time on Goat Island included the likes of miner Francis McNamara – a 21 year old native of Wicklow who received a seven year sentence in a Kilkenny court for 'plaid stealing', and was subsequently transported to Australia (arriving September 1832).

In Australia, McNamara was assigned to the aforementioned convict hulk the *Phoenix*. By January 1833, McNamara was working on Goat Island as part of a 12-month stint in the 'Iron Gang'. After working in chains, McNamara served time at Hyde Park Barracks and again on the *Phoenix* as part of its boat crew – thereafter things went rapidly downhill. His behavior aboard the Phoenix described as 'intolerable'.

During the mid 1830s McNamara appears to have been in near constant trouble and his record notes that he was frequently absent without leave, assaulted fellow prisoners, was found drunk in a public house, was suspected of stealing, and was often insolent and 'neglectful of duties'. His crimes while a convict resulted in a variety of punishments including numerous reprimands, floggings, and stints in isolation. He was also transferred to the Port Macquarie penal settlement in May 1836 for reasons unknown and received the curious sentence of 'Treadmill – 2 months' in November of the same year for the aforementioned assault.

By July 1842 Francis had received a colonial sentence of life in the Sydney Quarter Sessions Court. This was later (July 1844) reduced to seven years perhaps suggesting that at the age of 33, after twelve years imprisonment in the Colony, he had mellowed somewhat.<sup>107</sup>

<sup>107</sup> All information from the Hyde Park Barracks, Sydney – Database kiosk

## **Goat Island Aboriginal Prisoners**

Supreme Court records and newspaper reports from the 1830s indicate that some Aboriginal prisoners, like European convicts, were incarcerated on Goat Island.<sup>108</sup>

## <u>Trial 1</u>

On 11 February 1835, nine Aboriginal men were brought to trial in the Sydney Supreme Court on charges of 'stealing in a dwelling house and putting in fear'. These charges specifically related to the 25 October 1834 burglary of tea, sugar, beef, and 'sundry articles of wearing apparel' from the dwelling-house of a Mr. Alfred Hill Jaques, of Brisbane Waters.

The defendants were known by the names Little Dick, Whip-em-up, Monkey, Charley Muscle, Little Freeman, Leggamy, Major, Currinbong Jemmy and Tom Jones.<sup>109</sup> Attending the defendants was Lake Macquarie Missionary to the Aborigines Reverend Lancelot Threlkeld (who acted as interpreter), and Messrs Therry and Poole (who acted as Advocates at the suggestion of the Court).<sup>110</sup>

The court heard from principle witness Alfred Jaques who stated that a large group of Aboriginal men had came to his property and that he had he presented his fowling piece (gun) at them.<sup>III</sup> At that point, he said, three separate groups of Aboriginal men joined together and began throwing stones and a spear – the latter hitting the second witness, convict William Rust. Jaques further added that his possessions were stolen when he was driven out of the house, which was thereafter raided by the Aboriginal party.

One of the main problems bought up during the trial was the accurate identification of the principle culprits. There were around 90 Aboriginal men involved in the attack and these appear to have gathered from a number of different tribes to commit the subject robbery.<sup>112</sup> Complicating the situation further was witness testimony, including that of Threlkeld, which stated that the Aboriginal men 'looked alike' at the time of the crime and had then changed in appearance since of the events. Further court confusion was caused by the variation in the

<sup>&</sup>lt;sup>108</sup> R. v. Monkey and others, Supreme Court of New South Wales - Burton J., 11 February 1835 presented in *Decisions of the Superior Courts of New South Wales, 1788-1899* - Published by the Division of Law, Macquarie University

<sup>&</sup>lt;sup>109</sup> Burton, Notes of Criminal Cases, SRNSW 2/2418, vol. 17, p. 25-35

<sup>&</sup>lt;sup>110</sup> Sydney Herald 12 February 1835; Burton, Notes of Criminal Cases, SRNSW, 2/2418, vol. 17, p. 25-35

<sup>&</sup>lt;sup>111</sup> small gun

<sup>&</sup>lt;sup>112</sup> The Aboriginal men involved in the attacks are believed to have come from opportunistic recruitment of clan groups from Wyong, Brisbane Water and Tuggerah Beach

## Chapter 5 – Transformation

names of some of the accused, which were sometimes related to the place where they were born, and sometimes to the place where they resided.

Ultimately, Whip-em-up, Monkey and Tom Jones were found guilty and sentenced to 'death recorded'. The remainder were found not guilty.

# <u>Trial 2</u>

Other attacks on settlers were the subject of a second trial the following day on 12 February 1835. Several of the individuals brought before the court had been involved in the trial undertaken on the previous day and had been brought back before on alternate charges. In this instance, Laggamy was charged with 'highway robbery', Little Dick, Toby and Little Freeman were charged with 'stealing in a dwelling &c' and Mickey Mickey and Charlie Myrtle were charged with rape. All were found guilty and sentenced to 'death recorded'.

# Trial 3

This original attack on Jacques on 25 October 1834 resulted in a second trial before Judge Burton on 5 August 1835. In this instance, two men named Hobby and Maitland Paddy were tried for robbery in the Jacques' dwelling house.<sup>113</sup> Jacques claimed that he saw a party of 50 or 60 Aborigines approach his house and demand meat in a hostile manner, at which point he and associate Rust closed up the house, barricading themselves inside. Hobby was stated to have then boasted that 'black fellow was best fellow' which Jacques took to mean the most powerful. Eventually Jacques and Rust escaped to another farm for refuge, leaving Jacques' home to be ransacked.

Rust was said to have asked Hobby why they were stealing to which Hobby responded 'Black fellow master now - rob every body - white fellow eat bandicoots & black snakes now'. Rust estimated that there were 150 Aborigines involved altogether. Hobby was found guilty, and Maitland Paddy not guilty, with Hobby sentenced to death recorded.

# Death Recorded (Goat Island)

The decision of 'death recorded' meant a formal sentence of death, without an intention that the sentence be carried out. In the early 19th century the judge had considerable discretion where an offender was convicted of a felony punishable by death (except in the case of murder). If the judge, or the Governor, thought that the circumstances made the offender fit for

<sup>&</sup>lt;sup>113</sup> Burton, Notes of Criminal Cases, SRNSW, 2/2420, vol. 19, p. 1

the exercise of Royal mercy, then instead of sentencing the offender to death, he could order that a judgment of death be recorded. For all practicable purposes, this judgment usually transpired as a sentence of 'transportation for life'.<sup>114</sup>

In the above cases, the original intention on the part of the judge was to send the sentenced prisoners to Van Diemens Land where they would be assigned to settlers. The Lieutenant Governor of Van Diemens Land however objected to that plan and those found guilty were instead confined on Goat Island.

On Goat Island the Aboriginal prisoners were employed in cutting stone like many of the other convicts, but were kept separate from other prisoners. It was intended that in addition to the island incarceration, the group were also to be taught 'Christian Religion' and 'English Education'.<sup>115</sup> The exception was Mickey Mickey who had been found guilty of rape. Lancelot Threlkeld recorded in his *Annual Report of the Annual Mission at Lake Macquarie* (1835) that Mickey was ultimately hung for his crimes.<sup>116</sup>

It would appear that all of the Aborigines who were sent to Goat Island were released some time in 1836. Threlkeld noted in his *Annual Report of the Mission at Lake Macquarie* (December 1836), that they were:

... all liberated and escorted by their preceptor Mr Langhorne to this place (Lake Macquarie), with instructions from His Excellency to endeavour to establish them at, or near my residency."<sup>7</sup>

None of the Aboriginal men stayed at Threlkeld's mission for very long despite promises on Threlkheld's part of fishing boats and nets for all the ex-Goat Islanders who remained with him. Most of the Aborigines appear to have absconded almost immediately and returned to their own home districts on the Brisbane Water.<sup>n8</sup>

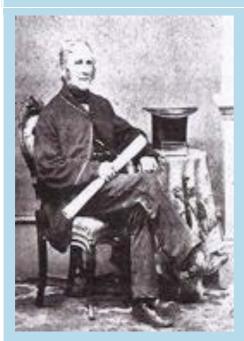
 <sup>&</sup>lt;sup>114</sup> Decisions of the Superior Courts of New South Wales, 1788-1899. Published by the Division of Law, Macquarie University
 <sup>115</sup> Bourke to Secretary of State, HRA 1(17): 718; See also Australian 13 February 1835; Sydney Herald 16 February 1835;
 Sydney Gazette 14 February 1835

<sup>&</sup>lt;sup>116</sup> Gunson, N (ed.). 1974. *Australian Reminiscences and Papers of L.E. Threlkeld: Missionary to the Aborigines 1824-1859*. Australian Aboriginal Studies No. 40, Ethnohistory Series No. 2, [2 Volumes]. Australian Institute of Aboriginal Studies, Canberra: 121

<sup>&</sup>lt;sup>117</sup> Gunson 1974: 133

<sup>&</sup>lt;sup>118</sup> Annual Report of the Mission to the Aborigines 1836 presented in Gunson 1974: 133

#### George Langhorne



The person responsible for providing education and religious instruction to the Aboriginal prisoners at Goat Island was Wesleyan missionary George Langhorne. Langhorne appears to have arrived in Australia in August 1832 when he was accepted as a catechist for the Missionary Society. He was instated on Goat Island in October 1835 under the direction of Governor Richard Bourke on the schoolmaster salary of £100 per annum.

As stated explicitly by Bourke, Langhorne's job was 'teaching the elements of Christian Religion and of English Education to eight Aboriginal blacks, who have been placed on Goat Island under a sentence, commuted from that of death'. The exact nature of Langhorne's teaching (and its relative success or failure) is unknown.

Langhorne appears in the Goat Island Iron Gang Returns for all of 1836 and appears to have left the island when the sentences of the Aborigines incarcerated there expired in late 1836.

On leaving Goat Island, Langhorne moved to Victoria where he became a prominent identity and founder of Victoria's first Aboriginal mission on the Yarra - a reserve of 875 acres now comprising the Botanical Gardens. He returned briefly to Sydney in August 1837 to marry Mary the eldest daughter of Reverend R. Cartwright.

In addition to his Victorian mission work he was also involved with the establishment of the Native Police. Commander of A Native Police Corps was established at Port Phillip (proto-Victoria) in September 1837, with a South African, Christian De Villiers as Officer in Charge. Allegations of misconduct led to his resignation in December. Missionary George Langhorne took his place temporarily - perhaps the first and only time such a unit was 'commanded' by a missionary. For a period, the Yarra mission was placed under the control of an overseer. Langhorne was ultimately deemed an inappropriate person for a police role, which led to the reappointment of De Villiers in September 1838. He resigned from the Yarra mission in mid 1839 and became a pastoralist with his brothers for a time before reviving his religious interests and becoming an Anglican priest.

Aside from his missionary and pastoral duties, Langhorne is also credited with the naming of the Melbourne inner eastern suburb of Prahran – a corruption of a native word. Langhorne recalled the naming in a letter in 1889:

With regard to the origin of the word Prahran-now, I believe, a large town or city-on a drizzly, rainy day of late autumn, in 1837, Robert Hoddle (Surveyor-General) strolled into my hut at the Government Station at Pur-ra-ran-for so I named it-a compound of two Aboriginal words, meaning 'land partially surrounded by water.

(References: Bourke to Secretary of State 12 October 1835 in *HRA* 18: 718; Iron Gang Returns 1836 & 1837 SRNSW 4/6272; The 6<sup>th</sup> Annual Report of the Mission to the Aborigines 1836 in Gunson 1974: 132 – 133; Foxcroft 1941: 39 – 49; Cooper c.1912; Image from Victorian Historical Magazine 1914 3(12): 145)

# **Other Aboriginal Prisoners**

Aside from the Brisbane Water Aboriginal men detailed above, the island was also the place of incarceration of men from other mobs including one man named Purimul from Putta who was held on a charge associated with the death of Colonial Botanist Richard Cunningham during an expedition in the interior in April 1835. Richard was the brother of famed botanist, explorer and author Allan Cunningham. Purimul was held in custody on Goat Island in 1836 despite there being no evidence against him and no intention to put him to trial.<sup>119</sup>

<sup>&</sup>lt;sup>119</sup> Threlkeld in Gunson 1974: 132-133

# Water Police Station

In October 1835, just five months after the foundations of the Queens Magazine were laid on the western side of Goat Island, the Committee of Police and Gaols recommended stationing the colonial water police boat on the northeastern tip of Goat Island.

# Sydney Water Police from 1789

Governor Phillip established a 12 watchmen water patrol to police Sydney Harbour at night in 1789. As the town population grew and the harbour became busier, the size of the patrol was increased and became known as the 'Rowboat' or 'Harbour' Guard.

This force continued under successive Governors and in time became the Water Police (c.1833). Initially, the Water Police, under the control of a 'conductor' (sergeant), were stationed at two harbour locations – Longnose Point and Garden Island. In 1837 the Garden island operation was moved to Watsons Bay and that at Longnose Point to Goat Island.

The principle activities of the force were to apprehend smugglers, prevent thieving on Sydney's busy waterfronts, supervise harbour activities and prevent the escape of convicts by sea.

The section expanded in the late 1830s and by 1841 the Water Police, comprising 20 personnel, were located at three strategic points - Watsons Bay, Goat Island, and Cockatoo Island. They remained on Goat Island until 1865.

(References: Kerr 1985: 14; Clark & Clark & Clark 2000: 16 - 17; http://www.policensw.com/info/history; http://www.police.nsw.gov.au/community\_issues/marine\_crime/history)

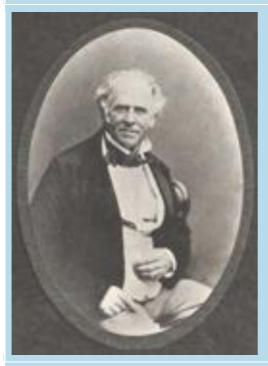
The Ordnance Department, which effectively controlled the island and managed the magazine works, agreed to allow the police boat to use the island in January 1837. To separate the colonial government's water police precinct from the rest of the island, Ordnance engineer George Barney commanded a 'wet ditch' be built by a small group of convicts.<sup>120</sup> This ditch (often referred to as 'Barney's Cut'), created a small, severed peninsula isle, physically and administratively separated from its parent island.

With demarcation established, and on-island communication facilitated by a small bridge, the Governor (via the Colonial Secretary) directed the Colonial Architect Mortimer William Lewis to design a station house for the water police site.

Refer ensuing text box.

<sup>&</sup>lt;sup>120</sup> Colonial Secretary to Colonial Architect 23 January 1837 SRNSW 2/8017.2 cited in Kerr 1985: 14

### George Barney & Mortimer Lewis





George Barney (1792-1862) was the Wolverhampton born son of a drawing master commissioned as second lieutenant in the Royal Engineers in July 1808. By 1825, after service in Peninsular war, the West Indies, Guadeloupe and Jamaica, he was promoted to Captain.

Barney came to Australia with his family in 1835 where Governor Bourke put him in charge of convict buildings and various civil works in addition to his regular military duties. He later became Superintendent of Public Works.

Barney was involved in a number of major military projects including the construction of Victoria Barracks (Paddington), which commenced under his supervision in 1841. Barney reached the rank of Lieutenant Colonel – being succeeded in that position in 1843. Thereafter he continued a varied and productive life as a colonial engineer, bank director, crown lands commissioner and surveyor general.

Mortimer William Lewis (1796-1879), surveyor and architect, was born in London where he worked from age 19 as a surveyor and draftsman in the London office of the Inspector-General of fortifications, and later as a private practitioner. He then received an appointment as assistant surveyor in the office of the Surveyor-General of New South Wales in 1829 and arrived in Australia in March 1830.

Under the Surveyor-General, T. L. Mitchell, Lewis mapped the Great Dividing Range west of Sydney and was appointed Town Surveyor, then Colonial Architect (1835) after Ambrose Hallen. Lewis held the latter post for fifteen years.

Lewis was a competent and prolific architect and building supervisor. He oversaw the construction of Sydney's Government House (1838), and designed five gaols, three watchhouses, two police stations, three court-houses, a school, a customs house at Port Phillip and twelve churches. Among his most notable works are the Darlinghurst Courthouse, the Australian Mu-

seum, and the gothic style St Johns Church, Camden. Lewis suffered a kidney complaint and died after a short illness on 9 March 1879. He was buried in South Head cemetery, Sydney.

(Sources: Barney, George (1792 - 1862)', *Australian Dictionary of Biography*, Volume 1, Melbourne University Press, 1966, pp: 60-61. Image c.1860s NLA nla.pic-an23182499.

Morton Herman's 'Lewis, Mortimer William (1796 - 1879)' in *Australian Dictionary of Biography*, Volume 2, Melbourne University Press, 1967, pp: 112 - 113; Image 'Mortimer Lewis holding an architectural drawing' (1860 – 1865) from ML SLNSW MIN 367 digital order nos. a128017h.jpg)

## Chapter 5 – Transformation

Lewis's chosen design for the station appears to have been adapted from a cottage plan depicted in Loudon's 1833 *Encyclopedia of Cottage, Farm & Villa Architecture* - specifically design XIV 'a dwelling for a man and his wife, with one servant and a grown-up son or daughter'.<sup>121</sup> Lewis's modification of the *Encyclopedia* design varied only in the removal of the verandah, the alteration of some of the openings into arched windows, and the modification of the internal domestic rooms (water closets, kitchen and pantry) to house an additional bedroom, constable's rooms and twin cells.

Budgeted in 1837, tenders were called for construction of the station house in early 1838. By June of the same year the *Australian* reported the Police Station built:

The new Water Police Station at Goat Island is completed and was taken possession of Tuesday last. Telegraphs are erected on this and Garden Island to correspond with that at the Chief Magistrate's Residence.<sup>122</sup>

**Figures 38** – **41** show the Water Police station; **figures 42** – **45** show variations artistic depictions of the island in the mid 19<sup>th</sup> century.



Figure 38: Water Police Station – view E (2007) (Dan Tuck 2007)

<sup>&</sup>lt;sup>121</sup> Loudon, J. 1833 Encyclopedia of Cottage, Farm & Villa Architecture: 58-61

<sup>&</sup>lt;sup>122</sup> Kerr 1985

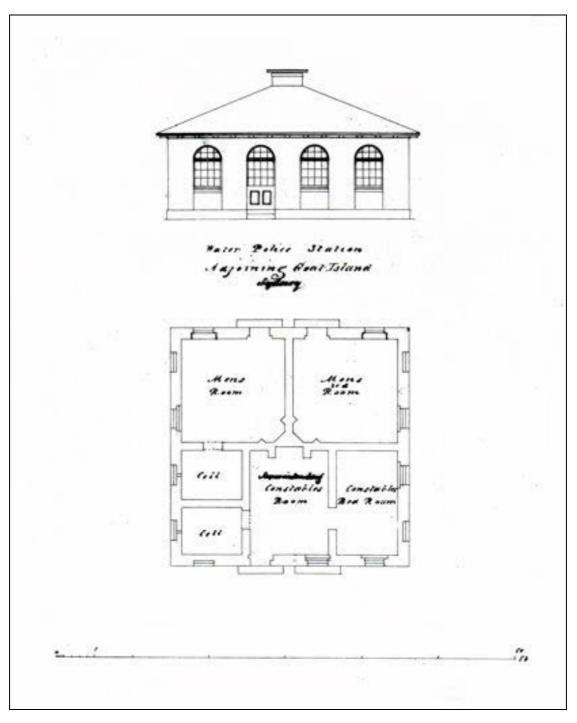


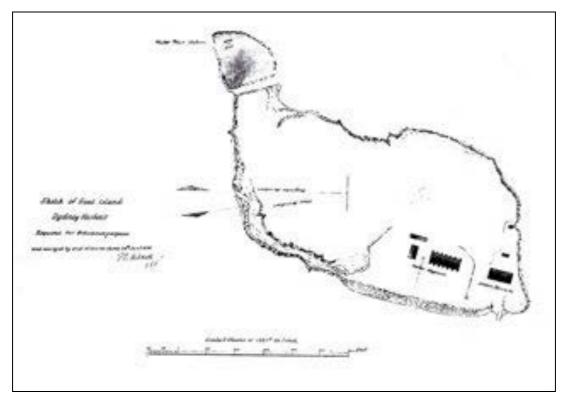
Figure 39: Plan for the Water police Station adjoining Goat Island (1938) Plan drawn by W. H. Fernyhough under the supervision of Mortimer Lewis.

(SRNSW Plans of Gaols X694 - Reel 2660)

## Chapter 5 – Transformation



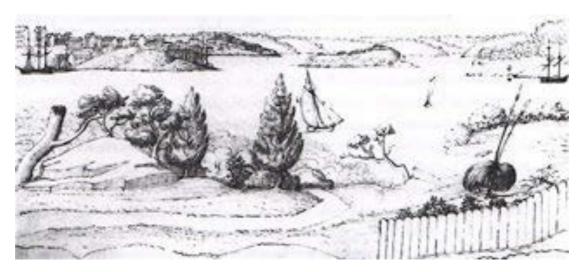
Figure 40: The Cut (wet ditch) – view NNE (Dan Tuck 2007)



#### Figure 41: Thomas Mitchell's Sketch of Goat Island Sydney Harbour (June 1844)

This plan shows the main buildings on Goat Island completed by 1844. The Water Police Station is shown isolated at the northeastern tip of the island separated by the 'wet ditch' cut.

(SRNSW Plans showing the location and outline of public buildings or blocks of land required for Ordnance purposes [Surveyor General] Series No.13863, X857)



#### Figure 42: P. Phelp's sketch of Sydney Cove & Goat Island (c.1840 – 1865) Image shows the Water Police Station, the 'house on the hill' temporary barracks and the Foreman's Quarters/Barracks.

(ML SLNSW ZDL PX 57)



Figure 43: Frederick Garling's 'Goat Island - place of punishment for prisoners' (1841) (DL SLNSW from Views of Sydney, ca.1835-1845 Call no.:DG\*D 14 Digital order no.: a352003)

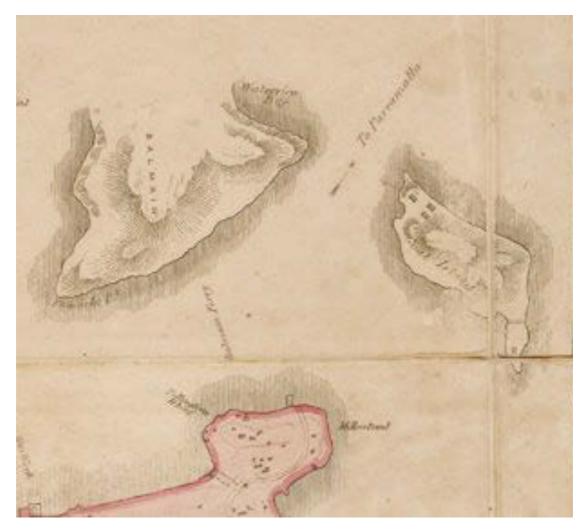


Figure 44: William Henry Wells 'Map of the City of Sydney (1842) (ML SLNSW ZMC 811.17/1842/1)



Figure 45: Walter Mason's View of Goat Island, Port Jackson (1857) Goat Island can be seen in the centre of frame beyond the tall ships. The Water Police station is visible with flag mast adjacent.

(NLA nla.pic-an8017127-v.jpg)

# Consolidation



By the 1840s Goat Island was principally a gunpowder storage facility under the control of the Ordnance Department with a small Water Police enclave on the northeastern tip separated from the island proper by a wet ditch.

The island's gunpowder storage capacity was already stretched by this time, as the facility was obliged to accept storage of not only British Government and Colonial administration gunpowder but also gunpowder of merchants. The latter responsibly arose when construction of the Queens Magazine was near completed and was a consequence of the Act *William IV No.7* (1836) that required merchant's powders be deposited in Government care.<sup>123</sup> The passing of this act was presumably aimed at ensuring that all gunpowder, whether civilian or Government owned, was adequately and safely stowed. Had this law been enabled prior to the initial magazine construction works on Goat Island the original magazine would arguably have been designed and constructed at a considerably larger scale.

By the mid 1840s conflicting and competitive use of the gunpowder storage facilities was causing much consternation amongst Ordnance Officers who considered storage of merchant gunpowder inconsistent with the appropriate and safe management of the Queens magazine and its military and public works stores. Official requests to remove merchants' gunpowder were forwarded to the Colonial Architect and the relevant Colonial and British authorities in 1847 and by 1850 there was an intention to construct additional facilities to separate public from private gunpowder stores.<sup>124</sup>

<sup>&</sup>lt;sup>123</sup> Kerr 1985: 16

<sup>&</sup>lt;sup>124</sup> Kerr 1985: 16

## A New Magazine

Establishing an appropriate location and design for additional gunpowder storage at Goat Island was no easy task. This was largely because the Ordnance department who managed the facilities answered to the War Office in England while the construction of facilities was the responsibility of the Colonial Office. Negotiations between the relevant authorities were complex and protracted and it was not until 1850 that all parties had agreed to a merchant gunpowder magazine on Goat Island and Colonial Architect Edmund Blacket had been directed to design the magazine.<sup>125</sup>



## **Edmund Blacket**

Edmund Thomas Blacket (1817-1883), architect, was born on 25 August 1817 in Surrey, England, son of James Blacket, draper and later merchant, and his wife Margaret Harriet, née Ralph. After working in the family business (drapery-merchants) and at his brother's mill he joined the Stockton and Darlington Railway Co., where he trained as an engineer and became incidentally a skilled draftsman and surveyor. He and his wife Mary sailed to Australia in the *Eden* reaching Sydney on 3 November 1842 carrying letters of introduction to Bishop Broughton and Charles Nicholson.

Governor Richard Bourke appointed Blacket valuator of the Sydney ward and inspector of teaching and building in Anglican schools. He assumed the role of architect and after seven years had established a viable practice, and had been appointed diocesan architect on account of his outstanding knowledge of Gothic styles.

In 1849 he succeeded Mortimer Lewis as colonial architect – a position he retained until 1854 when he resigned to accept an invitation by the Senate of the University of Sydney to design its first buildings. From that time his practice and reputation grew markedly. Commissions included schools, colleges, banks, hospitals, commercial buildings and domestic work in addition to numerous Anglican churches that were his chief interest. Buildings attributable to Blacket include St Andrews Cathedral (City), St Stephens (Newtown) and Morts Wool Store.

In 1880 his son Cyril joined the firm, which was then known as Blacket & Son. Blacket died at his home in Petersham on 9 February 1883, and was buried at Camperdown Cemetery.

(References: H. G. Woffenden, 'Blacket, Edmund Thomas (1817 - 1883)' in *Australian Dictionary of Biography*, Volume 3, Melbourne University Press, 1969, pp: 173 - 175; Image SLNSW GPO 1 - 12251)

<sup>&</sup>lt;sup>125</sup> The complex negotiations between the Imperial War Office and the Colonial Office relating to the management of the Goat Island facility and the construction of the Colonial Magazine are detailed in Kerr 1985: 16–20

Though Edmund Blacket was a talented architect and the designer of many renowned public works structures, he had no particular experience in powder storage design and was torn between the different objectives of the administrative parties - Ordnance wanted a conservative, heavy built structure, while the Colonial administration wanted something that could be built speedily and relatively cheaply.

Blacket's ultimate design for a merchants' gunpowder magazine (1850-51) was for a relatively lightweight structure with a thin skin, interior racking system and conventional windows. This was in marked contrast to the Queens Magazine with its massive walls and buttresses and was not well received by the Ordnance Department and military engineers. William Coles (Clerk of Works - Royal Engineers Office), for instance, reviewed Blacket's plans and reported to the Inspector General of Fortifications that the structure '... does not agree with the principles generally adopted in the construction of Powder Magazines'.<sup>126</sup> Figure 46.

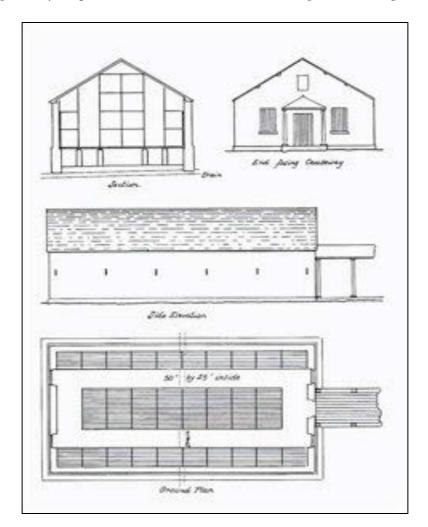


Figure 46: J. S. Plans for a Merchant's Gunpowder Magazine (1852) (Redrawn from original plan by William Coles at SLNSW WO 55.856.f.561 Reel 1114 by Kerr 1985: 19)

<sup>&</sup>lt;sup>126</sup> Kerr 1985: 18; SRNSW Approved schedule 2/624B

## Chapter 6 - Consolidation

Subsequent delays in approval meant that a number of temporary storage solutions had to be adopted. These included the use of moored vessels (such as the Brig *Cameo*) for interim storage.<sup>127</sup>

## **Colonial Magazine Construction**

Despite numerous objections, Blacket's design was adopted and works on the new magazine commenced in the early 1850s (possibly 1852). As with the genesis of the design, the construction phase was not without difficulty and in early 1853 Percival Wilkinson (Storekeeper, Ordnance Office) advised the Colonial Secretary that the magazine was 'far from a nearly finished state'.<sup>128</sup> At the time, the floors had not been laid, the building was not roved and the doors and windows had not been hung.

By late 1853 the new magazine had been completed.<sup>129</sup> In addition, restorative works including floor renewal had been undertaken on the nearby Queens Magazine (completed by March 1854).<sup>130</sup> Collectively, the new magazine and the repair work undertaken on the Queens Magazine increased Goat Island storage capacity to such an extent that the brig *Cameo* was relinquished from storage duties in 1854.<sup>131</sup>

## **Colonial Magazine Extension**

When Wilkinson vested the Colonial magazine worksite in 1853, he remarked that the structure was:

... inadequate in capacity and arrangement, to the present (without reference to the future) wants of this rising colony.<sup>132</sup>

Wilkinson's assessment proved to be spot on and by 1855 rapidly rising demands for gunpowder due to public works expansions and the growth of the NSW and Victorian goldfields, ensued that the Goat Island suite of storage facilities were again inadequate to meet public and private demand.

Short-term solutions included the storage or powder in tents on the island and the securing of the brig *Lady Mary* as a 'temporary floating gunpowder magazine' at a cost of £300 per

<sup>&</sup>lt;sup>127</sup> Sydney Morning Herald 2 November 1853

<sup>&</sup>lt;sup>128</sup> Wilkinson Report 16 May 1853 SRNSW 2/642B

<sup>&</sup>lt;sup>129</sup> Clark & Clark 2000: 17

<sup>&</sup>lt;sup>130</sup> Kerr 1985: 23

 $<sup>^{\</sup>rm 131}$  Colonial Secretary to Colonial Architect 30 March 1854 SRNSW 2/642B

<sup>&</sup>lt;sup>132</sup> Wilkinson Report 16 May 1853 SRNSW 2/642B

year.<sup>133</sup> The latter measure proved problematic – especially when the vessel's deck leaked and merchant gunpowder was spoiled.

Planning for additional storage commenced in the mid 1850s with a number of proposals mooted including:

- Plans for a new magazine at Goat Island prepared by Colonial Architect Alexander Dawson in 1856. This magazine (never constructed) was to be a free standing stone building with and iron roof.
- Plans for off site storage including suggestions on the part of John Buchanan (Colonial Storekeeper) and others for utilizing smaller magazines attached to other facilities such as those at Dawes Battery, Fort Macquarie and Fort Denison.<sup>134</sup>

In 1859, Colonial Architect Alexander Dawson scrapped planning for a new freestanding structure and instead presented a plan to add extra storage capacity to the Colonial Magazine.<sup>135</sup> To achieve this end he designed additions to either end of the extant magazine that would triple capacity. As with the designs for the original structure prepared by Blacket, Dawson's plans for the new additions appear to have been roundly criticized – a note written on the letter accompany Dawson's drawing describing the proposal as 'very defective'.<sup>136</sup>

Despite the objections, the need for a storage facility (any facility) appears to have overridden problematic design and Dawson's plans were adopted and tendered in June 1859. Works appear to have been rapid and within six months (December 1859), Dawson had handed over the extended Colonial Magazine to the Assistant Military Storekeeper and the cargo of the *Lady Mary* had been transferred to the island. Refer **figures** 47-49.

<sup>&</sup>lt;sup>133</sup> Return of Magazines 31 December 1856 SRNSW 4/720.4

<sup>&</sup>lt;sup>134</sup> Kerr 1985: 21

<sup>&</sup>lt;sup>135</sup> Alexander Dawson was Colonial architect during the period 1856 – 1862. He served under Governors Denison & Young. Buildings attributable to Dawson include the Hornby Light & Lighthouse Keeper's Station at South Head (1850s)

<sup>&</sup>lt;sup>136</sup> Colonial Architect to the Under Secretary for Lands 14 January 1859 SRNSW 2/642B

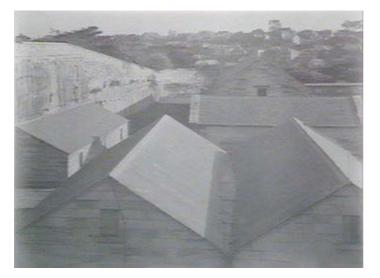
#### Chapter 6 - Consolidation

Addition designed Dawson built 1859. Original magazine. designed Blacket. built 1852-53. Addition designed Dawson built 1859.

#### Figure 47:

J. S. Kerr's indicative drawing of Dawson's 1859 additions to the Colonial or Merchants Magazine

(Kerr 1985: 22)



#### Figure 48: The Colonial or merchants Magazine (November 1918)

This image shows the Colonial Magazine in the foreground with the cooperage/cartridge lab behind and the Queens Magazine to the rear.

(SLNSW GPO 1 - 13442 digital image d1\_13442.jpg)



Figure 49: The Colonial or Merchants Magazine (c. 1943)

This image shows the structure in its near original (c1859) form. The structure has since been heavily modified and is now clad almost entirely in corrugated iron with much of the original stonework removed.

(SLNSW GPO 1 - 10045 digital image d1\_10057.jpg)

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## The Water Police Station - Acquisition & Eviction

The rapid growth of the colony, the size of Goat Island, and the slow rate at which improvement works were undertaken to increase storage capacity, conspired to ensure that each new improvement (such as the magazine extensions) were near obsolete by the time they were completed. George Barney and others had called for the creation of an entirely new storage facility in a different location in the late 1850s. By 1861 there were in excess of 7000 barrels of gunpowder stored on the island – or as the Colonial Secretary was advised 'equal to about one million pounds of gunpowder, quite sufficient to send half of Sydney to the other world'.<sup>137</sup>

By 1864, it was recognized that the location of the cartridge laboratory (former cooperage) between the two gunpowder storage magazines posed an unacceptable safety risk and laboratory works were halted until alternate facilities could be secured. The Water Police station at the northeastern point of island was seen as an ideal location requiring minimal conversion. Acquisition of the site was undertaken by 1865 and the Water Police were removed to Kirribilli Point Barracks in what the Inspector General of Police noted as 'an objectionable arrangement as far as the Department is concerned'.<sup>138</sup>

Once the Water Police had vacated the police building, a range of fit out and ancillary works were undertaken to prepare the site for use as a cartridge laboratory. These works were undertaken by contractor Sam Long and included:

- Construction of a bridge across the wet ditch (completed August 1865) figure 50.
- Construction of a two room cottage as quarters for a 'laboratory labourer' (with a 5 foot square privy, 6 foot colonial hardwood fence, a cooking stove and grate (completed December 1865) figure 51.
- Alteration of the water police building and its fit out as a laboratory including an office, two storerooms, a workshop and a shifting room (completed January 1866).
- Conversion of the laboratory between the magazines to an expense (small stocks) magazine.<sup>139</sup>

<sup>&</sup>lt;sup>137</sup> Weekes to CS Cowper 24 April 1861 SRNSW 7/366. 7000 barrels of gunpowder was a significant stock – Guy Fawkes plot to blow up the British House of Lords in 1605 revolved around 36 barrels of gunpowder concealed in the cellar

<sup>&</sup>lt;sup>138</sup> J. F. Kemp letter 24 January 1865 cited in Kerr 1985: 24

<sup>&</sup>lt;sup>139</sup> Work estimates and works described by John Sharkey and Midgley cited in Kerr 1985: 25



Figure 50: Bridge across 'Barney's Cut' or 'The Cut' – view N (2007) (Dan Tuck 2007)



Figure 51: Labourer's Cottage 1865 – view ESE (2007) (Dan Tuck 2007)

Materials used in the laboratory were delivered and stored in the magazine precinct and delivered via the new bridge on four-wheel hand trucks with wooden trays. The roadway between the magazines and laboratory was infilled and 'made good' in February 1866 – though its regular maintenance, required to ensure the smooth movement of the cartridges, was an ongoing and problematic issue over the ensuing years.

## **Barracks Conversion**

The Barracks building (constructed in c.1838) was subject to conversion in the late 1850s/early 1860s to accommodate 16 men comprising a Foreman of Magazines, two labourers and a military detachment of 13 who had previously been housed in a 'barrack room' at the southeast (**figure 52**). Works and changes involved included:

- Removal of the wall between the barrack room and Foremans Office (creating a larger living space for the detachment) at the southern end of the structure.
- Refurbishment of the central four rooms occupied by the Magazines Foreman (Midgley) this core part of the building featured three chimneys.
- Use of the northernmost two rooms to accommodate the two labourers.<sup>140</sup>

The southeastern 'guard room' was subject to recurrent rising damp and in 1862 its accommodation function was swapped with that of the 'cook house' (kitchen) to the east.<sup>141</sup>



Figure 52: Cook house/guard room, converted to a cottage in 1924/5 – view NNE (2007) (Dan Tuck 2007)

Other works on the island undertaken in the early 1860s included improved landing facilities for the magazines including a new jetty joined to the magazines via a covered way (1861-1862); construction of a new stone privy; and erection of a derrick crane on the new jetty (1863).<sup>142</sup>

<sup>&</sup>lt;sup>140</sup> Kerr 1985: 27

<sup>&</sup>lt;sup>141</sup> Kerr 1985: 28

<sup>142</sup> Kerr 1985: 24

### Chapter 6 - Consolidation

**Figure 53** is an annotated plan showing changes to the barracks and kitchen/guard room undertaken from 1858. **Figures 54** & **55** show general views in the mid 19<sup>th</sup> century.

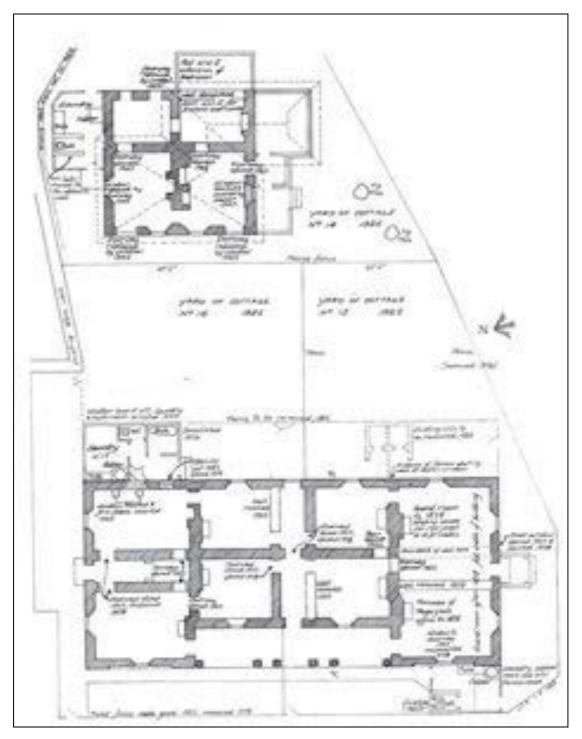


Figure 53: Kerr's reproduction of a plan of the former Water Police building and cottage (1924) Kerr's plan is annotated to show guard room accommodation pre and post-1858; conversion into cottages in 1924/25; & conservation works conducted in 1978.

(Drawing based on SHT plan A1/61 - Kerr 1985: 26)

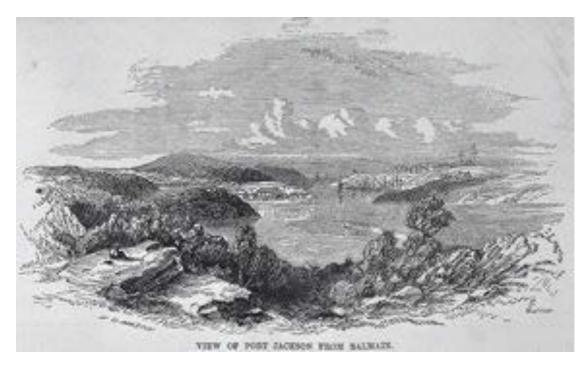


Figure 54: Walter Mason's View of Port Jackson from Balmain (1857) (NLA nla.pic-an8017131-v.jpg)



Figure 55: A view of Balls Head & Goat Island (c1860 - 1879) (NLA nla.pic-an24459698-v.jpg)

## **Imperial Garrisons**

From the establishment of the first gunpowder magazine in the 1830s, Goat Island became a 'semi-military' facility controlled by the British Government (Board of Ordnance). <sup>143</sup> As a British military facility, garrison (defending) duties at Goat Island were provided by small Australian based infantry and artillery units of the British Army.

Carved into the stonework at Goat Island (particularly the Magazine complex perimeter wall and sentry box) are the names and regimental details of a number of the men who guarded Goat Island. This 'graffiti' provides a near continuous record of Island garrison (and/or military visitation) between the 1830s and c.1868.<sup>144</sup>

## **Infantry Units**

Between 1833 and 1870 a number of Imperial British infantry regiments were sent to the colony of New South Wales. Generally these regiments served time in Australia as part of a four or five year deployment that usually involved stationing in an additional colonial outpost such as India. After arrival in Sydney, the regiment (1000 officers and men normally divided into about ten companies) was formed into detachments of varying sizes. These were dispersed to duties across the country.<sup>145</sup> It was some of the smaller units that were ultimately garrisoned on Goat Island for the purpose of guarding the powder magazine complex. Evidence of this duty is provided in a dispatch of 30 April 1847 from Governor Fitzroy to the Secretary of State for the Colonies commenting on the colony's requirements for troops:

...the presence of a military force of not less than 600 men in Sydney...will not be more than sufficient to furnish the necessary guards over the Commissariat and Treasury, and those over the convicts in the Woolloomooloo Stockade and at Cockatoo Island, and the magazine on Goat Island.<sup>146</sup>

The ensuing **table** provides details of the infantry unit garrisons at Goat Island, as attested to in the graffiti record.

<sup>&</sup>lt;sup>143</sup> The Sydney Harbour Officers Trust Journal 1926 (10): 37-38

<sup>144</sup> Robert Newton, personal communication

<sup>145</sup> Nichols, B. 1988. The Colonial Volunteers. Allen & Unwin, North Sydney: 1-2

 $<sup>^{146}</sup>$  Governor Fitzroy quoted in Nichols, 1988: 7

British Infantry Units at Goat Island who served at Goat Island		
Unit	Colonial History	
17th (Leicestershire) Regiment of Foot [1830-1836]	The 17th Regiment, under Lt Col Despard, arrived in New South Wales in 1830 and it is likely that much of the regiment was transferred to Van Dieman's land soon after to pro- vide protection against the 'aggressions of the savage natives'. The regiment reformed in Sydney again prior to its transfer to India in 1836.	
50th Queen's Own (Royal West Kent) Regiment of Foot [1833-1841]	Under the command of Lt Col Wodehouse, the Regiment embarked for NSW in 1833 in charge of convicts, arriving in Sydney in November 1833.Shortly after arrival 3 companies were sent to Tasmania and 2 to Norfolk Island under Major Anderson who was appointed Commandant of the island. Two of the remaining companies under Captain Johnston were sent to New Zealand in August 1834 to rescue Betty Guard, her two children and nine seamen, captured by the Maoris after the wrecking of their ship <i>The Harriet</i> . After completing their mission they returned to Sydney in November 1834. This was the first occasion British troops went into action against the Maori, in this case they were accused of using excessive force. Betty Guard was probably the first white woman to settle in the South Island and her son the first white child to be born on the island. The 50th Regiment departed for service in other colonies in 1841. The 50th served a second period in NSW, occupying Victoria Barracks from 1866-69.	
80th (Staffordshire Vol- unteers) Regiment of Foot [1837-1844]	The 80th Regiment under Lt Col Baker was sent to New South Wales in 17 detachments as convict guards from 1836 to 1838. The regiment was engaged across the colonies and "in the not very congenial task of suppressing convict riots'. The regiment embarked for India in 1844.	
51st (2nd Yorkshire West Riding Light Infantry) Regiment of Foot [1838-1846]	Arriving in New South Wales as convict guard in 1838, the 51st Regiment spent most of its service undertaking the duty of marching convict gangs to and from duty. The regiment was reported 'to have upheld its high character for discipline and good conduct'. The regiment sailed for India in 1846.	
58th (Rutlandshire) Regiment of Foot [1844-1847]	The regiment under Lt Col Wynyard arrived as convict guard detachments from 1844 to 1845 and was engaged in garrison duty. The regiment was sent to New Zealand in 1845 and again in 1847 to join the Maori Wars.	
11th (North Devonshire) Regiment of Foot [1845-1857]	Under the command of Lt Col Bloomfield, the regiment was transferred to Hobart Town soon after arrival in Sydney. The regiment returned in 1846 to restore discipline in the 99th Regiment, which was showing signs of mutinous conduct. The people of Sydney petitioned to have the 17th returned in 1848 and the regiment occupied the newly built Victoria Barracks amidst the cheers of an appreciative public. The 17th also earned praise as fire fighters. The regiment's Garrison Chaplain, Rev George Fairfowl MacArthur formed St Marks Collegiate, later named Kings School. The regiment was recalled to England in 1857.	

12th (East Suffolk) Regi- ment of Foot [1854-1860]	The first battalion of the regiment under Lt Col Kemp arrived in 1854 and was involved in the construction of the parade ground of Victoria Barracks. To prevent their desertion to the gold fields the men of the 12th were allowed to work at trades. The regiment was sent to New Zealand in 1860 to take part in the Maori Wars.	
77th (East Middlesex) Regiment [1857-1858]	The 77th Regiment landed in September 1857 and marched to Victoria Barracks "amid the cheers of thousands who had assembled to welcome the corps to New South Wales." The regiment departed for India in 1858 to assist with the Sepoy mutiny.	
18th (Royal Irish) Regi- ment [1870]	Four of the regiment's ten companies arrived in Sydney from New Zealand and were quartered at Victoria Barracks by March 1870 & departed on 6th September 1870.	

## British Infantry Units at Goat Island who served at Goat Island

 Table formulated by Robert Newton (DECC – Goat Island Ranger). Information sourced from Berryman, Lt Gen Sir Frank. 1977. A Short

 History of the Military Forces in New South Wales 1770-1900, Victoria Barracks Museum Society; The Harriet Affair refer

 <u>http://tpo.tepapa.govt.nz/ViewTopicExhibitDetail.asp?TopicFileID=0x000a4d82</u>; Jacky Guard and hisfamily refer

 <u>http://tpo.tepapa.govt.nz/ViewTopicExhibitDetail.asp?TopicFileID=0x000a4d73&Language=English.</u>

The last regiment to have performed garrison duties on the island is believed to have been the 18<sup>th</sup> (Royal Irish) Regiment.<sup>147</sup> British troops were withdrawn from Australia in September 18<sub>7</sub>0 after the British Government determined that the Colony should be responsible for its own defence.

Refer figure 56.



Figure 56: Garrison graffiti on the Magazine precinct sentry box and perimeter wall (2007) (Left & right images by Dan Tuck 2007; middle image DECC 2007)

<sup>&</sup>lt;sup>147</sup> The Sydney Harbour Officers Trust Journal 1926 (10): 37-38; Victoria Barracks Museum 1977

## Artillery Units

During the latter half of the nineteenth century, units of the British Royal Artillery also served in Sydney, to service the fortifications and supply instructors for volunteer artillery units of the colony. The last of these also departed in 1870 when Imperial forces were withdrawn from the Colony.<sup>148</sup> Again, graffiti on Goat Island indicates that a member of the 15th Brigade spent time on Goat Island (see **figures 5**7 & **58**).<sup>149</sup>

The existence of the 15th Brigade graffiti and the lack of graffiti from infantry regiments known to have been garrisoned in Sydney in the 1860s suggest that during this time garrison duty on Goat Island may have been undertaken solely by the Royal Artillery.

Little is known about the lives of the artillery (or infantry) men who guarded Goat Island in the 19<sup>th</sup> century – though one individual about whom there is some information is Artillery Sergeant John Bower. Bower arrived in Sydney in 1956 with the Artillery unit of No.3 Company,  $7^{th}$  Battalion after having served (and been decorated) in the Crimea. He became super-intendent at Goat Island for an unspecified time – leaving Sydney in 1870.<sup>150</sup>

## Imperial Unit Accommodations

The finer details of the living arrangements and operation of the garrison units at Goat Island is not well known. The barrack building on Goat Island certainly provided principle accommodations but other facilities and locations were also utilized by garrison troops. The following is a mere snapshot:

- A Sergeant of Artillery occupied the cottage adjacent to the former Water Police Office (then cartridge lab).
- Gunner Davis occupied a three-room weatherboard cottage (now demolished) on elevated ground between the magazine and laboratory precincts – on approximately the site of the former tennis court. Davis' house may have been constructed with materials from the 'house on the hill' temporary barracks, understood to have been demolished some time after 1842.<sup>151</sup>

<sup>&</sup>lt;sup>148</sup> Berryman 1977: 28

<sup>&</sup>lt;sup>149</sup> The 15th Brigade is known to have served in Melbourne from 1861-68

<sup>&</sup>lt;sup>150</sup> *Sydney Morning Herald* 22 March 1871; 27 March 1871; 30 March 1871. Letter from Babs (Bower) Mackie to Robert Bird dated 23 July 1993 (NPWS administrative file A/207)

<sup>&</sup>lt;sup>151</sup> Kerr 1985: 27-28



Figure 57: Infantry regiment graffiti - perimeter wall (2007) The graffiti reads '12 Foot' & '12 R Foo' – presumably the 12<sup>th</sup> (East Suffolk) Regiment of Foot. (Dan Tuck 2007)



Figure 58: Artillery regiment graffiti – perimeter wall (2007) 15 Brigade Royal Artillery.

(Dan Tuck 2007)

## Goat Island, Nitro and the Russian Threat

Developments on Goat Island in the closing decades of the 19<sup>th</sup> century were driven by two major developments – the evolution and widespread use of new blasting agents (refer text box); and a perceived threat to Australia posed by the Russian naval fleet.

## The Development of Blasting Agents in the 19<sup>th</sup> Century

Up until the 1860s explosives technologies in Australia relied exclusively on 'mediaeval' black gunpowder - a mixture of potassium nitrate, carbon and sulphur (variously modified with chlorates, other nitrates and solid additives).

#### Nitroglycerine

In 1842, the Italian, Ascanio Sobrero had discovered nitroglycerine (glyceryl trinitrate) and its superior blasting power; it was about six times more powerful than black powder. After an explosion of a related compound (mannitol hexanitrate) in Turin 1853, Sobrero ceased experimentation with it. It was Swedish chemist Alfred Nobel, initially with his father Immanuel, who was to turn unstable nitroglycerine into a useful product and pioneer its use and development.

#### The Blasting Cap

Nobel's first invention, designed to control the detonation of nitroglycerine was the 'igniter' or blasting cap (invented in 1862, and patented 1863 and 1864). This consisted of a capsule filled with gun powder (or mercury fulminate) and confined within nitroglycerine.

#### Dynamite

The second invention related to improving nitroglycerine itself as a blasting agent – the invention of dynamite in 1864. Nitroglycerine was a liquid and Nobel's' dynamite remedied the problem of oozing barrels of explosive by absorbing the liquid in a powder known as diatomaceous earth. Nobel patented the product in Sweden in 1867 and in Australia some time later in 1872.

#### Gelignite

While dynamite was a vast improvement over liquid nitroglycerine, the problem of liquid separating out still occurred occasionally and uncontrolled explosions reoccurred. Nobel's third invention, gelignite, solved the problem with finality and, in the process, improved potency further: He devised a mixture of nitroglycerine with partially nitrated cellulose, ether and alcohol which was stable and dominated the industry for a century. This was patented worldwide in 1876.

#### Lithofracteur

Nobel organised his dynamite and gelignite production based on licenses in two locations - the Anglo-German dynamite makers in Glasgow and the Latin producers in France. However, due to resistance in Britain, manufacturing in Germany was one of the first development centres.

In c.1783/84, Friedrich Krebs of Krebs Bros. & Co., Cologne an industrialist and epigone of Nobel's, established importation into Australia of 'Lithofracteur', a dynamite variant. Krebs had patented this, presumably on the basis of some additives to the Nobel recipe, but was sued for infringement by the British Dynamite Company who won a resounding victory in 1879. One year after Krebs started importing Lithofracteur, a Scottish factory began to manufacture the product in Australia.

## The Development of Blasting Agents in the 19th Century

#### Gun Cotton (Nitrocellulose)

In 1846, Chemist Christian Schonbein discovered guncotton when he accidentally spilled an acid mixture on a cotton apron and the apron exploded. It is an explosive substance produced by the action of strong nitric acid on cellulose.

(References: Technology in Australia 1788-1988 – The Australian Chemical Industry http://www.austehc.unimelb.edu.au; http://www.1911encyclopedia.org/Guncotton)

## **Blasting Agents**

New blasting agents such as guncotton and nitroglycerine (and its derivatives dynamite and Lithofracteur) were being imported into Australia by the early 1870s. Though more effective than gunpowder, they were more susceptible to accidental explosion due to mishandling and could not be stored in association with gunpowder.<sup>152</sup>

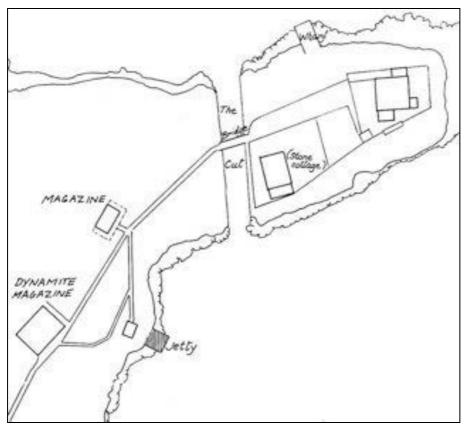
As an explosives repository, Goat Island was required to store the new generation of explosives from the early 1870s and this required both new development and reconfiguration on the island. By 1878 there were two new magazines on the island to the immediate southwest of the cut and bridge - and possibly a new jetty and shed on the adjacent shoreline.<sup>153</sup> This location was well distant from the pre-existing gunpowder magazine precinct and the central Goat Island ridgeline provided additional separation between the sites. Exact details concerning the 1870s magazines are unclear and buildings have been demolished. The earliest structure (nearest the cut) was constructed in 1875 and is believed to have been a wooden building with a galvanized iron roof. Its erection and proximity to the cartridge laboratory in the former Water Police building meant that the lab had to be removed. By this time, cartridge works on the island were 'trifling' and the laboratory was returned to its former location between the Queens and Colonial magazines.<sup>154</sup>

Refer figures 59-63.

<sup>&</sup>lt;sup>152</sup> There was a massive explosion of nitroglycerine in Bridge Street, Sydney in March 1866

<sup>&</sup>lt;sup>153</sup> 1891 Architectural Branch drawing No. 1451 from Victoria Barracks reproduced by Kerr 1985: 29

<sup>&</sup>lt;sup>154</sup> Legislative Assembly Votes & Proceedings 1875-1876, Volume 6: 1036



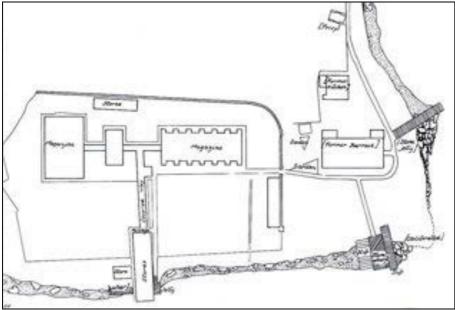


Figure 59: J. S. Kerr's reproductions of parts of a survey of Goat Island (December 1891) (Redrawn from a negative in the Victoria Barracks Architectural Section No. 1451, 281-11 – Kerr 1985: 29 & 31)

## Chapter 6 - Consolidation

IIIIk a Nanns Pl avender Ba Steam Ferry Balls Head Mils 16 Blues P! Snails Bay Day Goat Bas BALMA Bay

Figure 60: S.T. Leigh & Co's Map of Port Jackson and city of Sydney (c.1875) (ML SLNSW DSM/ ZMC 811.12/ 1875/ 1 - Digital Order No.: a928289)

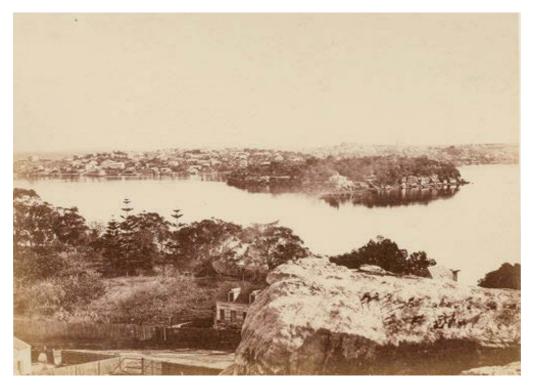


Figure 61: Balmain & Goat Island from North Shore (c.1870s) (ML SLNSW SPF/881 - Digital Order No.: a089881h.jpg)



Figure 62: John Degotardi's Panorama (third part) of Sydney Harbour from Blues Point (c.1870s) (ML SLNSW Pic.Acc.5864 - Digital order no. a226001 - a226004)

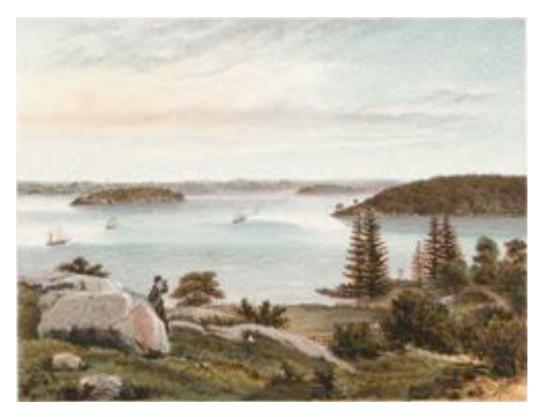


Figure 63: Chromolithograph of Berry's Bay & Goat Island, Sydney, New South Wales (1878) (NLA PIC S3369 LOC 3023 - nla.pic-an8810996)

#### Chapter 6 - Consolidation

#### The Russian Threat

From as early as the opening decade of the 19th century there was a perceived threat of attack or invasion of Australia by foreign forces. The first scare was that of invasion by the French at the end of the 18<sup>th</sup> century, which resulted in the construction of a single rock-cut battery at Middle Head in 1801. While this scare soon diminished it was latter replaced by fears of imminent invasion by the Americans (1839) and later the Russians following the British-French declaration of war against this country in 1854 (Crimean War). Successive scares lead to successive programs of defense and fortifications centered on strategic inner and outer harbour locations including Middle, Georges, and Bradleys Heads.

The perceived Russian threat was long lived and by the 1880s, the Colonial administration was anticipating an imminent coastal invasion. In Sydney, this fear became manifest in 1883 when British Admiralty chose Garden Island as a base for its Royal Navy and again in 1885 when Spectacle Island was outfitted as an Imperial Navy Store (Armament Depot) to house ball, cartridges, fuses and tubes for the defence of the colony.<sup>155</sup>

The impact of the Russian threat on Goat Island in 1885 was that it was forced to house not only its own explosives but also those that were transferred from Spectacle Island. To accommodate the newly arrived explosives the Queens Magazine was used to store small arms cartridges and a large weatherboard storage facility (30 x 40 feet) was constructed (later demolished).<sup>156</sup>

As with previous foreign threats, invasion by the Russians failed to materialize and colonial and public fears waned in the closing decades of the 19<sup>th</sup> century. Goat Island continued to function as an official explosives repository until 1900, though its role was somewhat diminished by the establishment of facilities elsewhere such as the Newington Armoury, on the banks of the Parramatta River – this facility was in use from the 1880s with first buildings for the Powder Magazine at Newington constructed in 1897.<sup>157</sup> Newington gradually came to receive most of the military grade explosives and by the turn of the century Goat Island was housing principally low-grade commercial explosives (powders).<sup>158</sup>

<sup>&</sup>lt;sup>155</sup> Clark & Clark 2000: 48; Meldon to Ordnance Storekeeper and Barrack Master 18 May 1885 SRNSW 7/367

 $<sup>^{156}</sup>$  Meldon to Ordnance Storekeeper and Barrack Master December 1885 SRNSW 7/367

<sup>&</sup>lt;sup>157</sup> While Goat Island ceased to function as an explosives storehouse in 1900, some explosives remained on the island into the 20<sup>th</sup> century including forward stocks of military small arms ammunition. The small stocks were requested to be moved to Victoria Barracks in 1904

<sup>&</sup>lt;sup>158</sup> LOCo6 'History of Goat Island' undated manuscript (possibly MSB) held at Greycliffe House (P.4)

## Plague



The opening year of the 20<sup>th</sup> century was a very significant year in the history of Goat Island. Not only was it the year in which the site ceased to function as an official explosives repository, it was also the year that plague visited Sydney (see images above). It was the plague that generated the formation of the Sydney Harbour Trust (SHT) - heralding significant changes to both harbour management and operation.

## 1900 - 1901

On 19 January 1900 a carman employed on the Central Wharf at Millers Point fell ill and was later found to have contracted 'bubonic plague'. The origin of the disease remains uncertain but there is considerable support for the theory that the disease arrived in late 1899/early 1900 via four vessels that had visited Hong Kong (where plague had persisted since 1894).

## Plague

Plague is an age-old disease caused by a gram-negative, ovoid bacillus (*Yersinia pestis*). The disease is epizootic and is spread to humans by fleas that have fed on rats (generally domestic *Rattus* spp) infected with the bacillus. The disease enters the human body via flea bite and presents as an enlargement of the lymph glands – generally in the armpit neck or groin. The enlarged glands are painful and are referred to as 'buboes'. When the disease moves beyond the lymphatic system into the general circulatory system, potentially fatal septicaemic plague results – often with characteristic small hemorrhages on the skins surface and elsewhere.

Plague disease that involves the lungs is referred to as 'pneumonic plague' – a particularly nasty plague variant that is highly contagious and inevitably fatal if left untreated.

The first major period of plague outbreak in Australia occurred in Sydney between 1900 and 1909. Most cases were of bubonic plague with only two confirmed reporting of pneumonic plague.

(Reference: Thearle & Jeffs 1984; Broughton 1981)

Between January and August 1900, 303 cases of plague were reported in Sydney – the mortality rate 30%. Those who fell ill with the plague were initially treated at the Quarantine Station

## Chapter 7 - Plague

and later, as the outbreak continued until 1909, at the Coast Hospital at Little Bay. The disease was initially restricted to those areas near busy Sydney wharves, but by 1905 had spread to regional ports on navigable rivers including the Clarence and Richmond.<sup>159</sup> By the close of the first decade of the 20<sup>th</sup> century, 1212 cases of the plague had been recorded.<sup>160</sup>

## Ashburton Thompson & Tidswell

Two Sydney medical figures featured prominently in the study and control of plague from the time of its initial outbreak in early 1900. These men were Dr John Ashburton Thompson, NSW Chief Medical Officer, and Dr Frank Tidswell, Medical Officer, Microbiologist to the Commissioner of Public Health, and Head of the Government Laboratories.

While Ashburton Thompson was responsible for plague management and information dissemination, Tidswell was heavily involved in plague research including investigations into the rat-flea- human connection and experiments into the development of plague vaccines.

## Plague Research & the Role of Goat Island

There are many accounts of the history of Goat Island (predominantly from the mid to late 20<sup>th</sup> century) that suggest that during the early 1900s Goat Island functioned as a government bacteriological research station where plague related experiments were undertaken. One such account, from Stephenson's *History and Description of Sydney Harbour* (1966) read as follows:

During the outbreak of bubonic plague at Sydney in 1900, the explosives were hastily removed from Goat Island to hulks at Bantry Bay, in Middle Harbour. All the buildings were vacated, including the Water Police Station, and the island was put to emergency use as a bacteriological station, under the control of the New South Wales Government Department of Health. The arsenal was equipped as a laboratory for the preparation of serums and for the testing and diagnosis of plague infection. The residential quarters were occupied by laboratory superintendents and staff. As the island was exclusively in use for this purpose on 1 January 1901, when the colonies of Australia became federated as States, the Government of New South Wales refused to hand it over to the Federal Government, which claimed it as a military post.<sup>16</sup>

This story, backed only with anecdotal evidence, was popular with the press and regularly appeared in features and articles on the island. In 1985 however, James Semple Kerr cast doubt on the substance of the story being unable to find primary evidence to support it.<sup>162</sup>

<sup>&</sup>lt;sup>159</sup> Boughton, C. 1981. The Coast Chronicle - The History of Prince Henry Hospital: 1881 - 1981

<sup>&</sup>lt;sup>160</sup> Thearle, J. & Jeffs, D. 1984. *Plague Revisited: The Black Death – An Account of Plague in Australia 1900 – 1923*. Royal Australian College of Physicians, Sydney

<sup>&</sup>lt;sup>161</sup> Stephenson 1966 [1980]. The History and Description of Sydney Harbour. Reed, Sydney: 222

<sup>&</sup>lt;sup>162</sup> Kerr 1985: 31-32

In an effort to address the issue, the author has undertaken additional research including reviewing Sydney newspaper indexes relating to the period, various primary and secondary texts on plague in Sydney in the early 1900s, as well as contemporary NSW Government medical reports and legislative assembly papers. These included:

- *Extracts from the Minutes of the Board of Health concerning the Plague (1897 1908).* SRNSW Series 590; File 5/5855).
- Cumpston J. & McCallum, F.1926. *History of Plague in Australia 1900-1925*. Commonwealth of Australia Department of Health Service Publication No. 32. SLNSW ML 616.92/c.
- NSW Department of Public Health. 1907. *Plague in Sydney*. Collected NSW Legislative Assembly papers and reports relating to plague between 1900 & 1907. SLNSW ML Q616.923N.
- 'Obituary Frank Tidswell' in *Medical Journal of Australia* 10 May 1941: 594-595.
- Gow, R. & W. 2006. *Plague: Epidemic in Australia.* A collection of newspaper references relevant to the Plague in NSW. Self published.
- Thearle, J. & Jeffs, D. 1984. *Plague Revisited: The Black Death An Account of Plague in Australia 1900 1923*. Royal Australian College of Physicians, Sydney.
- Tidswell, F. 1900a. *Plague and its dissemination*. Government Printer.
- Tidswell, F. 1900b. 'On plague and its dissemination' in *Australian Medical Gazette* 21 May 1900. SLNSW ML 616.92/T.

Recent research to date indicates the following:

- There is no mention of Goat Island in relation to the plague in Health Board minutes (1897 1908) or *Sydney Morning Herald* newspaper fiche indexes for 1900 1907.<sup>163</sup>
- There is no mention of Goat Island in relation to the plague in the *Sydney Harbour Trust Commissioners Annual Reports* (1901 – 1910). The reports do however refer to State and Commonwealth jurisdictional disputes on the island – none of which relate to the plague as stated by Stephenson.

Furthermore:

• On Wednesday 14 March 1900 it was reported that formal licenses had been issued by the Lands Department authorizing 'cultivation of Bubonic plague germs and the <u>infection of animals ther</u>ewith'. This work was to be carried out at the Microbiological

<sup>&</sup>lt;sup>163</sup> SRNSW *Extracts from the minutes of the Board of Health* (1897 – 1908) Series 590, Item 5/5855; SLNSW ML *SMH* fiche indexes for 1900 - 1907

## Chapter 7 - Plague

fection of animals therewith'. This work was to be carried out at the Microbiological Laboratory, Macquarie and Albert Streets, Sydney.<sup>164</sup> The laboratory occupied the first floor of the NSW Board of Health building constructed in 1897.<sup>165</sup>

- The Sydney Morning Herald reported on 17 May 1900 that negotiations were underway for dedication of Goat Island as a recreation reserve objections related not to the plague, but to Imperial jurisdiction over the island use of the island for storing munitions.<sup>166</sup>
- On Thursday 28 June 1900, a legislative Assembly meeting heard from the Premier that there was an intention to have a plague prophylactic made locally (rather than reliance on imports from India) – the suggested location was Shark Island.<sup>167</sup>
- The *Sydney Morning Herald* reported on 26 November that the island was still storing 'small arms & ammunition'.<sup>168</sup>

On the basis of the information presented above, there has been no primary evidence unearthed to date that supports the notion of Goat Island being used as a bacteriological research station from c.1900.

There is some chance (as pointed out by DECC ranger Robert Newton) that the notions of use of the island for plague research grew out of a misreading of historical Goat Island maps that depict a *laboratory*. The laboratory shown on such maps was not a medical laboratory but the cartridge laboratory discussed in an earlier chapter and defined as follows:

A room or building where gunpowder was mixed and/or made into charges prior to being stored in a magazine.<sup>169</sup>

## Rise of the Sydney Harbour Trust

The outbreak of the plague in Sydney in the opening months of 1900 focused public and government attention on the areas most associated with the plague and its transmission – Sydney's harbour ports and wharves. There was general agreement that Sydney's waterfront was unhygienic and its private wharves poorly managed, a situation that allowed diseased rats to proliferate. In late March 1900, 90 members of the NSW Parliament signed a petition calling for Government resumption of private wharves from Dawes Point to the head of Darling Har-

<sup>&</sup>lt;sup>164</sup> Gow, R. & W. 2006. *Plague: Epidemic in Australia. A collection of newspaper references relevant to the Plague in NSW*. Self published: 10

<sup>&</sup>lt;sup>165</sup> Cummins, C. 2003. A History of Medical Administration in NSW: 1788-1973. NSW Department of Health: 169

<sup>&</sup>lt;sup>166</sup> Sydney Morning Herald 17 May 1900: 6

<sup>167</sup> Gow 2006: 72

<sup>&</sup>lt;sup>168</sup> Sydney Morning Herald 26 November 1904

<sup>&</sup>lt;sup>169</sup> Jobson, P. n.d. *Clossary of Royal Artillery Terms & Abbreviations*: 60

bour. Despite some objections from private wharf owners, this proposal was agreed to in May 1900 and the Government commenced a cleaning program costing over  $\pounds_{70}$  000 which saw cleansing or demolition of numerous wharves and harbourfront buildings.<sup>170</sup>

By August, the initial plague outbreak had faltered but had already claimed 112 lives. John Ashburton Thompson, who in association with Frank Tidswell was pioneering theories on plague transmission and management, recommended management of the worst hit plague areas by the Darling Harbour Resumption Advisory Board. The board was ultimately responsible for the 1901 mass resumptions and demolitions in locations such as the Rocks and Millers Point.<sup>171</sup>

In November 1900 the *Sydney Harbour Trust Act* was passed vesting responsibility for the control, improvement and further development of Sydney Harbour in the hands of a trust. The trust was initially known as the Sydney Harbour Improvement Trust – until the rather unfortunate SHIT acronym was abandoned.<sup>172</sup> It was officially constituted as the Sydney Harbour Trust (SHT) in 1901.<sup>173</sup>

## Wrangling over the Island

While plague ran its course and the NSW Government plotted the future management of Sydney Harbour, Goat Island became embroiled in a three way tussle over its use and management involving the NSW Government, the newly formed Commonwealth Government, and Balmain Council.

The *Government Gazette* of 30 January 1900 (no. 88) had announced the vesting of Goat Island (minus the area east of the cut) in the Governor of NSW. This in turn resulted in the islands vesting in the SHT in 1901. In 1901 however the newly formed Commonwealth thought that much of the island was Government property and that magazine and barracks complex should be handed over as one of the many listed for property transfer.<sup>174</sup>

While this State verses Commonwealth tussle was underway, negotiations had commenced in other quarters relating to the will of the Balmain Mayor to have the island dedicated as a recreation reserve.<sup>175</sup> Balmain Council was still trying to obtain Goat Island two years later

<sup>&</sup>lt;sup>170</sup> Carew, L. 2002. *First Port, Future Port: Celebrating 100 years*. Sydney Ports Corporation: 38

<sup>&</sup>lt;sup>171</sup> Carew 2002: 38

<sup>172</sup> Carew 2002: 38

<sup>&</sup>lt;sup>173</sup> Sydney Harbour Trust Act, 1901 (Act No.1, 1901)

<sup>174</sup> Kerr 1985: 32

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reation reserve.<sup>175</sup> Balmain Council was still trying to obtain Goat Island two years later and the Commonwealth jurisdictional debate continued for much of the decade.<sup>176</sup> One particular highlight was the Federal Government's demand for the State Government to quit Goat Island in 1904. In this instance, the *Sydney Morning Herald* reported that the NSW Premier Joseph Carruthers refused to give up possession as it 'belonged to NSW'.<sup>177</sup>

The Federal Government's position was weakened considerably in 1907 when destruction of ammunition (obsolete cartridges) on the island lessened the military-strategic value and sensitivity of the location.<sup>178</sup> Thereafter, the State Government pressed the Federal Government to relinquish its hold on the island.<sup>179</sup>

In 1908 the NSW State Government regained that part of the island previously lost to the Commonwealth (in a deal that involved transfer of part of Cockatoo Island to the Federal administration). The State was now in control of the island in its entirety.<sup>180</sup>

**Figure 6**<sub>4</sub> shows a postcard view of the island from around the turn of the 20<sup>th</sup> century. The magazine complex on the western portion of the island remains distinct and shows the covered way (later removed) linking the foreshore area to the magazines. **Figure 65** shows the contested magazine precinct prior to its acquisition by the State.



Figure 64: Goat Island, Sydney Harbour (c.1900 – 1910) (ML SLNSW PXE 711/53 - Digital order no. a116053)

<sup>&</sup>lt;sup>175</sup> Sydney Morning Herald 17 May 1900: 6

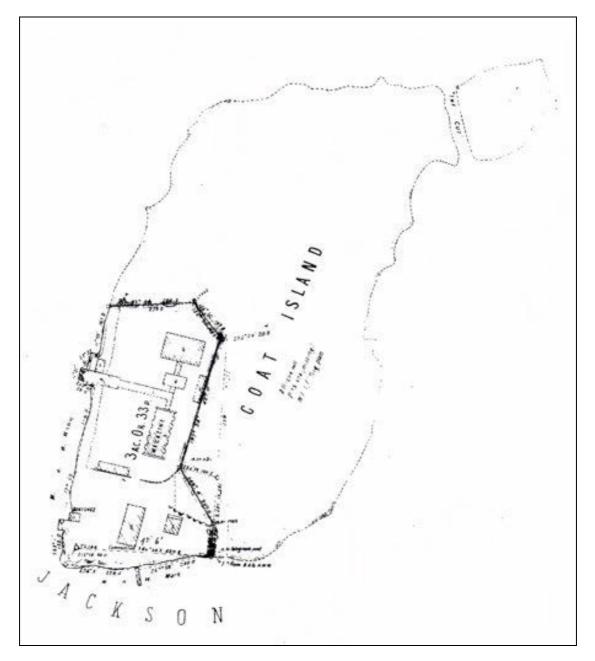
<sup>&</sup>lt;sup>176</sup> *Sydney Morning Herald* 9 January 1902: 5 21 March 1905: 4; 22 March 1905: 5; 27 April 1907: 12

<sup>&</sup>lt;sup>177</sup> Sydney Morning Herald 24 November 1904: 6

<sup>&</sup>lt;sup>178</sup> Sydney Morning Herald 27 April 1907: 12

<sup>&</sup>lt;sup>179</sup> Sydney Morning Herald 21 March 1905: 4; 22 March 1905: 5; 27 April 1907: 12

<sup>&</sup>lt;sup>180</sup> Sydney Morning Herald 22 January 1908: 9



#### Figure 65: Plan of Goat Island (1905)

This plan shows the area to be transferred to the State Government - the former magazine precinct on the southwestern part of the island.

(SRNSW AO Map 494)

# Sydney Harbour Trust



The Sydney Harbour Trust (SHT) consisted of three commissioners appointed by the Governor, who operated out of a head office in Circular Quay.<sup>181</sup> The SHT was generally responsible for the improvement and preservation of the Port of Sydney and its duties included;

- rehabilitation of Sydney Harbour through the demolition of old wharfage, land reclamation, and the construction of new port facilities and other shipping areas,
- regulation of the movement of vessels and the handling of cargo via a Harbour Master,
- dredging operations & removal of wrecks,
- granting licences for the erection of piers; maintain wharf facilities and collect wharfage rates,
- maintaining recreational swimming baths,
- fire fighting.

All foreshores, lighthouses and tugs within the harbour that had previously belonged to the Government (mostly under the control of the Public Works Department) were vested in the SHT. Due to its myriad of responsibilities the SHT organized its operations around a range of different branches including those responsible for survey, engineering, and lands.

It was on Goat Island in 1901-1902, against the aforementioned backdrop of jurisdictional dispute, that the SHT began to found a significant part of its harbour operations – establishing a harbour dredging and firefighting depot and installing a Harbour Master.

<sup>&</sup>lt;sup>181</sup> Sydney Harbour Trust Commissioners Annual Reports 1900 - 1925

## Dredging

Dredging of the harbour for land reclamation and harbour maintenance purposes was a primary responsibility of the SHT. In 1901 the SHT decided to use Goat Island as a depot for its dredging operation and commenced construction of facilities on the island and the transfer of a dredging fleet from the Department of Public Works.<sup>182</sup> At the end of 1901 the initial fleet of vessels had been transferred, and by March 1902, a depot area (including wharf, workshops and a coal store) was well advanced on the northeast shore of the island, east of The Cut.<sup>183</sup>

Main Vessels in the SHT Goat Island Fleet c.1901		
Vessel Type	Name	
Tugs	Dawn Achilles Dayspring Scyalla Aurora Octopus	
Ladder dredges	Sydney Charon	
Grab dredges	Pi Chi	
Suction dredge	Poseidon <sup>184</sup>	
Launch	Europe	

Source: Sydney Harbour Trust Commissioners Annual Report 1901

As the SHT's Goat Island operation grew, new facilities were constructed as needed. These included:

- 102ft of wharfage and a 60 x 30ft shed constructed to house plant, gear and materials from the defunct SHT Clebe Point depot (c.1909).<sup>185</sup>
- A 275ft jetty built in 1911 to facilitate the new dredge *Triton* and additional plant.<sup>186</sup>

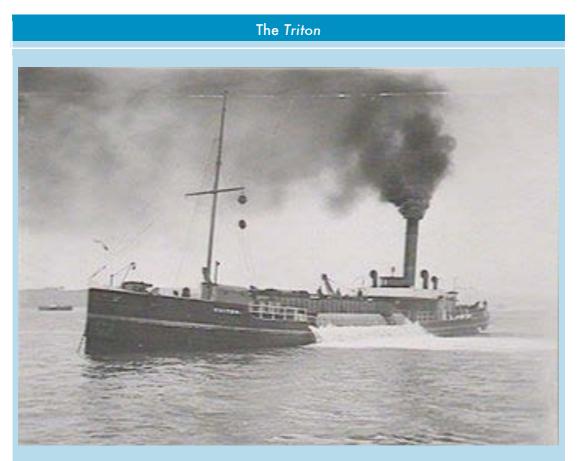
<sup>&</sup>lt;sup>182</sup> Kerr 1985: 32

<sup>&</sup>lt;sup>18</sup>3 Sydney Harbour Trust Commissioners Annual Report 1901

<sup>&</sup>lt;sup>184</sup> The Poseidon, or the 'Possy', was much involved in the deepening and reclamation works at Homebush Bay in the 1920s. It was reported scuttled off Sydney 9 May 1947

<sup>&</sup>lt;sup>185</sup> Sydney Harbour Trust Commissioners Annual Report June 1909

Additional craft were added to the fleet soon after including the steam lighter *Sampson* and the tug *Delilah* – both brought into SHT service on Goat Island in early 1913.<sup>187</sup>



The *Triton* was the SHT's flagship dredge – a self-propelled hopper imported from South Africa and brought into service in 1913. Among its many duties it was involved in creating the deep channels in the harbour to facilitate the largest of liners - a typical day involving the four round trips out of the harbour (a typical load being 1250 ton of sand). Her daily transformation on releasing her load has been described as follows:

Outward bound one has a good imitation of a waterlogged whale, but on the doors being opened she is transformed by comparison to a cork.

Aside from her usefulness as a work vessel the Triton was also called upon for recreation – the hoppers in the waist of the ship providing 'splendid shark proof swimming baths when full.

(Reference: *The Sydney Harbour Trust Officer's Journal* July 1929 5(2): 5; Image SLNSW GPO 1 – 47202 Digital Image d1\_47202.jpg)

For much of its early life with the SHT, Captain Hennings captained the *Triton*, with engineering work undertaken by R. Hamilton (see **text box** below).

<sup>&</sup>lt;sup>186</sup> Sydney Harbour Trust Commissioners Annual Report June 1910

<sup>&</sup>lt;sup>187</sup> Sydney Harbour Trust Commissioners Annual Report June 1913

## R.D. Hamilton – Assistant Engineer in the Dredge Service



On 28 January 1926, Assistant Engineer in the Dredge Service R. Hamilton died suddenly. His obituary in *The Sydney Harbour Trust Officers Journal* provides some information on this man and his role within the Trust's dredge fleet at Goat island.

Hamilton (Chief engineer 1<sup>st</sup> class) joined the SHT on its inception, transferring form the Public Works Department. He was immediately placed in charge of the Goat Island workshops and in 1906 was appointed engineer of the suction dredge *Poseidon*. When the *Triton* arrived from South Africa in 1913, he took over engineering duties on that vessel carrying out numerous tasks both ashore and afloat. He was appointed Assistant Chief Engineer at Goat island in 1920 – a position he held until his untimely demise in 1926.

(Reference: *The Sydney Harbour Trust Officer's Journal* February 1926 1(9): 24)

# Firefighting

Firefighting was another important responsibility of the SHT, which established a firefighting base on the island in addition to its dredging operation. Works associated with the establishment of the base included the establishment of quarters for the fire captain and crew and construction of a freshwater service wharf on the western side of the Cut. These initial works were completed between 1903 and 1906.<sup>188</sup>

Firefighting operations were originally based around a single firefighting tug the *Pluvius*. Fitted with a Merryweather & Sons 'compound-tandem-surface-condensing' fire engine, the vessel was capable of throwing 2500 gallons (11 365 litres) of water per minute. The *Pluvius* was later joined by the firefloats *Powerful* (pre-1907), *Hydra* (c.912) and *Cecil Rhodes* (c.1916).<sup>189</sup> The former featured a fire pump that delivered water via four separate  $2^{1/2}$ -inch hoses.<sup>190</sup> All were under constant steam, day and night, so as to be 'in readiness for any emergency'.<sup>191</sup> Refer **figures 66 – 69**.

<sup>&</sup>lt;sup>188</sup> Kerr 1985: 33

<sup>&</sup>lt;sup>189</sup> Kerr 1985: 33; Clark & Clark 2000: 21

<sup>&</sup>lt;sup>190</sup> Sydney Harbour Trust Commissioners Annual Report June 1903: 5

<sup>&</sup>lt;sup>191</sup> Sydney Harbour Trust Commissioners Annual Report June 1903



Figure 66: Photograph Exhibition of fire-fighting equipment of new steamer Pluvius (c.1903) (SLNSW GPO 1 – 47255 - Digital Image d1\_47255.jpg)



Figure 67: Photograph titled 'Fire-fighting equipment on steamer Pluvius, Goat Island' (Pre-1950) (SLNSW GPO 1 – 19721 - Digital Image d1\_19721.jpg)

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Figure 68: The Boray at Goat Island (December 1953) (SLNSW GPO 1 – 10057 - Digital Image d1\_10057.jpg)



Figure 69: Cecil Rhodes, tugboat, launching pontoon for Circular Quay (February 1924) (SLNSW GPO 1 – 25028 - Digital Image d1\_25028.jpg)

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When not employed at firefighting, the fleet was often engaged in towing the dredge fleet's punts and mud hopper barges 3 miles (4.83 km) out to sea where they dumped soil dredged from the harbour.<sup>192</sup>

## Scavenger Boats & Harbour Cleansing

Another smaller and somewhat less heroic SHT fleet was also established alongside the dredges, work vessels and firefighters in the opening decade of the 20<sup>th</sup> century. Born out of the plague and the need for a hygienic and unpolluted harbour was a fleet of two scavenger boats that were constantly employed to scour the harbour and remove all 'objectionable flot-sam and putrefying matter'.<sup>193</sup> Given the proximity of the island to the Glebe Island abattoirs and Darling Harbour itself, this was presumably no easy task. Retrieved matter that was collected and burnt on the island included rats, dogs, parrots, flying foxes, sharks, goats and the curious line item 'bags of meat'.<sup>194</sup> Other vessels employed in the general cleanup of the harbour included the tug *Octopus*, seconded to cleanse the harbour wharves at night time using a steam jet.<sup>195</sup>

## Harbour Master

Probably the most important person on the island in the early 1900s was the Harbour Master. The Harbour Master had been a part of Sydney's maritime landscape since 1811 and was responsible for all shipping entering and leaving port, the allocation of anchorage, and the proper berthing of vessels. The role intensified with the onset of the plague in 1900 and the need to tightly monitor shipping, crews and cargo.<sup>196</sup> From this point onwards the responsibilities of the Navigation Department and the former Marine Board were vested in the SHT.

Plague period Harbour Master Captain Charles Bird was set up on Goat Island (more by default than by deliberation) in c.1900. He had intended to situate himself on the mainland at Dawes Point but a suitable dwelling could not be secured. As an alternative, a new purpose built residence was constructed on Goat Island's high central ridge with views towards the heads, between 1902 and 1903 (**figures** 70 & 72).<sup>197</sup>

<sup>&</sup>lt;sup>192</sup> John Morgan cited in Clark & Clark 2000: 22

<sup>&</sup>lt;sup>193</sup> Sydney Harbour Trust Commissioners Annual Report June 1903: 5

<sup>&</sup>lt;sup>194</sup> Sydney Harbour Trust Commissioners Annual Reports June 1902; June 1904

<sup>&</sup>lt;sup>195</sup> Sydney Harbour Trust Commissioners Annual Report June 1903: 5

<sup>&</sup>lt;sup>196</sup> Stringer, M. 1984, *Sydney Harbour*. Rankin, Mosman: 151

<sup>&</sup>lt;sup>197</sup> Kerr 1985: 33

# Chapter 8 – Sydney Harbour Trust

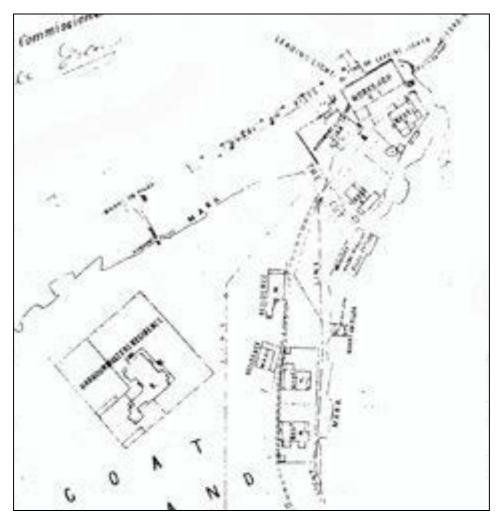


Figure 70: Part Plan of Goat Island (1905)

Plan shows land vested in the Sydney Harbour Trust Commissioners with works undertaken to 1905. The new Harbour Masters residence dominates the island ridgeline.

(SRNSW AO Map 495)

Captain Bird remained in the Harbour Master role until 1905. The following table presents a complete list of Harbour Masters for the period  $18_{77} - 198_3$ .

Harbour Masters (1877 – 1983)					
Date	Harbour Master	Date	Harbour Master		
1877 - 1900	Captain Henry Pettit	1900 - 1905	Captain C.E Bird		
1905 - 1925	Captain Alfred Pritchard	1925 - 1937	Captain John R. Stringer		
1937-1943	Captain Charles Hill	1943 - 1952	Captain F. Murchison		
1952 - 1956	Captain D. MacRae	1956 - 1964	Captain E.W. Livingston		
1964 - 1973	Captain H.J. Harvey	1973 - 1978	Captain John F. Dodwell		
1978 - 1983	Captain Brian Druce				

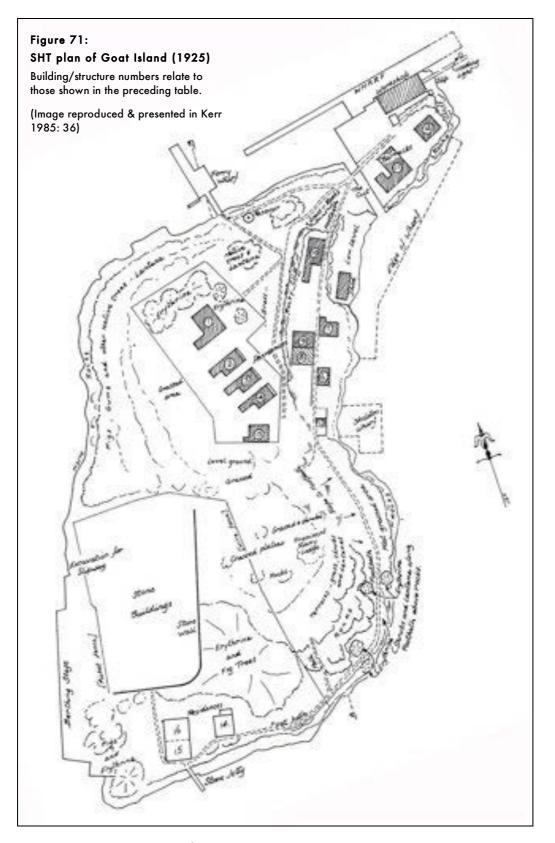
Table formatted from information in Stringer 1984: 152

# SHT Accommodation

The Harbour Masters residence was one of the first of a series of new purpose built residences constructed on Goat Island in the opening decade of the  $20^{th}$  century. The following table summarises Trust residential development in the period 1901 – 1924. The numbering shown in the left hand column relates to Kerr's plan of Goat Island in c.1925 (**figure** 71)

SHT Residential Accommodation 1901 - 1924			
Dwelling(s)	Details	Date	
Harbour Mas- ters Residence (1)	Large, Single story Federation style house with a deep-set veran- dah – set on main island ridge line	1902-1903	
Fire Brigade Quarters	East of the Cut, near coal bins Brigade later relocated (1912) to new barrack building	Pre-1903 (demolished by 1970)	
Married Men's Cottages (6 & 7)	2 x weatherboard & tile cottages – east side of island south of cut	Pre-1903 (demolished by 1970)	
Fire Brigade Barrack (11)	Brick barrack accommodating 14 men - west of the old Water Police Station	1912	
Fire Brigade Married Men's Cottages (2 – 4)	3 x brick & tile cottages of 'standard Trust design' – immediately southeast of (& in line with) the Harbour Masters residence	1916	
Cottage (5)	Weatherboard & tile cottage – near skeleton wharf	1913 – 1915 (demolished by 1970)	
Duplex (8 & 9)	Weatherboard & tile duplex – below cliff; east of Fire Brigade Married Men's Cottages	1913 – 1915 (demolished by 1970)	
Villa (13)	Cottage – constructed at the southeast end of the row of Fire Bri- gade Married Men's Cottages	c.1922	

Table formatted from information in Sydney Harbour Trust Commissioners Annual Reports (1901 - 1925); Kerr 1985: 32 - 37



Trust housing built in the  $20^{\text{th}}$  century allowed for the establishment of a significant on-Island population and by the start of the 1930s there were approximately 120 'Goat Islanders'.<sup>198</sup>

<sup>&</sup>lt;sup>198</sup> Clark & Clark 2000: 20



Figure 72: Harbour Masters Residence c.1902/03 – view SSW (2007) (Dan Tuck 2007)



Figure 73: Fire Brigade Crew Married Men's Cottage c. 1916 – view SW (2007) (Dan Tuck 2007)

# 25 years of the Sydney Harbour Trust

February 1926 marked the  $25^{th}$  anniversary of the SHT. By this time the authority's cleanup and makeover of Sydney Harbour had seen many changes to the operation and appearance of waterfront Sydney including:

- Broadscale demolition of 'unwholesome wharves and contiguous properties'.
- Construction of a rat-proof wall around much of the shipping waterfront (including Darling Harbour).
- Establishment of the area between Dawes and Millers Points as 'Walsh Bay' replete with architecturally designed berths for deep-sea ships. Adjacent development included the construction of the circular section of main port roadway (Hickson Road) and numerous approachways and overhead bridges.
- Revamp of Woolloomooloo Bay with 2225 lineal feet of wharfage (east side) including a double decked jetty 208 feet wide.
- Construction of Sydney's largest jetty at Jones Bay (Pyrmont) a 1200 foot long, 260 feet wide ferro-concrete structure.
- Wheat handling facilities at White Bay.
- Construction of a suite of wharves for interstate and coastal services at Darling Harbour.

Less visible but nonetheless significant port transformations included significant deepening of the harbour including the provision of two main channels within the entrance to the port (40 feet deep and 700 feet wide).<sup>199</sup>

The SHT's Goat Island depot played a significant role in much of this development with its Goat Island fleet employed in wharf cleansing, firefighting, dredging and land reclamation, and general harbour cleanup (scavenging). One wag described the island in the late 1920s as follows:

So much for the head office; but this noble pile does not cover the full extent of the Trust's administrative and operative establishments. Goat Island is a Trust stronghold; it is one of the gems of scenery of Our 'Arbour being studded with trees, houses, lighthouse, coal bins, powder magazines,

<sup>&</sup>lt;sup>199</sup> The Sydney Harbour Trust Officer's Journal February 1926 1(9): 16–20

buoys (not boys) and its foreshores are lined with picturesque craft of graceful lines. It is the headquarters of the Port Fire brigade.

Besides Goat Island there are several depots about the Port, but where they are is not clearly known (enquire at the Accounts Branch any pay day).<sup>200</sup>

A SHT article entitled the *Waterfront Fire Brigade – An insight into life on Goat Island* from 1925 described the fleet and its use at that time as follows:

They do not look like pleasure boats either, for in many places there are signs of wear and tear incurred in carrying out their ordinary day's towing work on the Harbour. Although employed on general towing work around the Harbour, arrangements are made by the Trust to have at least one float (fire boat) to the westward of Fort Denison during the day in order to cope with any fires occurring in that part of the Harbour.<sup>201</sup>

The article is one of the few from the period that describes Goat Island life in any real detail. It is perhaps worth lingering on some of the description therein in order to construct a picture of the place, its inhabitants and its broader operation in c.1925.

At Goat Island, one of the few islands in our harbour, fifteen cottages for married men and a commodious barracks for single men house twenty-seven Harbour Trust Firemen and families. Every comfort is allotted, even to a billiard table in the barracks room and a baths on the waterfront.

The island is an ideal spot from more than one aspect, and indeed, it was paid a quite a high tribute when Balmain Council made a strong effort to obtain at least a portion of it for a recreation ground just recently.<sup>202</sup> Its neat size of barely eighteen acres and its handy position directly between Balls Head and the entrance to Darling Harbour, contribute towards making this spot the most convenient that could be chosen for the home of the fire brigade as well as the centre of activities for the Trust's depots.

Goat Island is quite a picturesque little place, and at the present time white and purple wild flowers from the tree shrubs add a deal of charm to the uncultivated acres. The grass in most places is very long, but here and there where the rocky patches show through, the prickly pear is becoming somewhat of a pest and an expert regularly visits the island, to experiment on its eradication, Sometimes, says Captain Carter, Officer-in-Charge of the Fire Brigade, a new rabbit burrow or two can be seen, but the rabbits are gradually lessening in numbers.

<sup>&</sup>lt;sup>200</sup> The Sydney Harbour Trust Officer's Journal September 1927 3(4): 4

<sup>&</sup>lt;sup>201</sup> The Sydney Harbour Trust Officer's Journal December 1925 1(7): 23

<sup>&</sup>lt;sup>202</sup> Balmain Council's interest in acquiring part of the island dated back to the very early 1900s – a 1902 newspaper report stated that they were 'still tying' to get the island dedicated for public recreation in 1902 (*Sydney Morning Herald* 5 January 1902: 9)

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The residence of the Officer-in-Charge is connected with the telephone, and each cottage on the island is connected by an entanglement of alarm bells. The promptness with which the alarm is treated was witnessed by a party of officers from the Sydney Harbour Trust a short while ago. Scarcely had the bells been rung when the men were clambering on board their respective boats, each with a length of 21/4 in. hose. They were very methodical and the state of efficiency they have reached was evidenced by the little time it took them to get underway. Officer Dawes of the Redfern Fire Brigade visits the island about once every six weeks to train the men in the art of fire fighting, speaks very highly of them. He is of the opinion that there is a vast difference between the work from land and from sea, and claims that a different stamp of a man is required for each job. He admitted, with a certain amount of pride, that the Harbour Trust men were "a fine set of chaps, fully qualified for the work required of them".

There are three boats used as firefighters, the Hydra – built in 1912 for the Trust by the Government Dockyards – the Cecil Rhodes – purchased from the Cairns Harbour Board in 1914 – and the Pluvius purchased in 1902 from Wallaces.<sup>203</sup>

## A New Shipyard

Up until 1925, the SHT's enterprises were largely restricted to the eastern half of Goat Island where Trust's operations were concentrated. By the end of 1925 however, the situation had changed significantly - the SHT has moved into the western part of the island, the old Imperial enclave, and had commenced building a new shipyard 'for the repair of the SHT's vessels and floating plant'.<sup>204</sup>

## In July 1925, The Sydney Harbour Trust Officers Journal reported:

Goat Island Depot – This work recently commenced on the western side of the island, will include the construction of wharves, slipways, workshops, and coal storage, the object being to concentrate the Trust's depots as much as possible. The scheme is being carried out on the site of the old powder magazines, the removal of which will mean the passing of another old landmark erected during the regime of Governor Bourke.<sup>205</sup>

A party of SHT Officers, who visited the works in the same year, noted:

<sup>&</sup>lt;sup>203</sup> Sydney Harbour Trust Officer's Journal December 1925 1(7): 23

<sup>&</sup>lt;sup>204</sup> Sydney Harbour Trust Commissioners Annual Report June 1925

<sup>&</sup>lt;sup>205</sup> The Sydney Harbour Trust Officer's Journal July 1925 1(2): 8

...the party rambled leisurely round the island and had a peep into the huge and historical powder magazines. The spots where alterations are being affected by the Trust were transversed, and Captain Carter explained, wherever possible, the nature and extent of the improvements.<sup>206</sup>

Initial works on the new Goat Island SHT shipyard involved significant landscaping works to facilitate the new slipways required to service the SHT's vessels to the west of the former Colonial Magazine. Other works, detailed in plans attributable to Engineer-in-Chief W. E. Adams and summarized in Kerr's historical analysis are listed in the ensuing table and shown on the following plan (**figure** 74).

Goat Island Shipyard Development (1925 – 1931)				
Structure	Details	Date (by)		
Wharf	Broadside wharf 770 feet long; coal bins supported at southern end	1926 - 1927		
<b>Berthing Grid</b>	135 ft undecked birthing grid continuing the line of the wharf to the south and tied in the sea wall			
Slipways	Main slipway; launch slip; construction way	1925 - 1929		
Crane 1	5 ton hand crane with a max. radius of 60 feet – sited between the construction way and the shipwrights shed	1929		
Crane 2	5 ton 60 foot radius hand crane – located in the stor- age area	1929		
Crane 3	8 ton hand crane with a 50 foot radius – adjacent to the wharf and slipway	1929		
Crane <sub>4</sub>	5 ton hand hoist block bridge gantry crane – between the Queens Magazine and the Quarry cliff	-		
Haulage	A rail, turntable and haulage winch system to drag trucks up the wharf incline (1:13 grade)	1927		
Skillion Shed	Shed for timber seasoning/WCs – existing shed against stone perimeter wall	-		
Queens Magazine	Use of magazine for a general store	-		
Cooperage	Conversion of the former cooperage/magazine to a small materials store; storekeepers office; & general office	-		
Colonial Magazine	Reuse as a shipwrights store/shed	1927		

<sup>&</sup>lt;sup>206</sup> The Sydney Harbour Trust Officer's Journal 1925 1(6): 24

Goat Island Shipyard Development (1925 – 1931)			
Stone Shed	Use of the stone skillion shed against the Quarry cliff face as a mess area and locker rooms	-	
Gantry Crane	Area between the Queens magazine and quarry face roofed in and supplied with a 20ft gantry crane	1930 - 1931	

Table formatted from information in Kerr 1985: 32 - 37

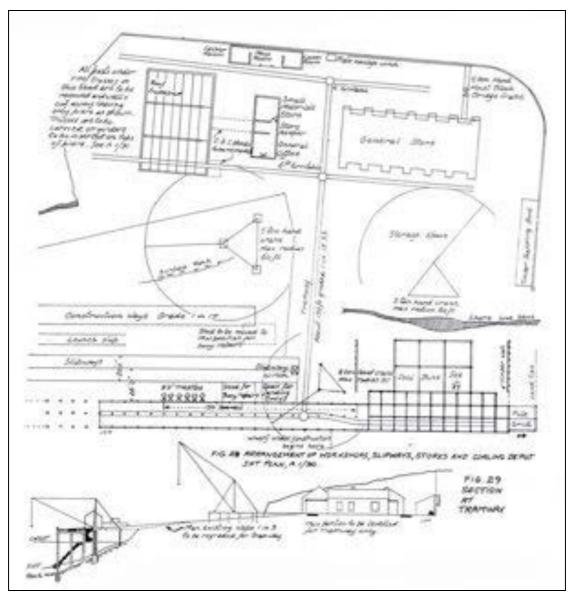


Figure 74: SHT Shipyard Plan (c.1920s)

(SHT Plan, A 1/90 re-drawn by James Kerr and presented in Kerr 1985: 38)

Fortunately for those with a love of history, demolition of the old stone magazines as foreshadowed in the SHT *Officers Journal* article cited previously did not take place. The former Colonial Magazine however was skeletonized when the walls were cut away to provide a flexible working area – essentially a large open shed with stone piers retained only at the corners of the three former chambers. Other work on the structure undertaken during its conversion to a shipwright's shed included strengthening of the trusses, removal of the internal (6 x 6") posts, and removal of the covered way between this building and the refurbished store and office building to the immediate south.<sup>207</sup> Refer **figures** 75 – 77.

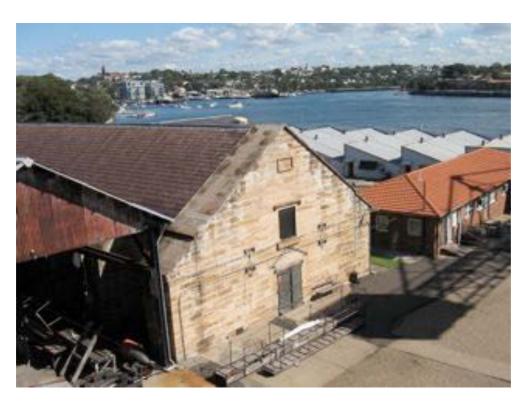


Figure 75: The Shipwrights store/shed - formerly the Colonial Magazine - views W & SE (2007) (Dan Tuck 2007)



<sup>207</sup> Kerr 1985: 40

## Chapter 8 - Sydney Harbour Trust



#### Figure 76: Queens Magazine (2007)

During the establishment of the SHT's shipyard between 1925 & 1931 the Queens magazine was used as a general store. The galvanized iron roof-over to the left of frame (infilling the area between the quarry face and the magazine) was constructed in to house a gantry crane in c.1930/31.

(Dan Tuck 2007).

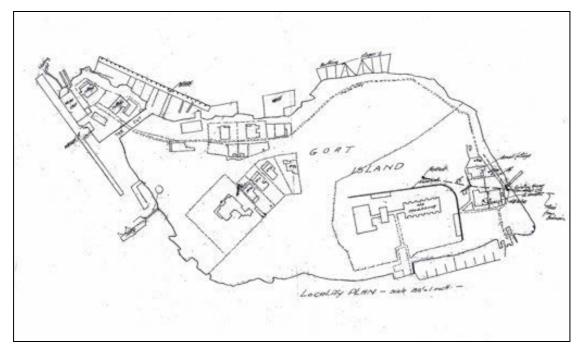


Figure 77: Image titled 'Garrison Guard House built in 1836 on Goat Island' (pre – 1936) Image shows the cooperage building used as a small materials store and general office in the SHT Shipyard construction period (1925 – 1931). In the foreground is part of the tramway constructed as part of the shipyard. The C.G.I. shed to the left of frame (between the former cooperage and Colonial magazine was later demolished.

(SRNSW Original MSBL 1861 Digital Image 9856\_a017\_A017000036.jpg)

Other capital works undertaken elsewhere on the island by the SHT in the late 1920s and early 1930s included:

- Construction of a 350 x 20 foot grid wharf on the eastern side of the island built to accommodate additional berthing for SHT vessels and plant (prior to 1929).
- Laying of a 6" water main between Balmain and Goat Island (figure 78).<sup>208</sup>



#### Figure 78: Goat Island Locality Plan (1924)

This plan shows the new water main from Balmain on the eastern end of the island. The plan predates the development of the Goat Island shipyard in the former magazine precinct, which commenced in the following year.

(SHT plan reproduced with permission of the Maritime Authority of NSW)

## Depression

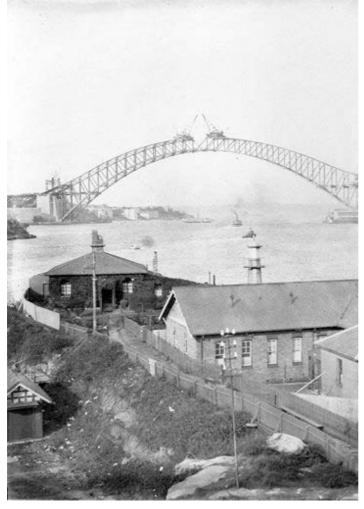
After a flurry of development in the late 1920s and the opening years of the 1930s (including the construction of the Sydney Harbour Bridge), the pre-war depression stalled the SHT's capital works program after three decades of impressive harbour wide development. In 1936 the SHT was dissolved and the Maritime Service Board (MSB) assumed its responsibilities (and more). Refer **figures 79** & **80**.

<sup>&</sup>lt;sup>208</sup> Sydney Harbour Trust Commissioners Annual Report June 1929

## Chapter 8 – Sydney Harbour Trust



Figure 79:View from Goat Island (June 1930) (SRNSW Digital ID:12685\_a007\_a00704\_8729000155r)



#### Figure 80:

Harbour Bridge span nearly completed, with buildings on the eastern end of Goat Island in the foreground (c. August 1930)

(SLNSW Hood Collection DG ON4/2170 Digital Image 02170h.jpg)

# Maritime Service Board



The ensuing chapter addresses the period 1936 to 1990 – the period during which Goat Island was part of the domain of the powerful and colourful Maritime Service Board of New South Wales.

# Maritime Services Board

The Maritime Services Board was established on 1 February 1936 under the *Maritime Services Board Act, 1935* which received assent on 10 December 1935.<sup>209</sup> The creation of the Board followed the recommendations of the Maritime Services Co-ordination Board.

The new Board consisted of three full-time commissioners appointed by the Governor and shipping interests - one of whom was the permanent head of the Department of Public Works. The function of the Board was to;

- administer ports and port facilities (such as wharves and pilotage services),
- conserve navigable waters,
- Ensure the safety of passengers and seaworthiness of vessels registered in New South Wales.

The MSB differed from the SHT in that it had responsibility for all state waters – not just Sydney Harbour. Also, it was answerable not only to the state government but also to nongovernment commercial interests such as shipping and mercantile companies.<sup>210</sup>

<sup>&</sup>lt;sup>209</sup> New South Wales Government Gazette No.27, 31 January 1936, Vol.1, p.547; New South Wales Government Gazette No.210, 13 December 1935, Vol.4, p.4761

<sup>&</sup>lt;sup>210</sup> Maritime Services Board Annual Report June 1936; Kerr 1985: 40

#### Chapter 9 - Maritime Services Board

The administrative change from the SHT to the MSB is unlikely to have impacted on Goat Island in any great way and its role as a depot, shipyard and 'sea fire' brigade quarters remained the same through the changes.

Despite the near decade long depression, the island is likely to have faired better than those in many other locales during the nationwide economic downturn, due to the unique and essential nature of the work undertaken there, and the bounties of the surrounding waters. During the depression, it appears that many of the men employed and/or living on Goat Island were able to remain gainfully employed (albeit in a reduced capacity). A Jessie Hickey (nee Comptesse) lived on the island from 1935 and recorded that her father had gone there to work on the dredge *Triton*, but during the war worked on the tugs 'one week in five'. With universally reduced incomes, fishing, crabbing and shellfish gathering appear to have played an important role in amplifying the depression era diets of the islanders (and infilling idle time) - nets and pots made of wire netting were regularly strung out along the skeleton wharf on the southeast part of the island, and the wharf piles were scoured for mussels.<sup>211</sup> By the late 1930s, immediately prior to WWII, Goat Island remained a busy place with a character perhaps not dissimilar to that of a working rural-industrial town. Like a working town, it featured a small residential population that was complimented daily by an influx of workers. Noisy and busy by day - largely vacated and quiet by night.

Two events that marked the last year of peace prior to the onset of war was a naval tragedy witnessed from Goat Island and involvement in the nations sesqui-centenary planning and celebrations. The former involved the USS *Louisville*, which visited Sydney Harbour in 1938. Passengers on the passing double-deck ferry *Rodney* raced to one side of the vessel to view the warship and in doing so destabilized the craft, which 'turned turtle'. Despite the rescue efforts of the warship personal there was significant loss of life.<sup>212</sup> On a lighter note, a high-light of the year was the island's involvement in the conversion and refit of the Lighter *Bramble* – rebuilt to resemble the brig *Supply* to celebrate 150 years since the nations founding. The conversion of the vessel, constructed in 1877 and stationed for much of its life on the Sow and Pigs reef, was entirely undertaken at Goat Island.<sup>213</sup>

General views of the island in the period leading up to WWII are shown at figures 81 - 84.

<sup>&</sup>lt;sup>211</sup> Jessie Hickey cited in Clark & Clark 2000: 24; Notes from a preliminary interview with Mr Bill Comptess dated 31 July 1995 (DECC Goat Island Archive – Greycliffe House, Nielsen Park)

<sup>&</sup>lt;sup>212</sup> John Morgan cited in Clark & Clark 2000: 22

<sup>&</sup>lt;sup>213</sup> Kerr 1985: 40; Maritime Services Board Annual Report June 1938

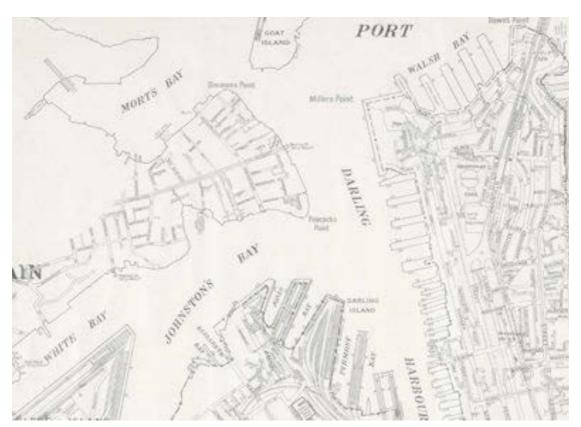


Figure 81: A.H. Garnsey's Map of the City of Sydney (1937) (ML SLNSW ZM3 811.17/1937/1)



Figure 82: Image titled 'Garrison Guard House built in 1838 on Goat Island' (post – 1936?) (SRNSW Original MSBL 1861 - Digital Image 9856\_a017\_A017000036.jpg)

## Chapter 9 - Maritime Services Board



Figure 83: Image titled 'Wharf at the northern end of Goat Island, NSW' (post-1936?) (SRNSW Original number MSBL 2079 Series No. 9856 - Digital Image 9856\_a017\_A017000039.jpg)



Figure 84: Image titled 'Dredge wharves on the eastern side of Goat Island, NSW' (post-1936?) (SRNSW Original number MSBL 2062 Series No. 9856 - Digital Image 9856\_a017\_A017000040.jpg)

# World War Two

Goat Island continued to service the harbour throughout WWII – maintaining its duties of improving and maintaining the harbour through the supply and operation of dredges, barges, lighters, tugs, launches and firefloats (**figures 88** – 8**9**).

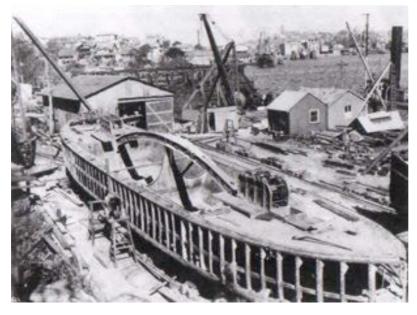


Figure 85: Goat Island Shipyard (c.1939 - 1945)

This image shows the continuation of traditional shipyard activities at Goat Island during WWII. In this instance, the hull of a hopper barge is being re-plated in the shipyard slips. (SRNSW Image presented in Andrews 1986: 156)

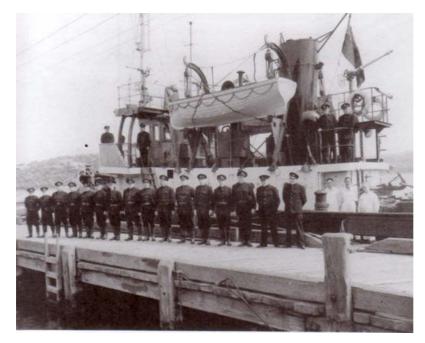


Figure 86: Goat Island Fire Brigade & the Firefloat Boray (c.1940) (DECC Image)

## Chapter 9 - Maritime Services Board

In addition to its regular duties, the island also played a number of important low-key wartime roles including involvement in the installation of the Harbour Boom and the construction of the keel blocks for the Captain Cook Dock (which was under construction at Garden Island).<sup>214</sup>

The Harbour Boom was an extensive anti-torpedo net sited between Georges Head and Green Point and featured gates to allow Australian and allied vessels to enter and leave the harbour.<sup>215</sup> It was part of a series of harbour defensive works constructed during WWII, which included an electromagnetic indicator loop at Sydney Heads.

The Captain Cook Graving Dock (to which Goat Island contributed the keel blocks) was constructed on Garden Island in the 1940s and first flooded in September 1944. It was the largest engineering feat in Australia's history to that date – including the erection of the Sydney Harbour Bridge – and construction involved the reclamation of 30 acres of land between Potts Point and Garden island as well as the construction of the dock facility itself.<sup>216</sup>.

## Life during Wartime

During WWII the shared experience of war tightened what was already a closely-knit island community. Despite the war, numerous developments were undertaken on the island during the war years – principally associated with recreation and presumably undertaken to improve morale and alleviate the intensity of the war experience. Recreational improvements constructed on the island by the end of 1941 included;

- 5000 foot square shark-proof swimming enclosure on the northern side of the island (near the cut),
- tennis court and pavilion (sited on the central ridgeline),
- recreation hall measuring 16 x 9 metres (again on the ridgeline hill).

The latter structure was widely appreciated and serviced not only the island community but 'mainland' based visitors as well who came in droves both during and after the war from Balmain and other nearby shoreline locations around the harbour. Soon after it was built, the MSB annual report (June 1942) described the facility and its impact as follows:

<sup>&</sup>lt;sup>214</sup> Clark & Clark 2000: 23

<sup>&</sup>lt;sup>215</sup> The boom was only partly completed in late May/early June 1942 when the Port of Sydney (and Newcastle) came under attack by a small fleet of Japanese midget submarines

<sup>&</sup>lt;sup>216</sup>The dock measured 1,140 feet (345 metres) long by 147 feet (45 metres) wide, and was 45 feet (14 metres) deep

The residents are deprived to some extent of the usual amenities available to those living on the mainland and, in order to foster community spirit, particularly among the younger members, a recreation hall, which will accommodate 250 persons, has been erected on the island. The residents have formed a social club and the hall has proved a decided acquisition to the social life of the island, as it is now possible to organize entertainments on a scale, which was not practicable in the past owing to the absence of adequate facilities.<sup>217</sup>

Constructed under the supervision of architect W. H. Withers, the hall was a 'handsome' wooden building that featured Doric porches and a bell-caste profile (with a navigational beacon tower later added to the design of the south-east gable). It was opened to a crowd of 2000 in on 13 December 1941 (**figures 87 – 90**).<sup>218</sup>

Infrastructure of a non-recreational nature built on the island during the war years appears to have been limited, but is known to have included an air raid shelter (built half under a large rock on the southern side of the island) and an electrical substation (transformer house) on the southwestern side of the island near the former barracks (**figure 91**). The latter was constructed in September 1943, with Georgian styling that respected the adjacent barracks and reflected design elements (such as segmental arch and label mold features) of the earlier building. Kerr describes the structure as a rare example of 'architectural good manners' on the island.

Other items constructed during the war years include:

- Corrugated iron (C.G.I.) gear store built butted against the gable of the former Queens Magazine (designed November 1942).
- Workshop for keel blocks northeast of The Cut (designed 1943 and possibly used in association with manufacturing the keel blocks for the Captain Cook Graving Dock).
- Triple-door boat shed on the southwest corner of the island (c.1943 figure 92).
- Jetty extension and ferry and wharf landing steps northwest of cut (designed December 1944).<sup>219</sup>

<sup>&</sup>lt;sup>217</sup> Maritime Service Board Annual Report June 1942

<sup>&</sup>lt;sup>218</sup> Kerr 1985: 41. The hall was demolished, after several fires and a partial rebuild, in the late 1960s

<sup>&</sup>lt;sup>219</sup> Kerr 1985: Appendix 4

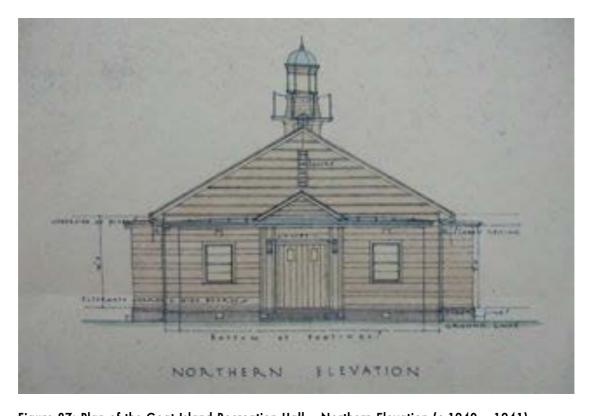


Figure 87: Plan of the Goat Island Recreation Hall – Northern Elevation (c. 1940 – 1941) Elevation shows the northern frontage of the recreation. The hall was in use from 1941. In 1963 it was severely damaged by fire (probably electrical) and was rebuilt in the following year. Licencing notes held by the SRNSW indicate that the building was generally assessed as sound and in good condition until 1969 – however in 1970 it

(SRNSW Item Nos. T3330 File 10/53170 – Plan photographed by Dan Tuck 2007)

was approved for demolition.

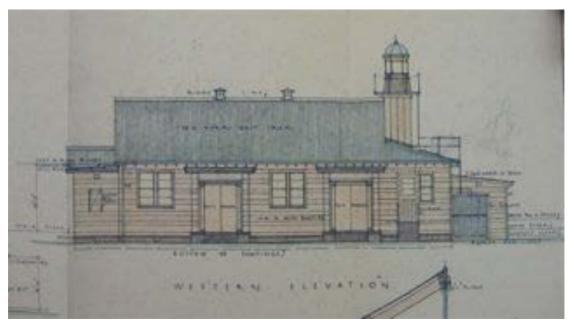


Figure 88: Plan of the Goat Island Recreation Hall – Western Elevation (c. 1940 – 1941) Plan shows the halls western frontage with the elaborate navigation tower (a late addition to the plan in 1941) at the southern end.

(SRNSW Item Nos. T3330 File 10/53170 – Plan photographed by Dan Tuck 2007)



Figure 89:'Wharf construction, Goat Island' (n.d.) This image from the c. 1940s shows the community hall with its Doric porches on high ground to the right of frame, with residential cottages below – all have been demolished.

(SLNSW GPO1-20849)

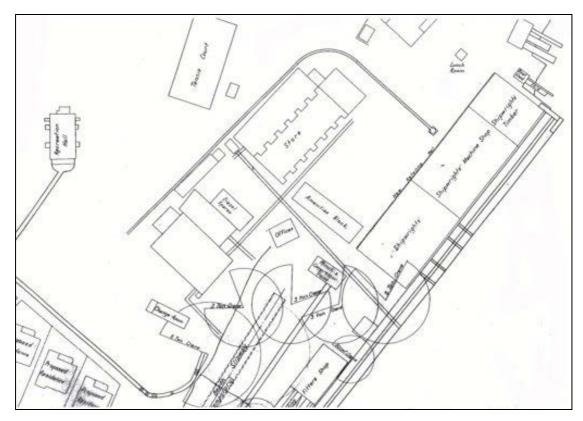


Figure 90: Part of an SHT Plan of the magazine precinct (1955)

Plan shows the location of a number of a number of wartime and postwar buildings and features including the tennis court and recreation hall (top left); CGI gear store against former Queens Magazine (denoted 'store'); and the three-port boat shed (top right).

(SHT Plan reproduced with permission of the Maritime Authority of NSW)

# Chapter 9 – Maritime Services Board



Figure 91: Goat Island Transformer House – view NE (2007) (Dan Tuck 2007)

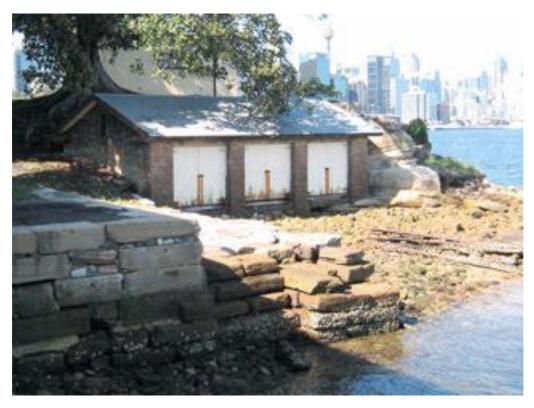


Figure 92: Three-port boatshed on southwestern tip of Goat Island – view SE (2007) (Dan Tuck 2007)

# **Goat Island Servicemen**

Like most other Australian communities, Goat Island contributed men to the war effort between 1939 and 1945. Servicemen who fought in WWII and had been born on Goat Island included:

- Alfred Henry Cuthbert (Service Number NX122084). Date of birth 20 Nov 1908;
   Place of birth Goat Island NSW; Place of enlistment Gin Gin WA
- Edwin Chapman (Service Number N150484). Date of birth 11 Jun 1918; Place of birth Goat Island NSW; Place of enlistment Newcastle NSW
- Edward Borgen Bird (Service Number QX6680). Date of birth 03 Jul 1903; Place of birth Goat Island NSW; Place of enlistment Brisbane QLD
- Albert Edward Hennings (Service Number 14269). Date of birth 06 Jun 1907;
   Place of birth Goat Island NSW; Place of enlistment Sydney NSW.<sup>220</sup>

Both the Hennings and the Birds in particular were well known Goat Island families with a long association with the location. Captain Charles Bird was Harbour Master on Goat Island (c.1900 – 1905); Captain Hennings was captain of the suction dredge *Triton* (retired 1925).<sup>221</sup>

<sup>&</sup>lt;sup>220</sup> NAA Record Search Data

<sup>&</sup>lt;sup>221</sup> Kerr 1985; The Sydney Harbour Trust Officer's Journal September 1925 1(4): 19

## Post-war MSB Development

The end of the War in 1945 heralded a major period of prosperity and growth in Australia. In 1946, as part of post-war planning, the MSB instigated a ten year plan as part of an overall 'moderization' strategy which called for expanded port facilities – especially those related to servicing overseas shipping.<sup>222</sup>

Goat Island experienced a major period of development and construction from the 1940s to 1960s which coincided with the broader postwar economic and population boom. Much of Australia's growth related to raw materials export, which in turn relied on the efficient and effective operation of the nations harbours. The growth and continued operation of Goat Island was an important part of the success of Sydney's ports and maritime industries. Refer **figure 93** and **text box** on following page.

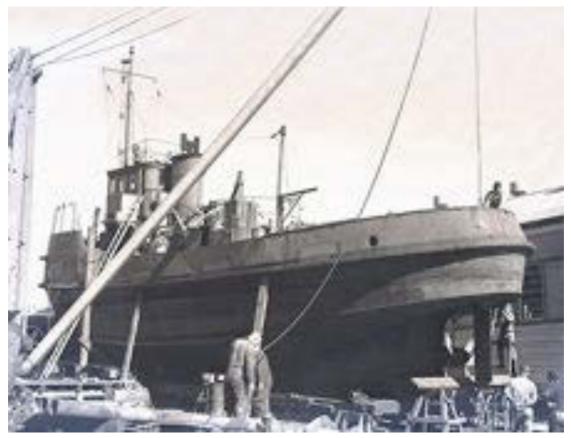


Figure 93: Tenac type tugboat on Goat Island slipway (1946) (SRNSW Digital ID9856\_a017\_A017000156.jpg)

<sup>&</sup>lt;sup>222</sup> Carew 2002: 50

# Life on Goat Island in the Mid 20<sup>th</sup> Century

Goat Island boomed in the wake of WWII as Australia entered a new era of optimism and prosperity. Bill Comptesse, who had lived on the island since the 1930s (and returned to the island after the war) remarked of the period:

... there was a big crowd working on the island – in the shipyard there was probably a hundred or more and there was approximately a hundred or more in the dredge service...'

Characteristics of post-war Island life, as remembered by Bill Comptesse and other residents include:

- A relaxed atmosphere and uninterrupted harbour views.
- A crowded harbour the air filled with the whistles and toots of hundreds of vessels on the water.
- All pervasive coal dust from the coal burning boats and houses.
- Milk delivered from Balmain by rowboat every day.
- Groceries and meat obtained from either Circular Quay or Balmain there was no shop or supplies on the island.
- Cottage flowerbeds and gardens attached to most of the residences growing the likes of spinach, beetroot and cabbages.
- A small flock of sheep (approximately 16) and a calf that provided manure for the island's gardens.
- Near constant fishing using traps occasionally filled only with broken crockery to attract bream and the ubiquitous leatherjacket.
- Port and starboard Island watch which effectively divided the island into two communities in the evenings those on duty and those off duty.
- Weekend dances, Christmas parties, and 'housie' in the island's community hall (Victory Hall) and occasionally in the barracks, and at Fort Dension.
- Home brew production supplemented by Advocaat and cherry brandy (which served to fuel some of the aforementioned dances).
- Weekend tennis matches on the island's tennis court.



(Sources: Preliminary interview with Mr Bill Comptesse recorded 31 July 1995; Notes from a letter received from Mr H. R. Brodie 7 July 1995; Letter received from K. Jorgenson 15 July 1995 (all items DECC Goat Island Archive – Greycliffe House, Nielsen Park; Images reproduced with permission of the Maritime Authority of NSW)

## Chapter 9 - Maritime Services Board

In the decade immediately after the war, numerous works were undertaken at Goat Island with an obvious focus on the heavily worked shipyard. Construction after 1945 included;

- jetty and launch pens west-northwest of the cut (designed 1945) the c.1906 water service wharf was demolished at around the same time,
- shipbuilding shed and fitters shop at head of slips (completed mid 1946),
- coal bins and bunkers on the north end of the broadside wharf (November 1946 since demolished),
- gear shed north of the former Water Police Station (June 1946),
- men's mess and *Lady Hopeton* gear room on the boat pen jetty (1946),
- maritime radio control station masts (February 1946),
- clump dolphins to protect coal bins (1946),
- compressor house at the head of the 150 ton slip way (1949),
- shipwrights shed, machine shop and timber store (June 1949)
- amenity block for shipwrights and fitters (1948),
- beacon light northeast of the dredge office (designed May 1949),
- building for watchmen, shipwright foremen and timekeepers (designed 1951 later demolished to make way for the 500 ton slip winchhouse),
- offices for the Superintendent of Dredging and Floating Plant, northeast of the former Water Police Station (designed 1952),
- 500 ton slipway (commenced in 1960; completed in 1965).<sup>223</sup>

# Refer **figures 94 - 9**7.

Probably the most significant of these developments were the new shipwrights shop and the 500 ton slipway – both of which significantly increased the operational shipbuilding and repair facilities of the island.

<sup>&</sup>lt;sup>223</sup> Kerr 1985: Appendix 4



Figure 94: Construction work in the Goat Island shipyard (n.d.) (MSB4043 image reproduced with permission of the Maritime Authority of NSW)



Figure 95: Navigation light, Goat Island (n.d.) (MSB6178 image reproduced with permission of the Maritime Authority of NSW)

## Chapter 9 - Maritime Services Board

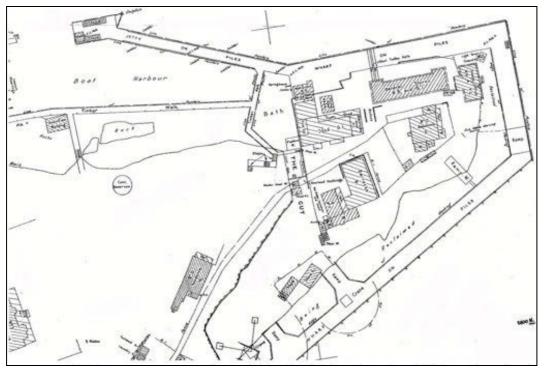


Figure 96: Part of a plan showing additions and alterations (1959)

(MSB plan reproduced with permission of the Maritime Authority of NSW)

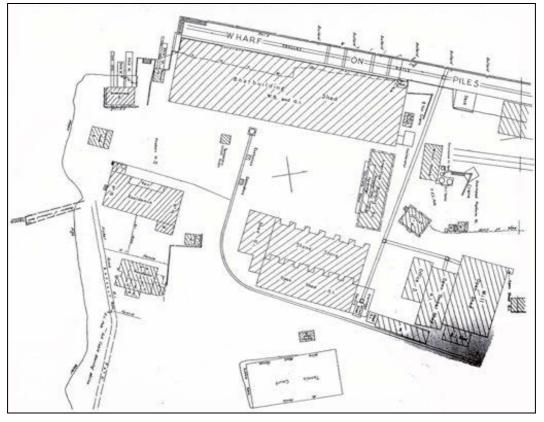


Figure 97: Part of a plan showing a portion of the Goat Island Shipyard (1959) Plan shows a number of converted former magazine buildings and new shipyard buildings constructed after 1925.

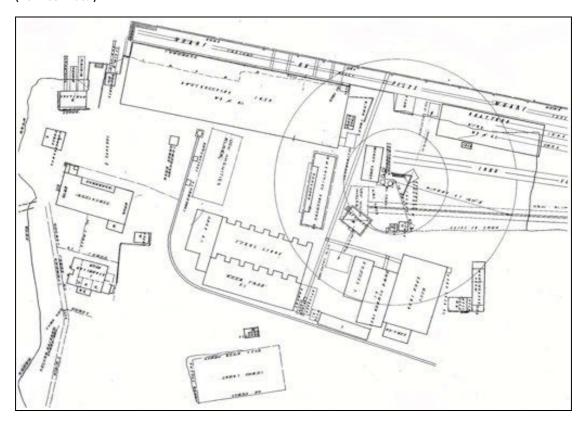
(MSB plan reproduced with permission of the Maritime Authority of NSW)

# Shipwrights Shop

The shipwrights shop is the large, rectangular, ten-bay fabricated steel building that remains on the island. Measuring 256 x 70 feet, it features a saw toothed roof and runs parallel and slightly over) the western side of the island (**figures 98** & **99**). Its construction was inevitable – a consequence of the facilities squeezed into the skeletonized former colonial magazine being sorely inadequate.



Figure 98: The MSB Shipwrights building - view WNW (2007) (Dan Tuck 2007)



#### Figure 99: Part plan of the MSB shipyard (1963)

The shipwrights shop (denoted 'boat building shed') is shown at the top of frame. Image also shows the shipyard's cantilever crane and the new 500-ton slipway commenced in 1960.

(MSB Plan reproduced with permission of the Maritime Authority of NSW)

## Chapter 9 - Maritime Services Board

During the period 1945 – 1955 the Board's fleet totaled well over 100 vessels. The Board's *Annual Report* for June 1948 listed a fleet of 144:

MSB Fleet 1948						
Vessel Type	Nos.	Vessel Type	Nos.			
Pilot Steamers	I	Water Boats	I			
Dredges	7	Steam lighters	2			
Tugs	8	Scows/skiffs	59			
Launches	24	Floating plant	33			
Barges	9	Rock breakers	I			

Table formatted from information in Maritime Service Board Annual Report June 1948; Kerr 1985: 42

As many of the vessels pre-dated the war – and indeed many dated to the early 20<sup>th</sup> century – the repair and reconstruction of the existing fleet was a major component of the Goat Island shipyard's workload. In addition to this, a range of new vessels were also constructed on site in the mid 20<sup>th</sup> century including the diesel tug *Bennelong*, a number of 36-foot launches and the *Derwent Hunter*.<sup>224</sup> Refer **figures 100 - 103**.

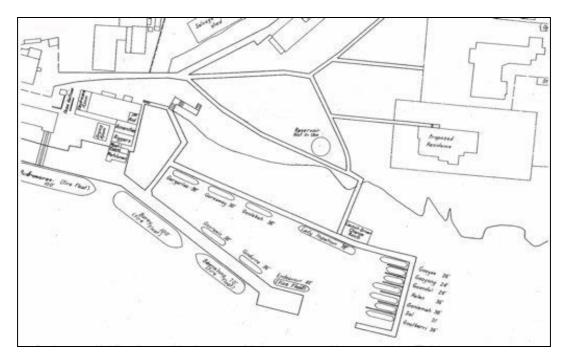


Figure 100: Part of a berthing plan for the northeastern part of Goat Island (1955) This plan shows the 1950s berthing arrangements in the northeastern ferry wharf and boat harbour area. (MSB Plan reproduced with permission of the Maritime Authority of NSW)

<sup>&</sup>lt;sup>224</sup> Kerr 1985: 42. The *Bennelong* now resides in Ballina (Northern NSW) where she has been rebuilt as a 'classic riverboat'



## Figure 101: Construction of ves-

sels: Goat Island (November 1952)

Details attached to the image state that the vessels are the tug Bennelong and the Derwent Hunter.

(ML SLNSW MSBL977 -GPO 1 - 10050)



#### Figure 102:

View looking eastward along the ferry and launch wharf on Goat Island' (c. 1950)

(SRNSW Original number MSBL 1252 Series No. 9856 - Digital Image 9856\_a017\_A017000082 .jpg)



Figure 103: Goat Island Pound (c.1960)

(Sydney Harbour Heritage Fleet Graeme Andrews Collection)

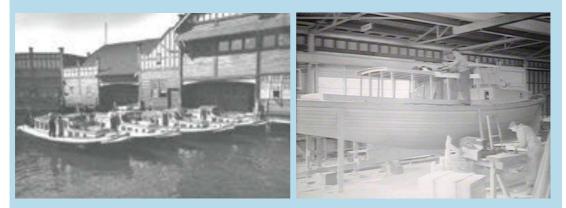
#### Chapter 9 - Maritime Services Board

The *Derwent Hunter* was one of a number of work launches constructed by the MSB in a concentrated construction period spanning the late 1940s to the early 1950s. Details of the Gclass 'Sputnicks' are provided in the following **text box**.

# The Sydney Sputnicks

Soon after the end of World War II the MSB began a program of replacing, rebuilding and renewing its aging harbour fleet. Among the best known of the vessels constructed between the end of the war and the early 1950s were the distinctive 36-foot G-class work launches – built as work boats to service the harbour in a variety of capacities. The vessels all operated in an inner harbour capacity and functioned variously as pay boats, punts, dive vessels and ferries (amongst other things).

Generally, the vessel class was referred to as the Sydney 'Sputnicks' – a reference to the G-class ferries that orbited Goat Island like satellites.



The Sputnicks were wooden vessels typically equipped with Ruston 4-cylinder diesel engines. The design remained relatively constant over the ten odd years of their construction, though at least some of the latter boast built after 1950s featured a raised wheelhouse not seen on the earlier vessels.

All of the vessels featured Aboriginal names reflecting an MSB policy of providing all of its vessels with indigenous handles. Among the early fleet boats were the *Goreen* (wind), *Goolabah* (grey dingo), *Goniemah* (northeast wind), *Gareaway* (white cockatoo), *Gonara* (sun) and *Gooyang* (camp). Vessels constructed in the 1950s included the *Goolberu*, *Giwang, Gurungal, Gargarle*, and *Gooyee*.

The vessels were partly superceded in the 1980s by 40-foot V8 powered launches (also constructed on Goat Island) Though many continued to operate until the late 1980s and early 1990s when most were sold off at fire sales associated with the rationalization of the MSB.

(References: *Sydney Afloat* November 1998: 8 - 9; January 2001: 34 – 35. Images: The *Gargarle, Coniemah, Gooreen* and *Gareaway* at Circular Quay in the 1950s – Sydney Heritage Fleet Graeme Andrews Collection; *Giwang* under construction at Goat Island 9 August 1949 – SLNSW GPO 1 – 07800 digital ID d1\_07800.jpg)

After a flurry of post-war activity in the 1940s, no major structures were erected in the shipyard during the 1950s.<sup>225</sup> By 1960 however, work had commenced on a major undertaking – construction of a 500 ton slipway to facilitate service of all but the Board's very largest floating plant.<sup>226</sup>

# 500 Ton Slipway

Work on a new 500 ton slipway to increase Goat Island's service capacity commenced in 1960. The slip was constructed on a bedding or footing of large concrete pedestal boxes.

The crane obtained to service the slip had previously been in use at Mort's Dock (Balmain) and was moved to the island (partly dismantled) by a floating crane (the *Titan*).<sup>227</sup> The crane had originally been built in Glasgow in 1924 by William Arrow and Co. Ltd of Parkhead – a long radius, 10 ton 'hammerhead' cantilever tower crane (**figures 104 & 105**).<sup>228</sup> The winch for the slip also featured second hand parts – the drum having been used for cable control during construction of the Sydney Harbour Bridge.<sup>229</sup> Footings for the crane were poured in 1963 and by June 1964 the slip, winch and crane were all in service.<sup>230</sup>



Figure 104: MSB cantilever tower crane – views NW & N (2007) (Dan Tuck 2007)

A large new two-storey amenities block was built nearby in the same year as the new slipway became operational. Replacing a number of redundant and overcrowded structures, the new building located near the Queens Magazine, featured a large downstairs change room with

<sup>&</sup>lt;sup>225</sup> Kerr 1985: 42

<sup>&</sup>lt;sup>226</sup> Maritime Services Board Annual Report June 1960

<sup>&</sup>lt;sup>227</sup> Morts Dock closed in 1963

<sup>&</sup>lt;sup>228</sup> Kerr 1985: 42

<sup>&</sup>lt;sup>229</sup> Kerr 1985: 42; Ray Jackson personal communication June 2007

<sup>&</sup>lt;sup>230</sup> Maritime Services Board Annual Report June 1964

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locker accommodation and ablutions, topped by an upstairs dining area (seating 150) with wet weather gear storage.<sup>231</sup> The structure featured concrete masonry (bessa) blocks, with the eastern and western walls fabricated of aluminum curtain walls with panels of exposed aggregate (as well as sporting fire resistant sound insulating fabric called 'vermicite plaster'). The advantage of this form of structure – aside from its 'attractive appearance' – was that it did not require painting and was anticipated to be low maintenance.<sup>232</sup> Refer **figure 105**.

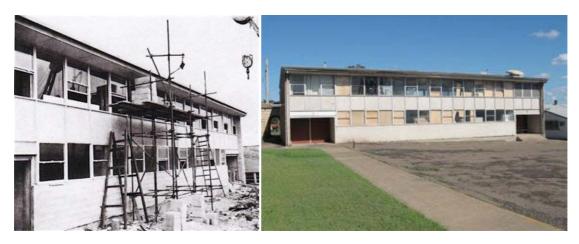


Figure 105: Amenities block under construction (1964) & the block today – view SSW (2007) (All A'Board May 1964 1(7) – reproduced with permission of the Maritime Authority of NSW; Dan Tuck 2007) At around the same time, the old fire brigade barracks were extensively remodeled to provide shower, change and dining facilities for dredge service employees on the eastern side of the island.<sup>233</sup>

While the Goat Island renovations were underway, numerous boat building enterprises and repairs were undertaken. Important projects of the mid 1960s included the construction and of the new Board launch *Captain Phillip* (1963 – 1965) and the new Port Kembla pilot tender *Goonawarra*.<sup>234</sup>. Refer **text box** on the ensuing page.

In the late 1960s and early 1970s, other vessels constructed included new superfast aluminum launches. The latter vessels, built by De Havilland Marine under the Board's supervision included the 36 foot launch *Supply*, the fast patrol boat *Cape Banks* and the personal carrier *James Cook*.<sup>235</sup>

<sup>&</sup>lt;sup>231</sup> All A Board May 1964 1(7)

<sup>&</sup>lt;sup>232</sup> *All A'Board* September 1964 1(8)

<sup>&</sup>lt;sup>233</sup> All A'Board May 1964 1(7)

<sup>&</sup>lt;sup>234</sup> All A Board May 1965 1(10); September 1966 1(14)

<sup>&</sup>lt;sup>235</sup> All A Board December 1970 2(4)

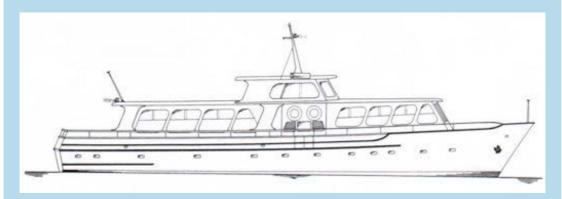
# The Captain Phillip

The *Captain Phillip* was designed to replace the veteran steam yacht *Lady Hopeton* - constructed by Watty Ford at Berrys Bay in 1902. The *Lady Hopeton* had long been the Boards flagship, a vessel that operated as the Commissioners launch and was also used to 'display the commercial and scenic interests of the harbour to VIP visitors'.



The *Captain Phillip*, a flushdeck launch, was built on Goat Island between 1963 and 1965 and featured an overall length of 76 feet, a waterline length of 70 feet. A beam of 20 feet and a draught of 4'9". The vessel was powered by twin Rolls Royce diesel motors (each of 170 bhp at 1800 rpm). Onboard facilities included a compact forward pantry, dining saloon and smoke-lounge room.

The prefabricated spotted gum keel of the vessel was layed down on 8 July 1963 (using the newly crected crane formerly of Morts Shipyard), with the name chosen in 1964, and vessel officially commissioned at the Goat Island Shipyard on 24 February 1965.



Like the *Lady Hopeton* before it, the *Captain Phillip* was the pride of the fleet and the principle vessel used for ceremonial and official functions. Among the many visiting dignitaries who traveled on the vessel in the years after its construction was Pope John Paul VI (who visited Sydney during the Captain Cook bicentennial celebrations in late 1970) and King Mahendra and Queen Ratna of Nepal (1971).



References & Images: *All A'Board* August 1963 1(4); September 1964 1(8); May 1965 1(10); May 1971 2(5); August 1971 2(6) – reproduced with permission of the Maritime Authority of NSW

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The mid 20<sup>th</sup> century was arguably the MSB's heyday. Sea transport was the major form of goods and passenger transfer, economic times were strong, and Goat Island served as an important hub of Board activities, rooted in building boats and servicing the busy harbour (**figure 106**). From the 1970s however, the harbour and its operations began to change – largely as a consequence of changing port use and the rise of alternate transport modalities.

Among the last of the major MSB vessel classes constructed in Sydney Harbour were a number of 40-foot wooden launches (featuring V8 engines) constructed by the MSB shipwrights and apprentices on Goat Island in the early 1980s. These included the *Girakool*, *Girra Girra* and *Macleay*.<sup>236</sup>



Figure 106: Leaving work, Goat Island (c.1960s - 1970s)

Image shows a crowded vessel about to ferry Goat Island workers to the mainland. A couple of stragglers can be seen bolting along the wharf to board the vessel – suggesting this may have been the last ferry of the day.

(Sydney Harbour Heritage Fleet Graeme Andrews Collection)

<sup>&</sup>lt;sup>236</sup> Sydney Afloat November 1998: 8-9

# Decline

The 1970s heralded a new era in Australian industry characterized by a decreased reliance on shipping. This change stemmed largely from the national and international growth of road transport (trucking) and air services (freight). The rise of new transportation options lead to an inevitable decline in maritime trade and industry. This decline, which saw Sydney in effect turn way from a maritime industry with its roots in colonial Australia, was neither smooth nor expeditious.

# MSB Revisited, Reconstructed and Revoked

While the decline of the maritime industry was a feature of the 1970s, the writing was on the wall for the industry for some time to prior to that.

After the war, brisk maritime trade began to highlight deficiencies in the Sydney's waterfront – namely port congestion and inefficient handling leading to slow turnaround. In the early 1950s these inherent deficiencies lead to the establishment of the New South Wales Transport and Highways Commission that exercised a supervisory role over the Department of Transport and the Maritime Services Board. This Commission's greater purpose was to plan for the provision of an 'efficient, adequate, economical and properly integrated system of public transport'. As such the Commission had wide powers enabling it to;

- ensure that the branches of the Ministry of Transport and the Maritime Services Board were efficiently conducted,
- review policy for the development of transport throughout the State,
- consider and make recommendations concerning any proposal from the agencies, which comprised the Ministry of Transport and the Maritime Services Board and coordinate, their annual budgets,
- 'control and direct' the branches of the Ministry.<sup>237</sup>

In order to perform these functions the Commission could inspect the offices and examine records and have access to all properties and other assets. Despite best efforts, the situation worsened – especially after 1974 when the Federal Government introduced tariff cuts that saw

<sup>&</sup>lt;sup>237</sup> Carew 2002; 57-58

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a veritable flood of imported goods shipped into Australia, further overloading the already congested harbour.<sup>238</sup>

The *Maritime Services (Amendment) Act 1960* reconstituted the Maritime Services Board to consist of seven Commissioners appointed by the Governor (rather than two commissioners and the head of the Public Works Department). The Board was again reconstituted in 1984 by the *Maritime Services (Amendment) Act No. 101 1984* with all board members appointed by the minister overseeing ports, public works and roads (then Labor's Laurie Brereton).

By this time there was widespread commercial and governmental concern over the operational efficiency of NSW ports and a perceived need for individual port authorities. In 1988 Dr. Stewart Joy was appointed to investigate the Board - finding that although there was a need for individual ports like Newcastle and Port Kembla to become more commercially responsive, separate port authorities were not essential to this aim. Stewart believed that cooperation between unions and management had led to an increase in organizational efficiency and that the Board itself had become more efficient since the Board's operational branches had been merged into a new commercial Marine Engineering Division. Dr. Joy's report was ultimately rejected.

The Board was again reconstituted (and effectively broken up), by the *Marine Administration Act, No. 93 1989* instigated by a new Liberal government under Premier Nick Griener. The act established subsidiary authorities of the Maritime Services Board – namely MSB Hunter Ports Authority, MSB Illawarra Ports Authority, MSB Sydney Ports Authority and MSB Waterways Authority (each with its own Board of Directors). This particular reconstitution heralded a period of significant change as maritime services across NSW were rationalized and scaled down.

Between 1989 and 1991, the MSB was run by Max 'the axe' Moore-Wilton who was in favour of the major reform of a waterfront he believed to be significantly 'underperforming'. By the end of his term he had halved the MSB staff from 3000 to 1500 – with numerous redundant staff put on an infamous *Jobsearch* program generally referred to as the 'departure lounge'.<sup>239</sup>

<sup>&</sup>lt;sup>238</sup> Carew 2002: 58

<sup>&</sup>lt;sup>239</sup> Carew 2002: 63

The *Ports Corporatisation and Waterways Management Board Act No.13* (1995) ultimately dissolved the Maritime Services Board and its subsidiaries. In doing so, the Act also provided for the following;

- establishment of the Office of Marine Safety and Port Strategy, Waterways Authority, and the Marine Ministerial Holding Corporation (was created to hold the property of the former Maritime Services Board which had not been transferred to the port corporations or the Waterways Authority),
- corporatisation of the three former Maritime Services Board port authorities (Sydney Newcastle and Port Kembla Ports Corporations).<sup>240</sup>

# Unions

Contributing in equal measure to the success and failure of maritime industry in the second half of the 20<sup>th</sup> century, and the demise of the old MSB institution, were the unions representing the various maritime trades. These unions, and particularly the powerful Painters and Dockers Union, provided support for their many members but proved a continual headache for other authorities and those who sought to manage them.

The Painters and Dockers Union represented those engaged in the trade of painting and docking – that is, getting and securing vessels in dock and painting them. They were one of the most militaristic, colourful, and non-compromising of all of the maritime unions - and one of the few never to unite or amalgamate with other trade unions. Refer **text box** on the following page.

<sup>&</sup>lt;sup>240</sup> SRNSW Notes on the MSB Agency Nos. 519

### Painters & Dockers Union

The Federated Ship Painters' and Dockers' Union of Australia was registered under the Commonwealth Conciliation and Arbitration Act 1904 in 1916, and had New South Wales, Victorian and Federal branches.

Over the years the union became a significant political force allied to the left (and far left) of the political spectrum. Throughout the 1970s and 1980s there was also considerable scuttlebutt regarding the links between certain members of the union and organized crime. Allegations regarding the latter were investigated from 1980 when the controversial and politically charged Costigan Commission (officially titled the Royal Commission on the Activities of the Federated Ship Painters and Dockers Union) was established. Headed by Frank Costigan QC, the Commission was established by the Australian Government to specifically pursue claims of criminal activities associated with the Union.

Some would argue that the enquiry was a thinly disguised attempt at heavy handed union bashing, though the enquiry ultimately led away from union activities towards investigation of so-called 'bottom of the harbour' tax evasion schemes – elaborate criminal enterprises that involved the asset-stripping of companies to avoid tax liabilities. It was found that these schemes were in some instances facilitated by criminals among the Painters and Dockers but generally benefited wealthy individuals. The union was deregistered in 1993 (just two years prior to the abolition of the MSB).

(References: Australian Trade Union Archives Archival and Heritage Sources - Federated Ship Painters & Dockers Union of Australia (1916 - 1993)

#### Painters & Dockers on Goat Island

Within the maritime industry, painting and docking was one of a number of specialist trades – others included shipwrights, boiler makers and marine engineers. From around the middle of the 20<sup>th</sup> century, the power and influence of the Painters and Dockers and their union grew as the Australian maritime industry boomed. This ensured that as a group many moved beyond their traditional trade roles and took over a range of waterfront labouring duties including acting as crane dogmen and labouring for boilermakers.<sup>241</sup> Goat Island resident Bill Comptesse described the situation on Goat Island in the mid 1900s as follows:

Well there were shipwrights, and in the early days there were labourers in the yards ... and there were fitters, boiler makers, as well as apprentices in all the trades ... then the Painters and Dockers took over all the labouring, and there were some good men among them but they had a bad name, the painters and Dockers ...

... there was some very skilled men amongst them at the splicing of ropes, and wires and stuff... ... some nice blokes too. I think we had the best of them there on Goat Island.<sup>242</sup>

It would appear that on Goat Island the various trades and their respective unions got along reasonably well – they had to in order ensure the successful running of a busy shipyard.

<sup>&</sup>lt;sup>241</sup> Mick Thaux personal communication 3 October 2007

<sup>&</sup>lt;sup>242</sup> Notes from a preliminary interview with Mr Bill Comptesse dated 31 July 1995 (DECC Goat Island Archive – Greycliffe House, Nielsen Park)

The Painters and Dockers (like other distinct Island groups such as the dredge service) had their own particular enclave areas on the island. The wooden change room building to the north of the Colonial Magazine, which overlooked the slipway, was Dockers' terrain - the door of which bears the inscription 'Rancho El Shito' (**figure 107**). Next to the building are the remains of the union member's garden (represented by banana palms) and a duck pond. It is understood that the Dockers grew some of their own veggies in their small garden, and that they were fishermen of sorts. When boats were slipped on the island and the slipways were flooded and discharged, the P&D workers are believed to have had *carte blanche* over all the fish that had been entrapped.<sup>243</sup>

While the Painters and Dockers Union members had their own quarters, special areas and responsibilities, claims that the island was a particular Painters and Dockers 'headquarters' or 'base' appear to be somewhat exaggerated.



Figure 107: Goat Island Painters & Dockers HQ (2007) (Dan Tuck 2007)

The commission investigation into (and ultimate deregistration) of the Painters and Dockers Union paralleled the changing role and reduction of the MSB. It was against this backdrop of maritime industrial reform and reconstitution that Goat Island's decline as a shipbuilding and port service facility commenced in the closing decades of the 20<sup>th</sup> century.

# Wind down

From around the early 1980s, the MSB was effectively in a holding pattern as investigations into its operations and reconstruction continued within the higher levels of Government. Consequently, from around this time the Board began to scale down its activities at Goat Island and pass on its responsibilities to other agencies. The scaling down was reflected in both

<sup>&</sup>lt;sup>243</sup> Ray Jackson personal communication 19 June 2007

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a diminishing on-island population (only 14 people living there permanently by 1984 compared to over 100 in the mid 1900s) and the demolition of some of its former accommodation buildings (on the lower slope).<sup>244</sup>

Despite the scaling down, the Board took some proactive steps to breathe new life into the facility - instigating historical site visits for school groups (March 1979); establishing a museum (1981); commencing public tours (1984); and engaging James Semple Kerr to undertake a Heritage Analysis of the place.<sup>245</sup> The outcome of the latter was a recommendation that the island be established as an historic site (open to the public) and that the Board's Island operations be relocated – a recommendation inline with Minister for Public Works & Ports Laurie Brereton's 1984 directive to 'commence work on plans for the progressive opening of the whole of the island to the public'.<sup>246</sup>

## Goat Island Museum

A Maritime Services Board museum was established on Goat Island in 1981 within the Officer's Barracks building constructed in 1838 on the southeastern portion of the island. Curator Nancy Herbison Evans established the museum on behalf of the MSB. And it was Nancy who collected and displayed Goat Island memorabilia and paraphernalia and began a popular visitors' program (later revisited by the NPWS at the start of custodianship of the island). Tours commenced in 1984 with the island receiving visitors by ferry three times a day.

(Sources: Anglin Associates 1990 VI: 39; Clark & Clark 2000: 29)

At around the same time there was some discussion about moving the Sydney Maritime Museum (then located temporarily at Birkenhead Point) to Goat Island. In 1986, a proposal was submitted to move the museum's workshops and administration to the island and establish a display area there. The proposal was ultimately deemed impractical and was abandoned with the museum establishing its present base in Darling Harbour instead.<sup>247</sup>

Another 1980s initiative that introduced Goat Island to a wider audience was the staging of a rock concert by seminal Australian pub rock band *Midnight Oil* (see **text box** below)

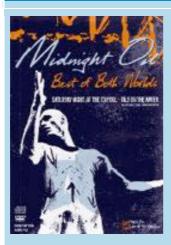
<sup>&</sup>lt;sup>244</sup> Clark & Clark 2000: 28. While the on-Island population declined into the 1980s, the island workforce remained at around 100 until well into the closing years of the 1980s (Mick Thaux personal communication 3 October 2007)
<sup>245</sup> Record of Goat Island Historical Site Visits prepared by MBS Public Relations Officer 7 November 1983 (DECC Goat

<sup>&</sup>lt;sup>215</sup> *Record of Goat Island Historical Site Visits* prepared by MBS Public Relations Officer 7 November 1983 (DECC Goat Island Archive – Greycliffe House, Nielsen Park); Clark & Clark 2000: 30; Kerr 1985

<sup>&</sup>lt;sup>246</sup> Clark & Clark 2000: 29; MSB memo from the office of the General Manager - early 1985 (provided by the DECC)

<sup>&</sup>lt;sup>247</sup> Clark & Clark 2000: 29. The proposal was revisited in the early 1990s but was again deemed problematic

# Oils on the Water



In 1985, when they were arguably at their peak, nationally and internationally successful Australian political rockers *Midnight Oil* performed a landmark outdoor concert on Goat Island. Nicknamed 'Oils on the Water', the concert was to showcase the band as part radio station Triple J's 10<sup>th</sup> birthday celebrations – the audience being made up solely of die hard fans who had won tickets in a radio competition. The band lineup at the time featured Peter Garrett, Rob Hirst, Jim Moginie, Martin Rotsey, and Peter Gifford. In the previous year the band had released 'Red Sails in the Sunset' (a brass laden affair recorded in Japan) and Garrett had run for (and narrowly lost on recount) a seat in the Australian Senate under the Nuclear Disarmament Party banner.

The entire concert was shot on 1" video (the prevailing TV format of the 80s), and in

4:3 format. Mark Fitzgerald had directed the six-camera shoot (augmented by two cameras shooting independently - one solely focused on Garrett and one in a helicopter). Considered a live recording classic, pirated copies of the event were valuable commodities for many years until the recent re-mastering and release of the concert on DVD.

When interviewed about the concert some time later by the ABC's internet radio station *DIG*, drummer Rob Hurst recalled:

I was totally oblivious to the amazing backdrop whether it be the fire tug or that big floating brick, that container ship that came past or how the lights of the bridge came on and dusk turned into that magnificent warm Sydney night. Certainly the location had a lot to do with making that a magical night.

Photographer Anthony 'Ant' Healey remembered:

The setting was a stroke of genius with The Coathanger in the background, the concert starting in daylight and the sun going down behind the audience on the hill and finishing in the dark. I believe at least one tough punter swam out, following his ears.

Another witness recalled:

Goat Island was one of those shows that everyone who was there will remember forever.

Considered on of Australia's finest exponents of passionate rock and roll, the 'Oils' released 16 albums, toured extensively and on 29 October, 2006 was inducted into the ARIA Hall of Fame.

(References: www.abc.net.au/dig/oils/discs/exhuming.htm; www.abc.net.au/dig/stories/s1082868.htm; Oil's guest-book webarchive; Image from the Best of Both Worlds DVD used with permission)

While the concert was clearly a success, interest in the island and its operation faded in late 1980s – perhaps reflecting a broader harbour malaise accompanied by the winding down of the MSB.

The Museum's Nancy Herbison Evans rued the situation in a tour memorandum dated August 1986, citing the following as reasons for a developing lack of interest in the island;

• lack of appropriate and timely promotion,

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- 'chaotic' booking and transport arrangements (the latter being subject to 'frequent breakdowns'),
- lost trade due to the removed location of the booking office,
- a static development plan,
- the impact of 'serious industrial unrest' on the initially high enthusiasm of staff.<sup>248</sup>

The 1980s closed with the MSB establishing an exit strategy for Goat Island – in 1990 it was deemed surplus to operational requirements and motions were set in train for its disposal.<sup>249</sup>

## Refer figure 108.



Figure 108: MSB period graffiti & memorabilia in the Colonial Magazine (Dan Tuck 2007)

 <sup>&</sup>lt;sup>248</sup> Memorandum – Goat Island Tours 18 August 1986 (DECC Goat Island Archive – Greycliffe House, Nielsen Park)
 <sup>249</sup> Clark & Clark 2000: 36

# Transition



The last decade of the 20<sup>th</sup> century was a major period of transition on Sydney's harbour. As mentioned in the previous chapter, the early 1990s saw major restructuring of the Maritime Services Board and its workforce. It also saw a significant reduction in the Board's assets (particularly its land holdings).

It was during this decade that the restructured MSB disposed of Goat Island and the site was transformed from a working maritime hub to a recreational locale with an historical focus.

# Transfer

In the late 1980s, the MSB under the direction of Max Moore-Whilton began the process of streamlining the Board and divesting it of 'non-core' assets deemed surplus to requirements. Among the assets that it sought to remove from its property portfolio were two of the Harbour's most historic island locations - Fort Denison and Goat Island.<sup>250</sup>

Numerous government and non-government (commercial) options for disposal of the two islands were investigated by MSB management with the preferred option being transfer of the islands to the National Parks & Wildlife Service for inclusion in its iconic Sydney Harbour National Park (SHNP) – a park established in 1975 to accommodate, conserve and promote the Service's most important harbour estates. In September 1990 the Premier went so far as to announce to parliament his desire for Goat Island (among other government properties) to become part of SHNP.<sup>251</sup> This recommendation was also voiced by then NSW Minister for Public Works & Ports, Laurie Brereton who again called for the restoration of the island and its wider use.<sup>252</sup>

<sup>&</sup>lt;sup>250</sup> Zenon Michniewicz personal communication 12 July 2007

<sup>&</sup>lt;sup>251</sup> *Goat Island: Review of Management Strategy* (facsimile copy dated 27 May 2002) - (DECC Goat Island Archive – Greycliffe House, Nielsen Park)

<sup>&</sup>lt;sup>252</sup> Undated newspaper article entitled 'Harbour's treasure island prepares for facelift' (DECC Goat Island Archive – Greycliffe House, Nielsen Park)

#### Chapter 10 - Transition

While a Government sanctioned transfer of a significant island location from one state government body to another sounds like a relatively sensible and straightforward venture, the process was complicated and not without obstacles and objections.

#### **Fight for the Island**

After the NSW Premier had announced his intention to vest Goat Island in the National Parks and Wildlife Service (NPWS) as part of its Sydney Harbour National Park estate, negotiations commenced to facilitate the transfer. Almost immediately, it became apparent that the process was not going to be straightforward. Significant issues included State Treasury's desire to receive a payment for the island (which the NPWS could ill afford to pay) and reluctance on the part of some within the NPWS to take on the island – which was perceived in certain quarters as a prospective ongoing financial and managerial burden for the Service.<sup>253</sup>

Ultimately, it was decided that transfer of the island to the NPWS was the appropriate course of action and from late 1990 the MSB, Treasury and NPWS commenced working towards fulfilling the State Government's stated objective under the guidance of an interdepartmental committee. One of the initial financial hurdles associated with the transfer (the need for treasury to balance its books by receiving payment for the island) was solved when an MSB proposition for transfer in exchange for an equivalent MSB debt cancellation was approved.<sup>254</sup>

#### **NPWS Management**

Once it was determined that transfer of the island would indeed go ahead investigations were undertaken in order to determine an appropriate and orderly exit strategy for the MSB's remaining presence on the island, and to consider the numerous options for NPWS management and use of the location.

During the early 1990s, the NPWS engaged Manidis Roberts Consultants to evaluate the resources required for the Service to meet essential management needs for the island in order to integrate it into Sydney Harbour National Park. The guiding philosophy espoused in the study being that the heritage and commercial resources of the island should be properly managed as a 'business unit' that could ultimately be self funding.<sup>255</sup>

<sup>&</sup>lt;sup>253</sup> Robert Bird personal communication 23 April 2007; Zenon Michniewicz personal communication 12 July 2007

<sup>&</sup>lt;sup>254</sup> Zenon Michniewicz personal communication 12 July 2007

<sup>&</sup>lt;sup>255</sup> *Goat Island: Review of Management Strategy* (facsimile copy dated 27 May 2002) - (DECC Goat Island Archive – Greycliffe House, Nielsen Park)

Unfortunately for those involved in the island assessment and transfer process, in 1992 the State Government came under severe budgetary pressure and management strategies and options for the island had to be reviewed in the light of a tightening economic climate which served to delay the inevitable transfer.

In late 1992, Fort Denison was transferred from the MSB to the NPWS where it came under the management of the Service's Sydney District as part of SHNP. This island was significantly smaller than Goat Island and posed less of a managerial headache for the Service than its larger counterpart. In the same year, the MSB commenced vacating Goat Island and the historic shipyard that it had inherited from the SHT in the 1930s was closed down.

Part of the exit process involved the breakup of the remnants of the old MSB fire brigade, which saw a reduced Marine Operations Service (fire fighting and oil spill response) transferred to Pier No. 9 Walsh Bay. The Marine Engineering Division, a significant operation unit colloquially known as 'Marine Eng', was also dismantled at this time.<sup>256</sup>

When the MSB commenced leaving its long time island home for good, the NPWS established a joint caretaker management agreement with the Board to ensure that the island's substantial cultural and historic heritage resources were protected. During this time the shipyard was mothballed, but NPWS and MSB staff worked hard to ensure that the site was secured and its movable heritage items stored away.<sup>257</sup>

In July 1993, once the MSB had vacated and the initial securing of the island had been undertaken, the NPWS assumed 'discrete' management responsibility for Goat Island. With effective transfer of the island concluded, formal transfer of both Goat Island and Fort Denison commenced.

<sup>&</sup>lt;sup>256</sup> Maritime Services Board Annual Report 30 June 1995: 5

<sup>&</sup>lt;sup>257</sup> Moveable heritage items at Goat Island are the portable historic items that have been retained and relate to use of the island in the past. They include convict, military, SHT and MSB relics – most of which were gathered during the 1980s and 1990s in association with the establishment of the Goat Island Museum and later transfer of the island to the NPWS

# Balancing History, Heritage & Use

Throughout 1992 and 1993 the NPWS was working hard to improve both Goat Island and Fort Denison and establish these islands as locations that would 'demonstrate the services credentials in heritage management' and 'promote the aims and of the service' while fostering greater public interest in the sites and opening them up to wider visitation. By the close of 1993 the NPWS had;

- established of a commercial sponsorship deal with *Energy Australia* to enable greater access to Fort Denison,
- installed a caretaker and established of a base of operations on Goat Island for the newly established Sydney Harbour Island's sub-district – a management area that also included Fort Denison, Shark, Clark and Rodd Islands,
- commissioned a survey and Conservation Management Plan for Goat Island,
- received an Archaeological Management Plan for Goat Island,
- undertaken investigations into returning the former MSB shipyard to appropriate 'active use'.<sup>258</sup>

In order to facilitate the latter, MSB *JobSearch* personnel (predominantly maritime workers made redundant by the Board's restructure in the late 1980s) became involved in the 'Goat Island Maintenance program' – a venture designed to undertake maintenance on Goat Island that would enhance the shipyard and facilitate its future reopening.<sup>259</sup>

Title to Goat Island was formerly transferred to NPWS (and the island gazetted as part of Sydney Harbour National Park) in 1994.

<sup>&</sup>lt;sup>258</sup> HLA - Envirosciences Pty Limited 1993; NPWS briefing notes for the member for Port Jackson Sandra Nori – File Nos. A/207 (DECC Goat Island Archive – Greycliffe House, Nielsen Park)

<sup>&</sup>lt;sup>259</sup> This work was allied to a broader 'clean-up' of the island conducted by the MSB which continued well into 1994

# The Burden of History

Goat Island's history, as manifested in its colonial buildings and structures from the SHT/MSB periods, is both the island's greatest asset and its most significant management hurdle. Consequently, it is not surprising that the island's built heritage has both enthralled and frustrated NPWS management in equal measure since the Service became practically involved in the running of the island in 1992.

When the MSB began considering divesting itself of Goat Island in the late 1980s it ceased actively improving the island's facilities and commenced instead an informal program of essential maintenance. When the MSB commenced leaving the island in the early 1990s, much of the basic maintenance ceased and in the windswept maritime locale, 'mothballed' build-ings, wharfage and fittings began to decay unarrested.

Despite the efforts of the Service and its skeleton crew of seconded MSB working on the shipyard, the island was falling into disrepair – a situation that was counter to the Services objectives of promoting and opening up the island to greater use. Nowhere was the situation graver than on the islands wharves and jetties – a patchwork of timber structures in various states of disrepair that encase the island almost in its entirety. These structures were in poor shape but were essential for facilitating access for Service staff and visitors alike.

The year 1995 proved to be a significant turning point in terms of NPWS management and use of Goat Island This was year in which three key developments occurred, namely;

- on-Island establishment of a production centre for television drama Water Rats,
- wharf reconstruction work on the northern wharfs by the army's 21<sup>st</sup> Construction Regiment,
- calling for Expressions of Interest for the long anticipated 're-activation' of the Goat Island Shipyards.

## Water Rats

Goat Island is perhaps best known to those who are unfamiliar with its broader history and heritage, as the production location and operational base of the highly successful Australian television drama *Water Rats*.

## Water Rats

The Australian television drama *Water Rats* was produced by Hal McElroy and Ted Roberts at Southern Star Productions (the stable also responsible for the long running Victorian based production *Blue Heelers*). The developers of the series were Tony Morphett (head writer) and John Hugginson.



*Water Rats* followed the working and private lives of the Sydney Harbour Water Police as they tackled an array of harbour based crimes. Among the series stars were an array of talented Australian actors including;

- Colin Friels (Detective Frank Holloway 1996 to 1999),
- Catherine McClements (Detective Senior Constable Rachel 'Goldie' Goldstein 1996 to 2000),
- Steve Bisley (Detective Jack Christie 1998 to 2001),
- Peter Bensley (Chief Inspector Jeff Hawke 1996 to 2001),
- Aaron Pederson (Detective Michael Reilly 1999 to 2001),
- Jay Laga'aia (Senior Constable Tommy Tavita 1996 to 2001),
- Dee Smart (Alex St Clare 1999 to 2001),
- Brett Partridge (Senior Constable Gavin 'Sykesy' Sykes 1996 to 2001).

Filming commenced in 1995 and the show was first aired on the Nine Network on 12 February 1996 – the opening double episode being *Dead in the Water*. At the height of its fame Channel Nine is understood to have claimed an estimated worldwide weekly audience of 200 million. The shows production costs were enormous - the logistics of working on location on an Island and shooting directly on film ensured that the production budget was around twice that of other comparable drama series. Executive Director Kris Noble blamed escalating costs for the shows ultimate demise in 2001.

*Water Rats* was both popular with viewers and critically acclaimed. The production was nominated for eight industry awards winning five in total:

- 1997 Silver Logie Colin Friels
- 1998 Silver Logie Catherine McClements
- 1998 Young Actors Award Paul Pantano
- 2001 Awgie Award John Banas & Peter Gawler (tied)

(Sources: <a href="http://www.imdb.com/">www.imdb.com/</a>; Picture provided courtesy of Southern Star Entertainment)

The production of *Water Rats*, which commenced in 1995, was facilitated by a landmark agreement established between the NPWS and Southern Star Productions/Hal McElroy. The arrangement allowed Southern Star to establish as extensive production base within some of the old buildings with the island itself acting both a set and location.<sup>260</sup>

The main facility utilized by Southern Star was the large squat blue building on the inner southeastern corner of the island (formerly the Port Emergency Services Building – also known as the MSB amenities block). This building was refitted to function as the main set – the Water Police HQ (**figure 109**). Among the changes to this building were the establishment of a rooftop terrace and the installation of plate-glass windows.<sup>261</sup>



Figure 109: Water Rats HQ (2007) (Dan Tuck 2007)

Other buildings and facilities utilized by the production team included the former shipwrights shop and amenities block on the southwestern or 'shipyard' area of the island (used for sets, offices and post-production), as well as some of the former SHT cottages (which functioned as wardrobe and script departments).<sup>262</sup>

The agreement between Southern Star and the NPWS was not one sided. While the production company had use of the facilities, the NPWS received Southern Star funding for the much needed restoration of the original Water Police building (as part of the agreement) as well as direct and indirect promotion of the island to visitors. *Water Rats* tours were a popular Island attraction and introduced many visitors not only to the filming and production site but

<sup>&</sup>lt;sup>260</sup> Robert Bird personal communication 23 April 2007

<sup>&</sup>lt;sup>261</sup> Clark & Clark 2000: 31

<sup>&</sup>lt;sup>262</sup> Clark and Clark 2000: 31

#### Chapter 10 - Transition

also to the wider attractions of the island – its unique location with 360-degree views of the harbour and its varied built heritage. Cast and crew (including Colin Friels and Catherine McClements) were occasionally involved in the tours when filming schedules permitted.<sup>263</sup>

The Water Rats production arrangement between Southern Star and NPWS appears to have been a generally successful one for both parties. From the NPWS point of view the production saw the island 'working' again and fostered broader public interest. From the point of view of the Rats cast and crew the island provided an idyllic workplace for them, summed up by actor and writer Peter Bensley (Chief Inspector Jeff Hawke) as follows:

Goat Island is an amazing place to work, it's a privilege to work in such an environment. In general the whole team appreciates it and respects it. But although folks may have a proprietorial view, they care about it, have a sense of belonging to the place...

There are about thirty people involved in the production, plus film crew and cast. But the island makes the group into a unit. It's great. 'Water Rats' is now sold to about 170 countries, so I hope it goes on forever.<sup>264</sup>

With very few exceptions, television dramas rarely do go on forever. *Water Rats* ended in 2001 – the victim of a combination of factors including principle cast resignations, falling ratings and escalating production costs. Like a limited number of iconic Australian dramas (such as *The Flying Doctors*) interest in the production continued well beyond its initial screening period (1996 – 2001). A 2003 National Film and Sound Archive exhibition on Australian police dramas (1950 - present) featured original scripts from the show, as well as a plastic corpse used in one of the episodes. The series has been recently re-run on Australian pay TV via the Hallmark Channel.

# 21<sup>st</sup> Construction Regiment Wharf Work

Another positive island development in 1995 was the establishment of a wharf reconstruction project addressing the poor state of the northern wharfs. This project involved the Army Reserve 21<sup>st</sup> Construction Regiment, and was another arrangement (like *Water Rats*) that was mutually beneficial to both parties.

Reconstruction of the wharfage on the northern side of the island was undertaken between September and October 1995 by 101 and 102 Construction Squadrons and involved all demo-

<sup>&</sup>lt;sup>263</sup> Robert Bird personal communication 23 April 2007

<sup>&</sup>lt;sup>264</sup> Part of a Peter Bensley interview (2 March 1999) cited in Clark & Clark 2000: 32 - 33

lition and construction work with the exception of the piling which was overseen by the Regiment but was undertaken by private contractors (Waterways Construction).<sup>265</sup>

When the work was completed the 21<sup>st</sup> Regiment squadrons had gained valuable field experience and the NPWS had improved wharfage facilities for the use of both Service and its island visitors. The 21st Construction Regiment again assisted the Service at Bradleys Head in 1997 removing the last remaining original gun carriage and taking it to the National Artillery Museum located at North Fort, North Head (Manly) where it is now on permanent public display.

# **Boat Building & Repair Resurrected**

The other major enterprise that was kicked off in 1995 (following several years of maritime industry interest, discussion and preliminary investigation) was the reinvigoration of the island's shipbuilding heritage. 1995 was the year in which expressions of interest (EOIs) were called for the 'Re-activation of the Goat Island slipways.<sup>266</sup>The level of interest (18 requests for information packages and 10 site inspections) led to a selective (and drawn out) tendering process.

At the close of the EOI period (9 February 1996) eight proposals for slipways had been received - though all were 'non-conforming'. After further negotiation NPWS awarded a 40year lease of the shipyard to Starkstrom Pty Ltd in 1998. Managing Director Ray Wimborne's plans for the shipyard as a publicly accessible place with an emphasis on the repair of historic vessels most closely adhered to the Service's visions for the old boatyard. Starkstrom kickstarted the process of reactivating the shipyard with capital investment and repair works on the cantilever crane. The first boat that was slipped at reopened shipyards in 1998 was the 380 ton *Showboat* paddle steamer.<sup>267</sup>

Starkstrom Pty Ltd predominantly utilized the two larger slipways (150 & 500 ton), and several bays of the saw-toothed shipwrights building. They subsequently sub-leased the smaller undercover slipways (17 & 20 ton) and the remainder of the shipwrights building to another maritime company in Composite Marine. The two companies ran complimentary operations with Starkstrom Pty Ltd undertaking shipwright work, engineering, spar building and rigging, and Composite Marine filling out allied trade.

<sup>&</sup>lt;sup>265</sup> Robert Bird personal communication 23 April 2007; 'Wharf Reconstruction - Scope of Works' (Australian Army facsimile dated 9 August 1995 (DECC Goat Island Archive – Greycliffe House, Nielsen Park); Clark & Clark 2000: 31

<sup>&</sup>lt;sup>266</sup> 'Expressions of Interest in the Re-activation of the Goat island Slipways' – NPWS briefing note dated 22 March 1996 (DECC Goat Island Archive – Greycliffee House, Nielsen Park)

<sup>&</sup>lt;sup>267</sup> Clark & Clark 2000: 33

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The shipyard has been fully operational since 1998 - the current tenant being a Starkstrom affiliate, the Sydney Ship Repair and Engineering Pty Ltd (SSRE). SSRE is a specialist marine repair and refit company that boasts a shipyard with 'the largest certified slipway facility in New South Wales with a capacity for a range of vessels up to 650 tons'.<sup>268</sup> Refer **figure 110**.



Figure 110: The Sydney Harbour ferry Alexander in the slipway at Goat Island (n.d.) (DECC Image)

<sup>&</sup>lt;sup>268</sup> www.ssre.com.au

# The Gargarle

During the two-year period between the establishment of the shipyard tending process (1996) and the re-opening of the shipyard by Starkstrom (1998), NPWS staff and former MSB employees undertook the first re-use of the shipyard – utilizing the slipway to refurbish a water-logged G-class launch, the *Gargarle*. Refer **text box** below.

# The Gargarle

The Gargarle (mentioned in a previous chapter) was one of a number of G-class launches constructed in the c.1950s by the MSB at Goat Island - most of which were sold off at MSB restructuring fire sales in the late 1980s and early 1990s. The Gargarle ended its MSB life in the most undignified of ways - full of water and in a bad way at Walsh Bay. The NPWS, seeking a wooden vessel as its 'heritage flagship' retrieved the vessel and over the course of several years used the soon to be recommissioned Goat Island slipway to rebuild the vessel.

The boat was completely stripped by NPWS staff (namely Robert Bird, Trevor Newman and Graeme Kermode) who mostly undertook the work in their spare time. Once preliminary work was undertaken, some funding was received to complete the project and professional help was acquired to stabilize the hull and repair the boat to her original configuration.



In all, around 95% of the *Gargarle* rebuilt was undertaken on Goat Island by NPWS staff or by others under their supervision. The vessel is the only G-class launch that remains in Government ownership. In 2003 she won 'Best Dressed' in the Wooden Boat Festival.

(Sources: Robert Bird personal communication 23 April 2007; *Sydney Afloat* November 1998; January 2001; 'Bangers, boats and best seats on the Harbour - Australia Day Barbie, Fort Denison' – DEC Media release Wednesday 17 January 2007; Image courtesy of Robert Newton)

# Other Initiatives

*Water Rats*, the Army wharf rebuild, and the re-establishment of the shipyard were all relatively high profile NPWS initiatives of the mid 1990s. Other works, events and planning undertaken Service direction in the closing decades of the 20<sup>th</sup> century included:

- Preparation of a Conservation Management Plan & Masterplan (1996) aimed to guide the conservation and future use of the islands built and archaeological heritage.<sup>269</sup>
- Undertaking of restorative conservation works on the original Water Police Station (1997 - 1998). These works were facilitated by the aforementioned *Water Rats* funding deal and occurred in tandem with archaeological investigation.<sup>270</sup>
- Establishment of the *Goat Island Film Festival* (1997) Australia's largest showcase of Indian Cinema.
- Establishment of guided heritage tours (including 'Ghost' tours) and school excursions.
- Renovation works on the Harbour Masters residence.
- Archaeological and conservation works within the Magazine precinct predominantly related to stabilization (fabric repairs) and drainage issues (c.1997 1999).<sup>271</sup>
- Staging of the *Biennale* (1998).<sup>272</sup>
- Staging of the *Isola del (Tiber Island) Cinema Festival* showcasing Australians in Italian film – later replaced by the *Italian Film Festival* (1999).

While activity on the island in the late 1990s was active and continuous, the decade closed with administrative focus (and therefore funding) sidetracked by cross-departmental planning for the Sydney 2000 Olympic Games. The aim of pre-Olympic planning was to showcase Sydney and its harbour to the world during the event – the wants of a small heritage island and continued planning for its future would have to wait.

<sup>&</sup>lt;sup>269</sup> Schwager Brooks & Partners Pty Ltd 1996

<sup>&</sup>lt;sup>270</sup> Mider 1998

<sup>&</sup>lt;sup>271</sup> Gojack 1996; Heritage Group State Projects DPWS 1997; Mider 1997; 2000

<sup>&</sup>lt;sup>272</sup> Sydney city-wide arts event encompassing 10 venues including the heritage finger wharf Pier 2/3 and Goat Island. The 1998 event 'Every Day' featured 101 artists from 28 countries (Jonathan Watkins was Artistic Director)

# Revitalisation



The year 2000 commenced with a flourish. On Goat Island, 1500 revelers armed to the teeth with champagne and nibblies welcomed in the New Year with a fantastic view of the traditional New Years Eve fireworks display, which lit up the Harbour Bridge and an array of pontoons afloat on the harbour.<sup>273</sup>

The year was marked by pomp, ceremony and celebrations as Sydneysiders were joined by the millions of national and international visitors who came to the city for the 'Sydney 2000' Olympic Games. Olympic planning authorities promoted the island as part of the 'Sydney Harbour tourism precinct', encouraging visitors to 'enjoy a walk or picnic on one of the numerous Sydney Harbour islands - Shark, Clark, Goat or Rodd Island'.<sup>274</sup>

Among the Games allied events on Goat Island in 2000 was *Sunscreen*, an Australian film retrospective (held jointly at Fox studios, Centennial Park) between the 1<sup>st</sup> and 10<sup>th</sup> of September.<sup>275</sup> Another event that took advantage of Sydney's inflated games population was the Goat Island Film festival's season of Indian Cinema, which featured *Bombay Boys* and four other Filmi Fundas features that took place in late November/early December 2000.<sup>276</sup>

Another unrelated event was radio station Triple-J's second Goat Island Concert – a gig by American neo-punk rockers *Greenday* that took place on the southern side of the island (19 October 2000).<sup>277</sup> Attended by a crowd of competition winners, the gig culminated with the

<sup>&</sup>lt;sup>273</sup> Goat Island (Visitor) Stats 2000 - 2006. DEC file note (DECC Goat Island Archive – Greycliffe House, Nielsen Park)

 $<sup>^{274}\ {\</sup>rm 'Precincts}\ {\rm of}\ {\rm Sydney}\ {\rm - Tourism}\ {\rm NSW'}\ {\rm www.gamesinfo.com.au/pubinfoweb}$ 

<sup>&</sup>lt;sup>275</sup> 'Sydney 2000 Olympic Arts Festival - Program Overview – Events' www.gamesinfo.com.au/pubinfoweb

<sup>&</sup>lt;sup>276</sup> 'Festival of Indian Cinema' Michael Cathcart ABC Radio National Monday 27 November 2000 - www.abc.net.au/rn/arts/atoday/stories/s216191.htm

<sup>&</sup>lt;sup>277</sup> www.geekstinkbreath.net/greenday/tour-dates

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drummer destroying his kit (as tradition would have it) and throwing its carcass into the harbour (figure 111).  $^{278}$ 



Figure 111: Greenday Concert, Goat Island (2001) (Images courtesy of Robert Newton)

Despite a promising start to the decade, which also included plans for additional visitation (including a guided shipyard tour), the development of a 'Tourist Walkway', and berthing facilities for heritage vessels, progress on the island foundered as administrative visions digressed and adequate funding became increasingly difficult to obtain. All the while, the islands perimeter wharfage, which had not been actively maintained since the MSB vacated, continued to decay.

<sup>&</sup>lt;sup>278</sup> Margaret Bailey personal communication 23 April 2007

# A New Start

In 2005, the NSW Government announced a four-year funding program aimed at revitalizing Sydney's national parks. Under this program, \$9.4 million was allocated to Goat Island to enable further conservation of the island's iconic heritage, as well as allowing for the improvement of public access opportunities and general public understanding and enjoyment of the site.<sup>279</sup> Goat Island is currently the subject of a new Master Plan and Conservation Management Plan that aim to direct and focus the management of this NPWS and public asset well into the future.<sup>280</sup>



Figure 112: Open Day on Goat Island with Historical Reenactments (2006) (DECC Images)

<sup>&</sup>lt;sup>279</sup> Robert Bird personal communication 23 April 2007

<sup>&</sup>lt;sup>280</sup> Draft Goat Island Master Plan (22 March 2007)

# References

Aird, W. 1961. *The Water Supply and Drainage of Sydney: 1788 – 1960*. Halstead Press, Sydney.

Albani, A., Rickwood. P., Johnson, B., & Tayton, J. 1997. *The Ancient River Systems of Botany Bay*. Sutherland Shire Studies Publication No. 8.

Anderson, D (ed.). c.1975. *The Botany Bay Project: A Handbook of the Botany Bay Region.* The Botany Bay Project Committee, Marrickville.

Andrews, G. 2004. *The Watermen of Sydney: Memories of a Working Harbour*. Turton & Armstrong, Wahroonga. SLNSW ML Q994.41/453.

Andrews, G. 1986. *Port Jackson 2000. Reed Books*, Frenchs Forsest.

Anglin Associates. 1990. *Sydney Harbour*: Maritime Services Board Heritage and Conservation Register. SLNSW ML Q363.6909944/169 SET (4 volumes).

Anon (n.d.) *Vocabulary of the language of N.S. Wales in the neighbourhood of Sydney (Native and English, but not alphabetical).* MS. 41645(c), School of Oriental and African Studies, University of London, London. [c.1790/1 - Authors possibly Phillip &/or Collins].

Aplin, G (ed.). 1988. *Sydney Before Macquarie: A Difficult Infant*. New South Wales University Press, Sydney. Aplin, G. & Story, J. 1991. *Waterfront Sydney: 1860-1920.* Allen & Unwin, Sydney. SLNSW ML REF 1/Q994.41/189.

Ashton, P. & Waterson, D. 2000. *Sydney Takes Shape: A History in Maps*. Hema Maps, Brisbane.

Attenbrow, V. 2006. *Aboriginal Place names in Sydney Harbour, New South Wales, Australia – A Duel Naming Project.* Paper presented at the Forum UNESCO University and Heritage 10th International Seminar *Cultural Landscapes in the 21st Century*, NewcastleuponTyne, April 2005.

Attenbrow, V. 2002. *Sydney's Aboriginal Past: Investigating the Archaeological & Historical Records*. University of NSW Press, Sydney.

Attenbrow, V. & Steele, D. 1995. 'Fishing in Port Jackson, New South Wales – More than met the eye' in *Antiquity* 69(262): 47-60.

Australia ICOMOS Inc. 1999. *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance.* 

Australian Government (Department of Defence). 2003. *Sea Dumping in Australia : Historical and Contemporary Aspects*. Defence Publishing Service, Department of Defence, Canberra.

Banks, J. 1962 [1768-1771]. *The Endeavour Journal of Joseph Banks: 1768 – 1771*. Edited by J. Beaglehole. Angus & Robertson, Sydney.

#### References

Bell, J. 1961. 'Some Demographic and Cultural Characteristics of the La Perouse Aboriginals' in *Mankind* 5(10); 425 - 438.

Bennett, S. 1865. *The History of Australian Discovery and Colonisation*. Hanson and Bennett, Sydney. SLNSW ML Dixon Reading Room 86/427 (parts 1 - 5).

Benson, D. & Howell, J. 1994. 'The Natural vegetation of the Sydney 1:100,000 Map Sheet' in *Cunninghamia*, 3(4): 677-787.

Benson, D. & Howell, J. 1995. *Taken for Granted: The Bushland of Sydney and Its Suburbs.* Kangaroo Press in association with the Royal Botanic Gardens Sydney.

Berryman, Lt Gen Sir Frank. 1977. *A Short History of the Military Forces in New South Wales 1770-1900*, Victoria Barracks Museum Society.

Bickford, A. 1989. 'Aboriginals in New South Wales after 1788' in *Magazine of the Royal Australian Historical Society*. June 1989: 8-12.

Bigge, J. 1966 [1823]. *The Bigge Report: Report into the Commission of Inquiry on the State of Agriculture and Trade in the Colony of NSW.* Facsimile Edition of Report III - 1823, published by the Libraries Board of South Australia, Adelaide.

Boughton, C. 1981. The Coast Chronicle -The History of Prince Henry Hospital: 1881-1981.

Bradley, W. 1969 [1786-1792]. *A Voyage to New South Wales*. Ure Smith, London.

Branagan, D., Herbert, C., & Langford-Smith, T. 1979. *An Outline of the Geology*  *and Geomorphology of the Sydney Basin.* Science Press, Sydney.

Bowdler, S. 1971. *Bass Point. The Excavation of a South East Australian Shell Midden showing Cultural and Economic change.* Unpublished BA(Hons) Thesis, University of Sydney.

Brodsky, I. 1973. *Bennelong Profile: Dreamtime Reveries of a Native of Sydney Cove.* University Co-operative Bookshop, Sydney. State Ref Library E994.020924/BEN.

Bursill, L. 1993. *Paintings, Engravings, Drawings and Stencils (P.E.D.S) of Southern Sydney Aboriginals.* Thesis submitted as part of the requirements for the master of Letters Degree, Department of Archaeology & Paleoanthropology, University of New England, Armidale. Copy held by the Sutherland Library – Local History Collection.

Butler, K., Cameron, K. & Percival, B. 1995. *The Myth of Terra Nullius : Invasion and Resistance -The Early Years*. Board of Studies (NSW), North Sydney.

Byrne, D. & Nugent, M. 2004. *Mapping Attachment: A Spatial Approach to Aboriginal Post-contact Heritage*. DEC NSW, Hurstville.

Byrne, D., Brayshaw, H. & Ireland, T. 2001. Social Significance: A Discussion Paper. NSW National Parks & Wildlife Service, Research Unit, Cultural heritage Division, Hurstville.

Campbell, W. 1898. *Aboriginal Carvings of Port Jackson & Broken Bay* (Memoirs of the Geological Survey of NSW, Ethnologi-

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cal Series, No.1) NSW Department of Mines & Agriculture.

Campbell. C. 2001. *The Intolerable Hulks -British Shipboard Confinement 1776-1857*. Fenestra Books, Tueson.

Capell, A. 1970. 'Aboriginal languages in the South Central Coast, New South Wales: Fresh discoveries.' *Oceania* 41:20-27.

Carew, L. 2002. *First Port, Future Port: Celebrating 100 years*. Sydney Ports Corporation. SLNSW ML Q994.41/437.

Carleton, F. (n.d.). 'One (or two) French Priests & the Catholics of NSW in 1788' in ANZTLA Newsletter 19: 29 - 35.

Chapman, G & Murphy, C. 1989. *Soil Landscapes of the Sydney 1: 100 000 Sheet*. Soil Conservation Service of NSW, Sydney.

Clark, J. 1813. *Field Sports of the Native Inhabitants of New South Wales*. Edward Orme, London (J. Dove)

Clarke, M & Coltheart, L. 1990. *A Heritage* of *Waste*. Institution of Engineers Australia. Papers of the Fifth National Conference on Engineering Heritage.

Clarke, M. & Clarke, J. 2000. *The Islands* of Sydney Harbour. Simon & Schuster, East Roseville. SLNSW ML REF 1/ Q994.41/ 383A.

Coad, J. 1983. *Historic Architecture of the Royal Navy – An Introduction*. Victor Gollancz Ltd.

Coleman, P. 1986. 'Reminiscences of Old Sydney' in *Descent* (Journal of Australian Genealogists 16(4): 166-172. Collins, D. 1975 [1798]. *An Account of the English Colony in New South Wales.* Volume 1. A.H. & A. W. Reed in association with the Royal Australian Historical Society, Sydney.

Collins, D. 1971 [1802]. *An Account of the English Colony in New South Wales*. Volume 2. A.H. & A. W. Reed in association with the Royal Australian Historical Society, Sydney.

Conner, M. 2005. *The Invention of Terra Nullius*. Macleay Press, Sydney.

Cook, J. 1968. *The Voyage of the Endeavour: 1768 – 1771.* Edited by James C Beaglehole, Sydney).

Cooper, J. (comp.). 1912. *History of Prahran.* Modern Printing Company, Melbourne.

Cummins, C. 2003. *A History of Medical Administration in NSW: 1788-1973*. NSW Department of Health.

Cumpston J. & McCallum, F.1926. *History* of *Plague in Australia 1900-1925*. Commonwealth of Australia Department of Health Service Publication No. 32. SLNSW ML 616.92/c.

Curson, P. & McCraken, K. 1989. *Plague in Sydney: Anatomy of an Epidemic*. New South Wales Iniversity Press, Kensington.

Curson, P. 1985. *Times of Crisis: Epidemics in Sydney 1788-1900.* Sydney University Press, Sydney.

Davidson, G., Hurst, J. & Macintyre, S. 2001. *The Oxford Companion to Australian History*. Oxford University Press, Melbourne.

#### References

Dawes, William. 1790a. *Grammatical forms* of the language of N.S. Wales, in the neighbourhood of Sydney. MS. 4165(a), Marsden Collection, School of Oriental and African Studies, University of London, London.

Dawes, William. 1790b. *Vocabulary of the language of N.S. Wales in the neighbour-hood of Sydney. Native and English.* MS. 4165(b), Marsden Collection, School of Oriental and African Studies, London.

Dallas, M., Steele, D. Barton, H. & Wright, R.V.S. 1997. *POW Project 1995. Randwick Destitute Children's Asylum Cemetery, Archaeological Investigation. Volume 2: Archaeology, Part 3 - Aboriginal Archaeology.* Report to South Eastern Sydney Area Health Service, Heritage Council of NSW and NSW Department of Health.

Davies, S. 1984. *The Islands of Sydney Harbour*. Hale & Iremonger, Sydney. SLNSW ML REF 1/Q994.41/44.

Department of Defence (Australia). 2003. *Sea Dumping in Australia: Historical and Contemporary Aspects.* Department of Defence, Canberra.

Donohoe, J. 1996. *The British Army in Australia 1788 – 1970: Index of personnel*.

Dowling, P. 1998. 'A Great Deal of Sickness: Introduced Diseases Among the Aboriginal People of Colonial South-east Australia'. PhD thesis abstract presented in *Journal & Proceedings of the Royal Society of NSW* 131(1-2): 39-40.

*Draft Goat Island Master Plan*. Report by Conybeare Morrison International in association with DECC (22 March 2007) Dunn, B. 1991. *Angling in Australia – Its History & Writings*. David Eli Press Pty Ltd, Sydney.

Dyer, C. 2002. 'The Indigenous Australians in Sydney and its environs as seen by French explorers, 1801 - 1831' in *Journal of the Royal Australian Historical Society* 88(2); 147 - 161.

Earnshaw, B. 1996. *The Larrikins of Lavender Bay: The Story of the Phoenix Hulk.* North Shore Historical Society, Cammeray.

Emmett, P. 1995. *Fleeting Encounters: Pictures and Chronicles of the First Fleet*. Museum of Sydney, Historic Houses Trust of New South Wales.

Etheridge, R. & Whitelegge, 1907. 'Aboriginal Workshops on the Coast of NSW and their Contents' in *Records of the Australian Museum*, Volume 6.

Farwell, B. 2001. *The Encyclopedia of Nineteenth-Century Land Warfare*. W. W. Norton, New York.

Flannery, T (ed.). 1999. *The Birth of Sydney.* Text Publishing, Melbourne. Australia.

Fletcher, J. 1989. *Clean, Clad and Courteous: A History of Aboriginal Education in New South Wales*. Sydney: J.J. Fletcher, Southwood Press.

Fox, W. *Bubonic Plague*. SLNSW ML 614.49/F.

Foxcroft, E. 1941. Australian Native Policy. Melbourne University Press in association with Oxford University Press, Melbourne. SLNSW ML 572.9901/F. Fraser, J. 1882. 'The Aboriginals of New South Wales' in *Journal & Proceedings of the Royal Society, New South Wales 1882.* Thomas Richards, Sydney.

Franklin, B. 1997. *Report on Goat Island Stonework Conservation: Geology of the Sandstone.* Report prepared for NSW Department of Public Works.

Gojak, D. 1996. *The Magazine Precinct at Goat Island: Archaeological & Architectural Investigations*.

Goodall, H. 1996. *Invasion to Embassy: Land in Aboriginal Politics in New South Wales, 1770 1972.* Allen & Unwin in association with Black Books, St Leonards.

Gow, R. & W. 2006. *Plague: Epidemic in Australia.* A collection of newspaper references relevant to the Plague in NSW. Self published.

Graham Brooks & Associates Pty Ltd. 2006. *Goat Island Conservation Management Plan (Exhibition Draft)*. Report prepared in association with Taylor Brammer Landscape Architects Pty Ltd & Mary Dallas Consulting Archaeologists for NSW NPWS.

Grant. E. 1965. *Guide to Fishes*. Department of Harbours & Marine, Queensland.

Gunson, N (ed.). 1974. *Australian Reminiscences and Papers of L.E. Threlkeld: Missionary to the Aborigines 1824-1859.* Australian Aboriginal Studies No. 40, Ethnohistory Series No. 2, [2 Volumes]. Australian Institute of Aboriginal Studies, Canberra.

Haglund, L. 1989. Assessment of the Prehistoric Heritage of Bare Island and the La *Perouse Headland.* Report to NSW NPWS & NSW PWD.

Hall, J. & McNiven, I. 1999. *Australian Coastal Archaeology*. ANU Research Papers, ANU, Canberra.

Hamilton, A. 1918. 'Topographical, ecological and taxonomic notes on the ocean shoreline vegetation of the Port Jackson District' in *Journal & Proceedings of the Royal Society of New South Wales* 51: 287 355.

Hassall, J. 1977 [1902]. *Old Australia, Records and Reminiscences from 1794*. Library of Australian History, North Sydney.

Heiss, A (ed.). 2002. *Life in Cadigal Country*. Cadigal Information Service, Strawberry Hills.

Henry, G. & Lyle, J (eds). 2003. *National Recreational & Indigenous Fishing Survey.* FRDC Project Nos. 99/158. Australian Government Department of Agriculture, Fisheries & Forestry, Canberra.

Gunter, J. 1978. *Across the Harbour: The story of Sydney's ferries*. Rigby, Adelaide.

Hill, R. & Thornton, G. 1892. *Notes on the Aboriginals of New South Wales (With personal reminiscences of the tribes formerly living in the neighbourhood of Sydney and the surrounding districts).* Published by the Authority of the NSW Commissioners for the World's Columbian Exposition, Chicago, 1893.

Hinkson, M. 2001. *Aboriginal Sydney: A Guide to Important Places of the Past and Present.* Aboriginal Studies Press, Canberra.

#### References

*Historical Records of Australia* [HRA]. Series 1, Library of the Commonwealth Parliament, Canberra.

HLA – Envirosciences Pty Ltd. 2002. *Archaeological Monitoring of Water Pipe Excavation, Magazine Precinct, Goat Island.* Report prepared for NSW NPWS.

HLA – Envirosciences Pty Ltd. 2003. *Archaeological Management Plan for Goat Island, Sydney Harbour*. Report prepared for NSW NPWS.

Horton, D (ed.). 1994. *Encyclopaedia of Aboriginal Australia.* Volumes I & II. Aboriginal Studies Press for AIATSIS.

Howitt, R. 1845. *Impressions of Australia Felix*. Longman, Brown, Green, and Longmans, London.

Hughes, R. 1998. *The Fatal Shore*. The Folio Society, London.

Hunter, J. 1968 [1793]. *An Historical Journal of Transactions at Port Jackson & Norfolk Island* including the Journals of Governors Phillip and King, and of Lieutenant Ball. Australiana Facsimile Edition, Libraries Board of South Australia.

Index of the Criminal Trial reports No. 2 – names of persons tried before the Supreme Court and Quarter Sessions 1839-1840. First published 28 July 1989, Popinjay Publications. ML Ref 1 Q346.6/7/Set.

Interim Sydney Harbour Federation Trust. 2000. *Reflections on a Maritime City: An appreciation of the trust lands on Sydney Harbour*. The Trust, Mosman. SLNSW ML Q994.41/381. Jobson, P. n.d. *Glossary of Royal Artillery Terms & Abbreviations*.

Kelly, M (ed.) 1978. *Nineteenth-Century Sydney: Essays in Urban History*. Sydney University Press, Sydney.

Kelly, M (ed.). 1987. *Sydney: City of Suburbs*. Kensington.

Kemp, P (ed.). 1976. *The Oxford Companion to Ships & the Sea*. Oxford University Press, Oxford.

Kenny, J. 1973. *Bennelong: First Notable Aboriginal.* A report from original sources by John Kenny, Councilor, Royal Australian Historical Society.

Kent County Council. n.d. *The Rise of Artillery 1500-1800*. Refer http://www.fortifications.org/printfreindly .cfm.

Kerr, C. & M. 1980. *Port Jackson, Today & Yesterday.* Rigby, Sydney.

Kerr, J. 1985. *Goat Island: An Analysis of Documentary & Physical Evidence and an Assessment of Significance*. Report prepared for the NSW Maritime Services Board.

King, P. 1790. *Journal, 1786-1790*. ML SLNSW ML [MSS CI15].

Kohen, J. 1985. *Aboriginals in the West: Prehistory to Present.* Western Sydney Project, Armidale.

Kohen, J. 1993. The Darug and their Neighbours: The Traditional Owners of the Sydney Region. Darug Link in association with the Blacktown and District Historical Society. Kohen, J. 1995. *Aboriginal Environmental Impacts*. University of New South Wales Press.

Kohen, J. & Lampert, R. 1987. 'Hunters and Fishers in the Sydney Region' in Mulvaney, J. & White, J (eds). 1988. *Australians to 1788.* Fairfax, Syme & Weldon, Sydney.

Lampert, R. & Megaw, V. 1979. 'Life around Sydney' in Stanbury, P (ed.). 1979. 10,000 Years of Sydney Life: A Guide to Archaeological Discovery. The Macleay Museum, University of Sydney.

Laracy, H. 1980. 'Leopold Verguet and the Aboriginals of Sydney, 1845' in *Aboriginal History* 4(2): 178 - 183.

Larmer, J. 1898. *Native Vocabulary of Miscellaneous New South Wales Objects* (communicated by T.P. Anderson Stuart). Royal Society of NSW, Sydney 1898. ML Dixson Reading Room 9/37.

Loudon, J. 1833 *Encyclopedia of Cottage, Farm & Villa Architecture*. London.

Lowe, G. 1842-1850. *Album of Works: 1842-1850.* SLNSW ML C390.

Marriott, E. 1988. *The Memoirs of Obed West: A Portrait of Early Sydney*. Barcom Press, Bowral.

Matthews, R. 1900. 'Organisation, Language and Initiation Ceremonies of the Aboriginals of the South East Coast of N.S.W' in Journal of the Royal Society of New South Wales 34: 262-281.

Matthews, R. 1903. 'The Dharruk Language' in *Journal & Proceedings of the Royal Society of New South Wales* 35: 155-160. Matthews, R. 1904. 'Ethnological Notes on the Aboriginal Tribes of N.S.W and Victoria' in *Journal of the Royal Society of New South Wales* 35: 127-160.

McBryde, I. 1989. *Guests of the Governor: Aboriginal Residents of the First Government House*. Friends of the First Government House Site.

McCarthy, F.D. 1948. "The Lapstone Creek excavation: Two culture periods revealed in eastern New South Wales" in *Records of the Australian Museum* 22(l): 1-34.

McCormick, T. 1987. *First Views of Australia 1788-1825: A History of Early Sydney.* David Ell Press/Longueville Publications, Chippendale.

McCracken, K. & Curson, P. 1989. *Plague in Sydney - The Anatomy of an Epidemic.* UNSW Press, Sydney.

McDonald, J. 1985. *Sydney Basin Aboriginal Heritage Study. Stage 1: Rock Engravings & Shelter Art Sites.* Report to NSW NPWS.

McDonald, J. 1987. *Sydney Basin Aboriginal Heritage Study. Stage 2: Shelter Art Sites*. Report to NSW NPWS.

McGuanne, J. 1910. 'Old Sydney Blackfellow' in *The Public Service Journal, 1 February 1910* - presented in McGuanne's Press Contributions (ML SLNSW ML Q911m).

McGuigan, A. c.1985. *Aboriginal Reserves in NSW: A land Rights Aid.* Occasional Paper No. 4. NSW Ministry for Aboriginal Affairs.

McKenzie, P & Stephen, A. 1987. 'La Perouse: An Urban Aboriginal Community' in

#### References

Kelly, M (ed.). 1987. *Sydney: City of Suburbs*. Kensington.

McLoughlin, 2000. *The Evidence for vegetation and landscape history of the Sydney region from 1770*. Manuscript, SLNSW SRL N070.50973/16.

Megaw, J.V.S. 1967. 'Radiocarbon dates from Curracurrang Cove, NSW', *Australian Institute of Aboriginal Studies Newsletter* 2(5):26 30.

Megaw, J.V.S (ed.) 1974a. *The Recent Archaeology of the Sydney District: Excavations 1940-1967.* Australian Institute of Aboriginal Studies, Canberra.

Megaw, J.V.S. 1974b. "The Recent Archaeology of the South Sydney District: A Summary" in Megaw, J.V.S (ed.) *The Recent Archaeology of the Sydney District Excavations 1964 1967* Australian Institute of Aboriginal Studies, Canberra.Pp:35-40.

Mider, D. 1997a. Archaeological Assessment & Research Design. 1838 Barracks and Kitchen, Magazine Precinct, Goat Island. Report prepared for NSW NPWS.

Mider, D. 1997b. *Report on Archaeological Monitoring, Goat Island*. Report prepared for NSW NPWS.

Mider, D. 1998. *Archaeological Test Excavations at Goat Island, Sydney Harbour*. Report prepared for NSW NPWS.

Mider, D. 2000. Archaeological Excavation & Recording at the former colonial Magazine, Goat Island, Sydney Harbour. Report prepared for NSW NPWS.

Mider, D. 2000. Archaeological Excavation & Recording at the former colonial Magazine, Goat Island, Sydney Harbour. Report prepared for NSW NPWS.

Mitchell, T. c.1838. *Native Names of Points and Islands in Port Jackson*. Included in Sir Thomas Livingstone Mitchell papers (volume 8 – misc.). ML SLNSW CY Reel 248, frames 328 – 329.

Montgomery, J (ed.). 1831. Journal of Voyages and Travels by the Rev Daniel Tyerman and George Bennett, Esq. Deputed from the London Missionary Society. Westley and Davis, London.

Moore, P. 1989. *Native Plants of the Sydney District: An Identification Guide.* Kangaroo Press in Association with the Society for Growing Plants, Sydney.

Morris, B. 1978. *Colonial Occupation of NSW: The Aboriginal Experience. BA* Honours Thesis, Macquarie University.

Morrison, W. 1888. *Aldine Centennial History of New South Wales. Volume 1.* Aldine Publishing, Sydney.

Mulvaney, D & White, J (eds). 1987. *Australians to 1788.* Fairfax, Syme & Weldon, Sydney.

Mulvaney, J. & Kamminga, J. 1999. *Prehistory of Australia*. Allen & Unwin, Sydney.

Mudie, R. 1829. *The Picture of Australia, 1829.* Whittaker, Treacher & Co, London

Mundy, C. 1971 [1855]. *Sydney Town: 1846-1851.* Review Publications, Dubbo.

Nashar, B. 1967. *Geology of the Sydney Basin.* Jacaranda Press, Brisbane. Newbery, P. 1999. *Aboriginal Heroes of the Resistance: From Pemulwey to Mabo*. Action for World Development, Surry Hills.

Nichols, B. 1988. *The Colonial Volunteers*. Allen & Unwin, North Sydney: 1-2.

NSW Department of Environment & Conservation (DEC). 2005. *Comprehensive Coastal Assessment: Aboriginal Cultural Heritage Audit.* A report prepared for the Coastal, Rural & Regional Strategy Division of DIPNR.

NSW Department of Health. 1900. Prevention of Plague - Instructions to Householders.

NSW Department of Mineral Resources (DMR). 2000. Mining by Aboriginals – Australia's First Miners. *Minefact No. 84*. St. Leonards.

NSW Department of Planning (DoP). 1992. An Environmental Study of Fort Denison, Rodd, Clark, Shark & Goat Islands. Department of Planning, Sydney. ML Q333.7830994/76.

NSW Department of Public Health. 1907. *Plague in Sydney*. Collected NSW Legislative Assembly papers and reports relating to plague between 1900 & 1907. SLNSW ML Q616.923N

NSW Department of Public Works & Services (DPWS). 1997. *Archaeological Investigation of the Drainage System Queens Magazine Goat Island.* Report by the Heritage Group State Projects.

NSW Department of Urban Affairs & Planning (DUAP). 1999. *Sydney Harbour His*- tory Workshop: Background report. SLNSW Q333.9170994/59.

NSW Heritage Office. 1996. *Heritage Terms* & *Abbreviations*. Publication prepared by the Heritage Office (NSW), Department of Urban Affairs & Planning.

NSW Heritage Office. 2001. *Assessing Heritage Significance*. A NSW Heritage Manual Update. Published by the NSW Heritage Office.

NSW Heritage Office. 2004. *Revealing the Past: An Introduction to Historical Archaeology.* 

NSW Legislative Assembly. 1862. *Blankets* for the Aboriginals (from the Government Stores) 1857-1861: Returns relative to the distribution of). Ordered to be printed 3 June, 1862. SLNSW ML ML Q 572.9901/N.

NSW NPWS. 1998. Sydney Harbour National Park Plan of Management.

O'Brien, T. nd. 'Reminiscences of Bondi' presented in *Royal Australian Historical Society Journal 1922-23*, Volume VIII: 362 – 365.

Office of the Board of Studies (NSW). 1995. *Talking Lapa: A local Aboriginal community history of La Perouse*. Office of the Board of Studies (NSW), North Sydney.

O'Flanagan, N. 1989. *The Sydney harbour Trust: The Early Years*. URA Working Paper No. 8. Urban Research Unit, Research School of Social Sciences, ANU, Canberra.

Organ, M. 1990. A Documentary History of the Illawarra & South Coast Aborigines 1770-1850 (including a chronological bibliog-

#### References

*raphy 1770-1990).* Aboriginal Education Unit, Wollongong University, Wollongong.

Organ, M. 1993. *Illawarra and South Coast Aborigines, 1770-1900*. Self published, Wollongong

Panorama views, 1819-36. ML Dixon 82/72.

Pollen, F. 1988. *The Book of Sydney Suburbs*. Angus & Robertson Publishers, Sydney.

Proudfoot, H. 1988. *Sydney Harbour: Paradise of Waters.* Proudfoot Press, Sydney. SLNSW ML 994.41/105.

Pugshell. 1924a. *Early Days of Waverley*. Collection of Newspaper clippings from the Eastern Suburbs Daily & The Bondi Daily. SLNSW ML ML Q991.1/P.

Pugshell. 1924b. 'Aboriginal Workshop at Bondi: Tomohawks, Grindstones, Nose Ornaments, etc' in *Eastern Suburbs Daily*, September 12, 1924.

Radford, R. & Hylton, J. 1995. *Australian Colonial Art 1800-1900.* Art gallery of South Australia, Adelaide.

Ramsland, J. 1996. *With Just But Relentless Discipline: A Social History of Corrective Services* in NSW. Kangaroo Press, Ken-thurst.

Reece, R. 1967. 'Feast & Blankets: The History of Some Early Attempts to Establish Relations with the Aborigines of New South Wales, 1814-1846' in *Archaeology & Physical Anthropology in Oceania* 2(3): 190-206.

Reece, R. 1974. *Aborigines & Settlers*. Sydney University Press.

Robinson, L. 1998. 'Aboriginal Uses of Plants Around Sydney' in *Australian Plants Online* No. 10 (June 1988).

Rich, B. 1985. *Goat Island Archaeological Survey and Assessment of Aboriginal Sites*. Elizabeth Rich for Schwager/Brooks and Partners Pty Ltd. SLNSW ML Q994.41/185.

Rosen, & Manns. 2003. 'Who owns Callan Park? A cautionary tale' in *Australasian Psychiatry* 11 (4), 446–451.

Ross, A. 1976. *Intertribal Contacts: What the First Fleet Saw.* Submitted as part of the requirement for the degree of B.A. Honours, Department of Anthropology, Sydney University.

Ross. A. 1988. 'Tribal and Linguistic Boundaries: A Reassessment of the Evidence' in Aplin, G (ed.). 1988. *Sydney Before Macquarie: A Difficult Infant*. New South Wales University Press, Sydney. Pp: 42-53.

Roughley, T. 1966. *Fish & Fisheries of Australia.* Angus & Robertson, Sydney. Chapter on Aboriginal Fishing revised by Prof. A. P. Elkin (1st edition 1951).

Schwager/Brooks and Partners. 1985. *Goat Island Conservation Policy and Management Plan.* Prepared by Schwager/Brooks and Partners for the Maritime Services Board of NSW. ML Q994.41/82 & Q994.41/184.

Schwager/Brooks and Partners. 1986. *Sydney Maritime Museum: Potential Re-use of Goat Island Shipyard.* Report prepared by Schwager/Brooks and Partners for the Darling Harbour Authority. ML F727.6387099/1.

Sharp, A. 2000. *Pictorial History – City of Sydney*. Kingsclear Books, Sydney.

Shore, H. 1981. *From the Quay: A pictorial history of Sydney Harbour from the 1870's to 1920.* University of NSW Press, Kensington.

Smith, K. 2001. *Bennelong: The Coming in of the Eora*, Sydney Cove, 1788 1792. Kangaroo Press, Kenthurst.

Smith, K. 2002. *Eora & Cameragal: The Sydney Coastal Clans – A Cultural profile.* 

Smith, K. 2006. 'Highways in the Stream' in *atmitchell* 2(2): 3-5.

Spearritt, P. 2000. *Sydney's Century*. UNSW Press, Sydney.

Stanbury, P (ed.). 1979. *10,000 Years of Sydney Life: A Guide to Archaeological Discovery.* The Macleay Museum, The University of Sydney.

Starling, S. 2002. *The Fisherman's Handbook.* Sandstone Publishing, Sydney.

Stephenson, 1966 [1980]. *The History and Description of Sydney Harbour*. Reed, Sydney. SLNSW ML REF 1/994.41/4.

Stockdale, J. 1950 [1789]. *The Voyage of Governor Phillip to Botany Bay*. Facsimile edition – Australiana Society, Adelaide.

Stringer, M. 1984. *Sydney Harbour: A pictorial history from the first settlers to the present day.* JMA Stringer & Co, Sydney. SLNSW ML REF 1/Q994.41/43.

Sydney Harbour Trust (SHT). 1913. *The Port of Sydney, N.S.W: Official handbook*  (2<sup>nd</sup> edition). SLNSW ML ZMC 811.15/1913/1.

Sydway Publishing Pty Ltd, 2003. *Greater Sydney & Blue Mountains Street Directory* (8th edition). Sydway Publishing Pty Ltd, Sydney.

Tench, W. 1979 [1789-1793]. *Sydney's First Four Years*. Library of Australian History, Sydney.

Tennison-Woods, J. 1882. *Fish & Fisheries in New South Wales*.

Thompson, J. 1907. 'The Mode of Spread and the Prevention of Plague in Australia' in *Australian Medical Gazette*, 26: 557-64.

Thornton, G. 1899. 'Aboriginal Names of Places at Port Jackson and along the Coast. *Science*, 31 December 1899.

Thorp, W. 1985. 1985. *Goat Island: Archaeological Survey and Assessment of Historic Sites*. Wendy Thorp for Schwager/Brooks and Partners Pty Ltd.

Thearle, J. & Jeffs, D. 1984. *Plague Revisited: The Black Death – An Account of Plague in Australia 1900 – 1923*. Royal Australian College of Physicians, Sydney.

Tidswell, F. 1900a. *Plague and its dissemination.* Government Printer.

Tidswell, F. 1900b. 'On plague and its disemmination' in Australian Medical Gazette (21 May 1900). SLNSW ML 616.92/T.

Tindale, N. 1974. *Aboriginal Tribes of Australia.* ANU, Canberra.

Troy, J. 1994. *The Sydney Language*. Produced with the assistance of the Australian Dictionaries Project and the Australian In-

#### References

stitute of Aboriginal and Torres Strait Islanders.

Turbet, P. 2001a. *The Aboriginals of the Sydney District before 1788*. Kangaroo Press (Simon & Schuster), Sydney.

Turbet, P. 2001b. 'Seafoods of the Dharawal' in S*utherland Shire Historical* Society Bulletin 4(1): 29-32.

Turner, J. 1980. *Manufacturing in Newcastle: 1801-1900.* Newcastle History Monograph No. 8, Newcastle Public Library.

Turner, J & Blyton, G. nd. *The Aboriginals* of *Lake Macquarie: A Brief History*. The History of Lake Macquarie Series, Lake Macquarie City Council.

University of Newcastle, 2007. *Photography and Convict Wall Recording Goat Island 2006-07*. Report prepared for DECC.

Vaughn, H. 1992. *The Australian Fisherman's Companion*. Ure Smith Press, Sydney.

Victoria Barracks Museum. 1977. A Short History of the Military Forces In New South Wales 1770 – 1900. Prepared in 1953 and reprinted in 1972.

Vinnicombe. P. 1980. *Predilection & Prediction: A Study of Aboriginal Sites in the Gosford-Wyong Region*. Report to NSW NPWS.

*Vocabulary of Language of N. S. Wales in the Neighbourhood of Sydney*. c1790-1792. Manuscript in the Marsden Collection, Library of the Scholl of Oriental and African Studies, London. SL NSW FM4/3432, (Reel 6: Frames 342-366). Wait, E. 1952a. 'Dark People: Aboriginals in Sydney (1)' in *The Australian Highway* August 1952: 39 - 41.

Wait, E. 1952b. 'The Dark People (11): The reasons for coming to the city' in *The Australian Highway* November 1952: 56 - 58.

Walden, I. 1995. 'To Send Her to Service': Aboriginal Domestic Servants' in *Indigenous Law Bulletin Online* 3(76), October 1995.

Waterman, J. (n.d.). 'Recollections of Sydney' presented in *Royal Australian Historical Society Journal 1922-23*, Volume VIII: 359-362.

Waugh, J (ed.). 2001. *Aboriginal People of the Eastern Coast of Sydney: Source Documents.* Randwick & District Historical Society.

Wells, W. 1970 [1848]. *Dictionary of the Australian Colonies - 1848*. Council of the Library of New South Wales, Sydney.

Welsby, T. 1909. Schappering and Fishing in the Brisbane River and Moreton Bay Waters. Outridge Printing Company, Brisbane.

West, A. 1812. *Views of New South Wales* (ML F 981w)

West, O. 1882. *Old & New Sydney*. Reprinted from the Sydney Morning Herald with permission from the proprietors, Edward Horden & Sons. SLNSW ML.

West, O. 1988. *The Memoirs of Obed West: A Portrait of Early Sydney*. Barcom Press, Sydney. Wheeler, J. 1962. 'Old Miller's Point' in *Royal Australian Historical Society Journal* 48(4): 301-320.

White, J. 1962 [1790]. *Journal of a Voyage to New South Wales.* Angus & Robertson in association with the Royal Australian Historical Society, Sydney.

Willey, K. 1979. When the Sky Fell Down: The Destruction of the Aboriginal Tribes of the Sydney Region, 1788-1850. Sydney.

Williams, P. 1986. 'Reminiscences of Old Sydney' in *Descent* 16(4):166-172.

Willmot, E. 1987. *Pemulwuy: Rainbow Warrior.* Weldons, Sydney.

Woolmington, J (ed.). 1973. *Aboriginals in Colonial Society: 1788-1850*. Cassell Australia, Melbourne.

Worgan, G. 1978 [1788]. *Journal of a First Fleet Surgeon*. Library Council of New South Wales, Sydney.

Yeates, N. 1993. *Coffs Harbour. Volume 1: Pre 1880 – 1945.* Banana Coast Printers, Coffs Harbour.

### Appendix A: Glossary of Terms & Abbreviations

The following glossary of terms and abbreviations is based on material presented in the following documents:

- Farwell, B. 2001, *The Encyclopedia of Nineteenth-Century Land Warfare*. W W Norton & Co Inc, New York.
- Kemp, P (ed.). 1976. *The Oxford Companion to Ships & the Sea*. Oxford University Press, Oxford.
- NSW Department of Environment & Conservation (DEC), 2005. Comprehensive Coastal Assessment: Aboriginal Cultural Heritage Audit. A report prepared for the Coastal, Rural & Regional Strategy Division of DIPNR.
- NSW Heritage Office. 1996. *Heritage Terms & Abbreviations*. Publication prepared by the Heritage Office (NSW), Department of Urban Affairs & Planning.
- <u>www.seatalk.info</u> an online Dictionary of English Nautical Language

Modifications, additions and amendments have been made to suit the purposes of this report.

#### **Aboriginal People**

Original inhabitants of Australia

#### ADB

Australian Dictionary of Biography.

#### Archaeology

The study of past human cultures, behaviour and activity through recording and analysis of physical evidence (material remains).

#### AWM

Australian War Memorial (Canberra)

#### Barge

A large flat-bottomed, square-ended vessel used for transporting bulk cargo (such as coal, wheat &c) in inland or near-shore waters. Generally pushed or towed by a tugboat, but sometime self-propelled.

#### Bark

A three (or four) masted ship with square rig on fore and main mast.

#### **Board of Ordnance**

The British government department that managed affairs relating to military engineers and the artillery (abolished in 1855)

#### Brig

A brig is a two-masted sailing ship where both masts are square rigged - the rear mast carrying a gaff sail.

#### Caking

Process whereby stored gunpowder would absorb moisture and become lumpy - caked. To prevent this, the storage barrels would need to be taken out of the magazine periodically and rolled on boards.

#### Cartridge

A tube of paper or metal (sometimes both) containing a complete charge for a firearm.

#### Conservation

All the processes of looking after an item so as to retain its cultural significance. It includes maintenance and may, according to circumstances, include preservation, restoration, reconstruction and adaptation and will be commonly a combination of more than one of these.

#### **Cultural Heritage Management**

Generic term applied to the management of cultural heritage places and values. Previously termed Cultural Resource Management (CRM).

#### **Cultural Significance**

A term frequently used to encompass all aspects of significance, particularly in guideline documents such as the *Burra Charter*. For historic heritage, cultural significance most commonly includes social, spiritual, scientific, historic and aesthetic values.

#### DECC

NSW Department of Environment & Climate Change (formerly the DEC – Department of Environment & Conservation). This department was formed in 2007 and encompasses the NSW National Parks & Wildlife Service; the NSW Environmental Protection Authority; the former Department of Natural Resources; Botanic Gardens; and the former NSW Greenhouse Office.

#### Dredge

A ship or barge that specializes in creating or deepening channels by digging up and moving material (sand, mud &c) on the sea floor.

#### Gunner

A member of a gun (cannon) crew, or any soldier in the artillery

#### **Floating plant**

Plant (often machinery such as rock crushers, cranes &c) that can be moved around on water (often onboard a vessel or pontoon).

#### **Gunpowder barrel**

Gunpowder barrels were built to contain 100 pounds of powder and large enough to allow for space for the powder to move when rolled to prevent 'caking'.

#### Heritage

Consists of the intangible and tangible aspects of the whole body of cultural practices, resources and knowledge systems developed and passed on as part of expressing cultural identity.

#### **Historical Theme**

Traditionally used to describe a major force or process (activities such as mining, fishing or defence), which has contributed to our history.

#### Historic Heritage

Comprises sites, places and cultural landscapes that contain physical and non-physical manifestations of cultural heritage values of human occupation and settlement after the arrival of non-indigenous people in Australia. Historic heritage includes both non-indigenous and Aboriginal (shared) cultural heritage values and can also be referred to as post-contact heritage. Historic heritage includes moveable heritage, collections and gardens.

#### History

The study of, or a record of, past events considered together, especially events of a particular period, country or subject.

#### Holocene

A 'post-glacial' geological time-scale period lasting from 10,000 years ago to the present.

#### Item

Generic term used to describe objects, structures or places. A heritage item is a landscape, place, building, structure, relic or other work of heritage significance.

#### JRAHS

Journal of the Royal Australian Historical Society. Also Journal & Proceedings of the Royal Australian Historical Society.

#### Keel

The lowest and principal timber of a wooden ship - the single strongest member of the ship's frame.

#### Laboratory

A military structure in which ammunition and pyrotechnics were made up.

#### Landscape

Used in the same way as place but applies to a large contiguous geographic area, usually comprised of a number of topographic features.

#### Launch

A small boat carried on board ship and used for transportation ashore (and often also as a lifeboat).

#### Lighter

A barge used to unload cargo from ships (often, but not necessarily, where there is no adequate harbour).

#### MS/MSS

Manuscript (s)

#### MSB

Maritime Services Board

NAA

National Archives of Australia (Canberra)

#### Nature Reserve

Lands dedicated as a Nature Reserve under National Parks and Wildlife Act 1974.

#### NPWS

The NSW National Parks and Wildlife Service (NPWS) was created in 1967 to manage a growing number of national parks, historic sites and Aboriginal sites as well as undertaking its role in native fauna management. Australia's first national park 'The National Park' – was declared in 1879 (and renamed 'Royal National Park' in 1955). NPWS now manages 783 national parks and reserves covering over 6.6 million hectares or 8 percent of NSW, including World Heritage areas, rainforests, rivers, beaches, wetlands, deserts, marine parks, culturally significant places, and alpine areas. NPWS is now part of the Department of Environment and Climate Change (DECC).

#### NLA

National Library of Australia

#### Pilot

A commercial ship operator who is especially qualified to operate ships in local coastal waters and into harbours.

#### Pleistocene

A geological time-scale period, lasting from around two million years ago to 10,000 years ago.

#### Post-contact

Period in Australia after British colonists arrived in 1788.

#### Prehistory

Usually defined as the period prior to written records. In Australia it is used mainly to refer to the period of Aboriginal occupation dating to before the arrival of British colonists.

#### RAHS

Royal Australian Historical Society.

#### Regiment

A military unit larger than a battalion but smaller than a brigade, usually commanded by a Colonel. Most British regiments consisted of two battalions - however some had only one ,and rifle regiments had four. All the artillery in the British Army constituted a single regiment - the Royal Regiment of Artillery.

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#### **Regiment of Foot**

In the early 19th century, infantry were designated as 'foot' as opposed to 'horse' (cavalry).

#### Relic

(1) Term replaced by Aboriginal object in the Act following the passing of the National Parks and Wildlife Amendment Act 2001.

(2) Heritage Act 1977 defines relic as '... any deposit, object or material evidence relating to non-Aboriginal settlement which is more than 50 years old'.

#### Schooner

Generally defined as sailing ship with at least three masts, a carvel built hull and a gaff rig on all masts.

#### Scow

A flat bottom barge with a raked transom at both ends, designed for shallow waters

#### Shipwright

A tradesman with special skills in construction of ships (also referred to as a boatwright or boat builder).

#### SHNP

Sydney Harbour National Park

#### SHT

Sydney Harbour Trust

#### Significance

Of aesthetic, historic, scientific, cultural, social, archaeological, natural or aesthetic value for past, present or future generations. Heritage significance is often used interchangeably with the term 'heritage value'. In NSW two management levels of significance for heritage items are used – State and local.

#### Site

Usually considered to be a location or area of land that represents a focus of past human activity. An archaeological or historic site often features or contains physical or tangible cultural material remains.

#### Skiff

A small lightweight sailing boat or motorboat.

#### Slip (slipway)

Either a docking area between two piers, or, a ramp leading ashore from the water where boats may be repaired.

#### SLNSW

State Library of New South Wales. The main section that contains information relating to the history of NSW (and Australia) is the Mitchell Library (ML).

#### SLSA

State Library of South Australia.

#### SLV

State Library of Victoria.

#### SRNSW

State Records New South Wales (formerly the Archives office of NSW).

#### Sydney Harbour National Park

This national park was created in 1975 to conserve key headlands and harbour-side areas of natural and cultural significance. Existing parklands were the first to be gazetted, including parts of Dobroyd Head, Bradley's Head, Shark Island and Clark Island. Nielsen Park, already under NPWS management, was added in 1980. Between 1979 and 1984, in accordance with an agreement between the Commonwealth and State Governments, lands previously reserved for defence or other purposes were added. These were Middle Head, Georges Head, Crater Cove, North Head and South Head and the Quarantine Station. Fort Denison and Goat Island were the last areas added to the Park in 1995. The Park now exceeds 380 hectares.

#### Tug

A vessel designed and equipped specifically for towing. Tug boats usually have deep drafts, a moderate freeboard, a spacious low afterdeck for bits and hawsers, and a large powerful engine. Some tugs are specially outfitted to push as well as tow (pushboats). Tugs are also widely know as tow boats.

#### Values

The reasons why an item is important to individuals, groups or communities. Key cultural heritage values are social/spiritual, scientific, historic and aesthetic.

Appendix B: Summary Chrono	ology –	limeline
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	Goat Island - Timeline
Date	Event
c.8000 - 6000 BP	Sea level rises create Sydney harbour. The inundation crates a number of islands (formerly hills and high ground) – Goat island is one of these
Pre-1788	Goat Island is the sole domain of local Aboriginal people who know the place as 'Memel'
1788 - c.1820s	Numerous commercial and non-commercial enterprises suggested for the island (includ- ing establishing a whaling station and building a navy dock)
1798	Bennelong claims Goat Island as part of his traditional territory
1	Lt. David Collins refers to Goat Island – this appears to be the first use of this name
1813	Bennelong dies and is buried on James Squires' property at Kissing Point
1826	Convict hulk the <i>Phoenix</i> moors off Goat Island and prisoners engaged in cutting stone
1831	Northeast tip of the island established as a stone quarry. Quarrying ceases in c.1832
18205/18305	Safe storage of gunpowder a major colonial concern
Early1830s	Work commences on a gunpowder storage facility (including a magazine and cooperage) on the western side of the island. Convict labour utilized
1835	Water police station established on the eastern tip of the island. Facility is separated from the mainland by a cut (wet ditch) and features a station house
	Wesleyan missionary George Langhorne employed as a teacher to instruct the prisoners on Goat Island (including Aboriginal prisoners)
1837	Convict Charles 'Bony' Anderson is briefly chained to a rock (Anderson's seat)
1839	Gunpowder storage complex completed – complex includes Queens (Ordnance) maga- zine, cooperage, wharves, barracks, & a stone enclosure wall. Facility garrisoned by Impe- rial units.
18405	Continued concern over the storage of government and private gunpowder. Goat Island complex deemed inadequate for present and future storage requirements
C1852 - 1853	New Colonial gunpowder magazine established near the Queens Magazine
1859	Colonial magazine extended – with additions on both sides of existing structure
1860s	Barracks building converted to accommodate a magazine foreman and garrison staff. Other Island works included additional wharfage, erection of a derrick crane, and a new stone privy
1861	Over 7,000 barrels of gunpowder stored in the island's magazines

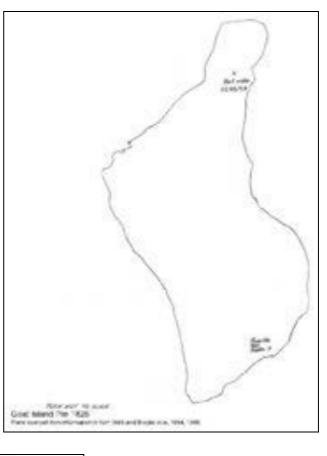
	Goat Island - Timeline
1865	Water Police move out of the eastern part of the island. Site acquired by the Ordnance department and bridged to the western part of the island. Former water police complex retrofitted with a cartridge laboratory and a new labourer's cottage
18705	Importation of new blasting agents into Australia (guncotton, nitroglycerine &c). Addi- tional magazines established on the west side of the island (since demolished) Imperial troops leave Australia
Late 1800s	Focus of gunpowder storage moves elsewhere (e.g. Newington) and role of Goat Island as a storage facility diminishes
1900	Plague breaks out in Sydney – initial outbreak continues sporadically until 1909
	Sydney Harbour Trust (SHT) established to structure and manage Sydney Harbour improvements and cleanup
1901	Federation
	Wrangling over ownership and use of Goat Island between Commonwealth, state and local governments
	Goat Island established as SHT dredge and fire brigade depot
Early 1900s	SHT facilities including sheds, workshops, wharves and accommodation established on the western side of the island
	Harbour Masters residence built on the main ridgeline
	Remainder of stored explosives removed from the island (c.1904 – 1907)
1914-1918	WWI
1925	SHT move into the western (colonial magazine complex) side of the island and establish a shipyard to service its ever-expanding fleet of vessels and floating plant.
	Facility includes slipways, cranes, new wharfage and sheds. Old colonial structures refit- ted to allow for boat repair and building – the colonial magazine is significantly altered to accommodate shipwrights.
1920s/1930s	Grid wharf established on the eastern side of the island; water main laid between the island & Balmain
	Depression era
1936	SHT dissolved – Maritime Services Board (MSB) established. Board takes over the responsibilities of the SHT (and more)
1939-1945	WWII
	MSB harbour works continue; MSB vessels involved in the establishment of the harbour boom (anti-torpedo net) and Island involved in construction of the Garden Island graving dock keel blocks
	On-island improvements include construction of a community hall and tennis court and the building of a transformer house near the barracks

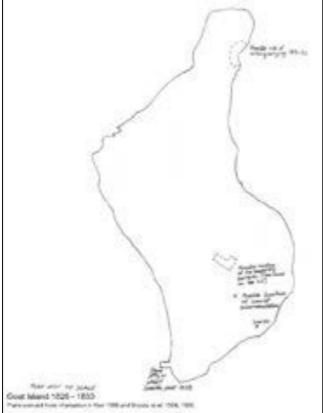
	Goat Island - Timeline
1945 <b>-</b> 1960s	Post-war boom period – the island has a large workforce (c.200) and residential commu- nity
	Flurry of post-war construction including additional jetties, sheds and workshops, a new shipwrights shop, and a 500 ton slipway
	Major shipbuilding period on the island – including construction of numerous launches
19708	General decline in maritime activity due partly to the rise of road, rail and airline transport
19805	Major inefficiencies on the waterfront highlighted as impediments to Australia's ports – MSB reconstruction and reformation commences
Mid 1980s	Decline in the importance of Goat Island as an MSB asset
	Minister Laurie Brereton calls for opening up of the island to the public
	MSB investigate opportunities to open up the Island including establishing a museum, instigating cultural tours, and undertaking heritage and conservation studies
1985	Midnight Oil perform arguably one of their finest live concerts at Goat Island – Oils on the Water
1989	MSB restructured with subsidiary authorities established (1989)
	Major waterfront reform commences under Max Moore-Wilton – MSB staff number halved by 1991
	Goat Island deemed surplus to MSB requirements – operations on the island reduced; parts of the island mothballed
Early 1990s	NSW National Parks & Wildlife Service (NPWS) commences investigation into acquiring Goat Island (and nearby Fort Dension)
199 <b>2 -</b> 1993	Fort Denson transferred from the MSB to the NPWS
	MSB operations remaining on Goat Island transferred - NPWS assume discrete management responsibility
	NPWS work with MSB Jobsearch personnel to tidy up the island and its shipyard
1994	Title to Goat Island officially transferred to NPWS
1995	NPWS & Southern Star productions/Hal McElroy enter into an agreement to establish a production base for the TV series <i>Water Rats</i> on Goat Island. Filming commences in 1995 and the series runs from 1996 to 2001. The former MSB amenities block becomes water Rats HQ and numerous other buildings have production functions
	The army's 21 <sup>st</sup> Construction Regiment undertakes reconstruction work on the northern wharves
	Expressions of interest are called for the re-opening of the Goat Island shipyard.
1996	Conservation Management Plan & Master Plan prepared to guide use of the island
	Archaeological and restorative works commence at a number of locations about the island including the Water Police cottage, Harbour Master's residence and the magazine pre- cinct
1997	Goat Island Film Festival established – a showcase of Indian cinema. This is the first of a number of film festivals that utilize the island

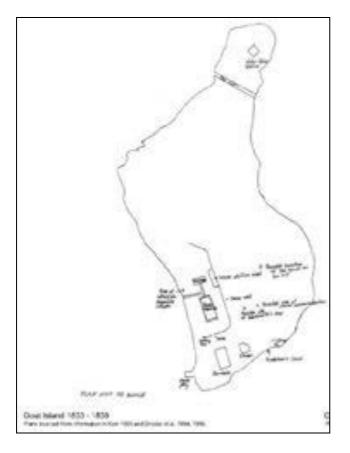
Goat Island - Timeline	
1998	Shipyards are re-opened – the 380 tonne <i>Showboat</i> paddle steamer is the first vessel slipped
2000	Sydney Olympics Goat Island is part of the 'Sydney Harbour Tourism Precinct' <i>Sunscreen</i> Australian film retrospective; Greenday concert
Early 2000	Conservation works and scoping studies
2005	NSW Government announces a four-year funding program to revitalize Sydney's National Parks. Money allocated to Goat Island to enable conservation and cultural tourism oppor- tunities
2006-2007	Planning for the future is focused with the commissioning of a new Conservation Man- agement Plan and Master Plan

### Appendix C: Evolutionary Development of Goat Island

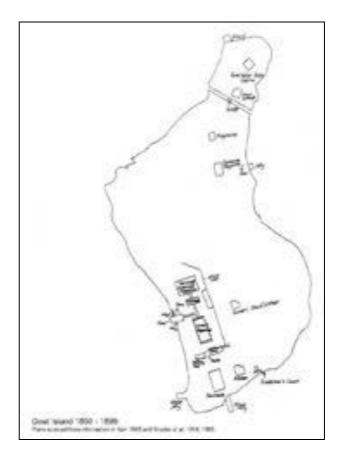
The following low-resolution images have been provided by the DECC. They were originally presented in the report HLA – Envirosciences Pty Ltd. 2003. *Archaeological Management Plan for Goat Island, Sydney Harbour*. They were also presented on the website *Goat Island Dreaming* (deactivated 2007)

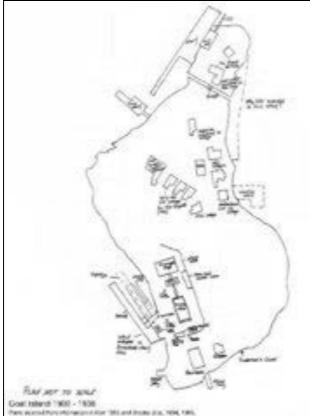


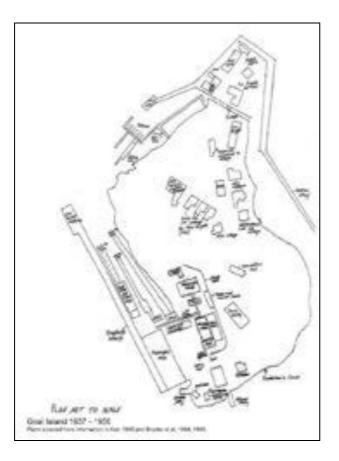


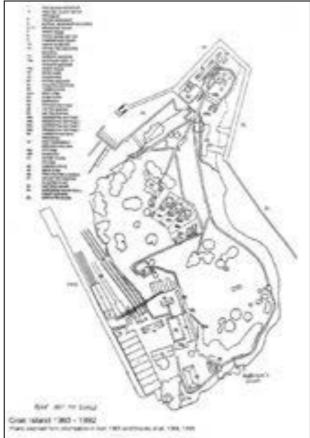




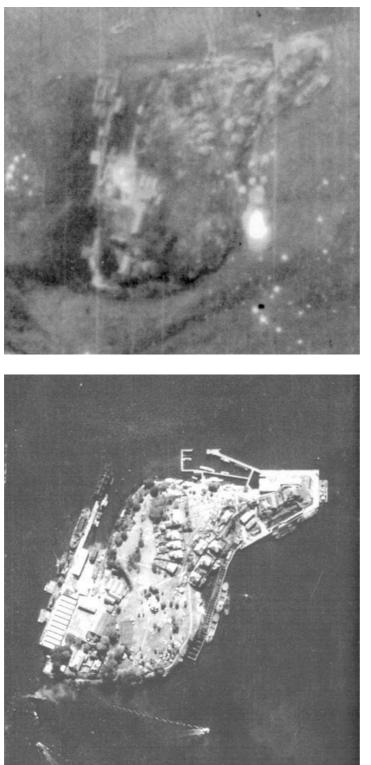








### Appendix D: Select Air Photos

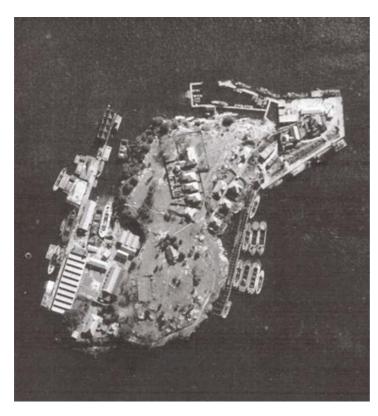


## 1930

Land & Property Information Commonwealth of Australia Map 3 422 Sydney 6.3.1930

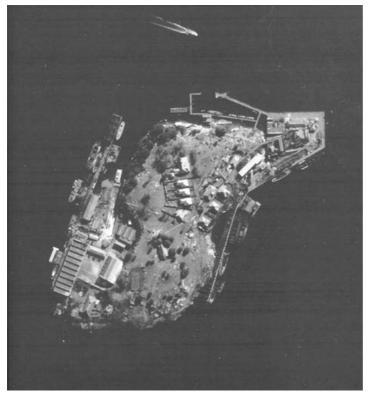
## 1951

Land & Property Information Sydney (Co. Cumberland) Run 12 May 51



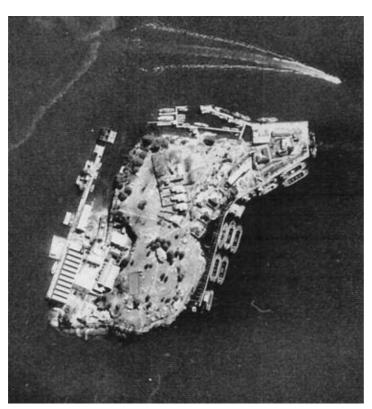
## 1955

Land & Property Information Sydney (Co. Cumberland) Run 21 - 6 August 1955



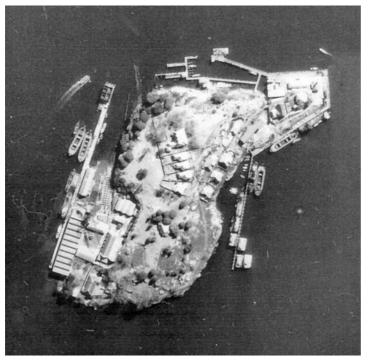
## 1961

Land & Property Information Sydney (Co. Cumberland) Series Run 33E - 1961



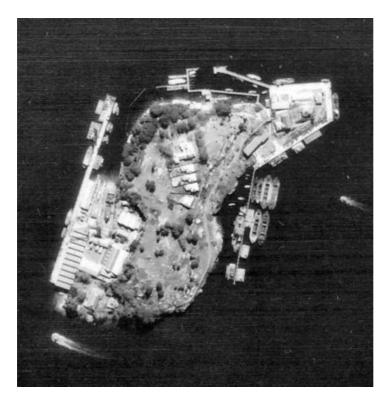
## 1965

Land & Property Information Sydney (Co. Cumberland) Series Run 20E – 29 August 1965



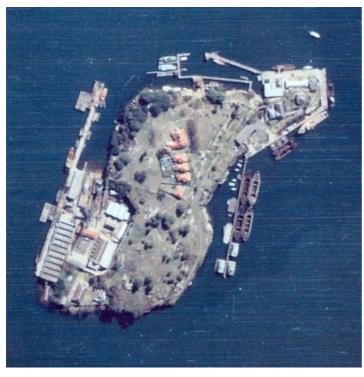
## 1970

Land & Property Information Sydney (Co. Cumberland) Series Run 16E 13 August 1970



## 1978

Land & Property Information Sydney (Co. Cumberland) Run 15 – 6 May1978



## 1982

Land & Property Information Sydney (M1474) Run 21 – 10 August 1982



### 1986

Land & Property Information Sydney ISG 1986 Run 21 – 3 August1986



## 1991

Land & Property Information Sydney Run 10 – 14 August1991



### 1994

Land & Property Information Sydney Run 10 – 4 October1994



### 2002

Image supplied by the DECC

All images (with the exception of the last) were collated in Tropman & Tropman Architects. 2006. *Goat Island Wharves, Sydney Harbour: Introductory Report*. Report prepared for the DECC to accompany the Conservation Management Strategies prepared for the Broadside Wharf (4a, 4b, 5); Skeleton Wharf (51); Eastern Wharf (52a & b); Ferry Wharf (54a); Boat Pens (54c & c); Northern Wharf (55a & b). Pp: 62 – 72.