

## APPENDICES

## **APPENDIX A: Gazettal Notices**

**22<sup>nd</sup> November 2002**

**13<sup>th</sup> May 2005**

**SYDNEY METROPOLITAN OFFICE**  
**Department of Land and Water Conservation**  
**2-10 Wentworth Street (PO Box 3935), Parramatta, NSW 2124**  
**Phone: (02) 9895 7503 Fax: (02) 9895 6227**

**RESERVATION OF CROWN LAND**

PURSUANT to Section 87 of the Crown Lands Act 1989, the Crown land specified in Column 1 of the Schedule hereunder is reserved as specified opposite thereto in Column 2 of the Schedule.

**JOHN AQUILINA M.P.,**  
Minister for Land and Water Conservation.

**SCHEDULE**

COLUMN 1	COLUMN 2
Land District: Metropolitan	Reserve No. 1004208
Local Government Area: Pittwater	Public Purpose: Access
Locality: Mackerel Beach	
Lot 7016 D.P. 752017	
Parish: Broken Bay	
County: Cumberland	
Area: 1875 m <sup>2</sup>	
File Ref.: MN02R15/1	

**ESTABLISHMENT OF RESERVE TRUST**

PURSUANT to Section 92(1) of the Crown Lands Act 1989, the reserve trust specified in Column 1 of the Schedule hereunder is established under the name stated in that Column and is appointed as trustee of the reserve specified opposite thereto in Column 2 of the Schedule.

**JOHN AQUILINA, M.P.,**  
Minister for Land and Water Conservation

**SCHEDULE**

COLUMN 1	COLUMN 2
Mackerel Beach Wharf	Reserve No. 1004208
(R1004208) Reserve Trust	Public Purpose: Access
	Notified, This Day
	File Ref.: MN02R15/1

**APPOINTMENT OF CORPORATION TO MANAGE RESERVE TRUST**

PURSUANT to Section 95 of the Crown Lands Act 1989, the corporation specified in Column 1 of the Schedule hereunder is appointed to manage the affairs of the reserve trust specified opposite thereto in Column 2, which is trustee of the reserve referred to in Column 3 of the Schedule.

**JOHN AQUILINA, M.P.,**  
Minister for Land and Water Conservation.

**SCHEDULE**

COLUMN 1	COLUMN 2	COLUMN 3
Pittwater Council	Mackerel Beach Wharf (R1004208)	Reserve No. 1004208
	Reserve Trust	Public Purpose: Access
		Notified, This Day
		File Ref.: MN02R15/1

**ERRATUM**

THE notification appearing in the Government Gazette of the 8 November 2002, folio 9487 under the heading "Addition to Reserved Crown Land" and detailing "addition of part Lot 1 D.P. 126704 to Reserve 1003788" is cancelled.

MN02R57

**JOHN AQUILINA, M.P.,**  
Minister for Land and Water Conservation

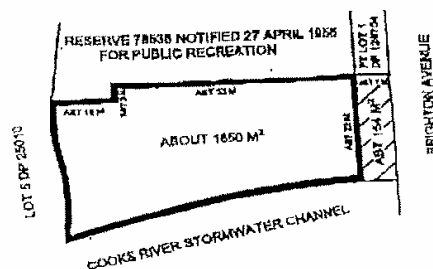
**REVOCATION OF DEDICATION OF CROWN LAND FOR A PUBLIC PURPOSE**

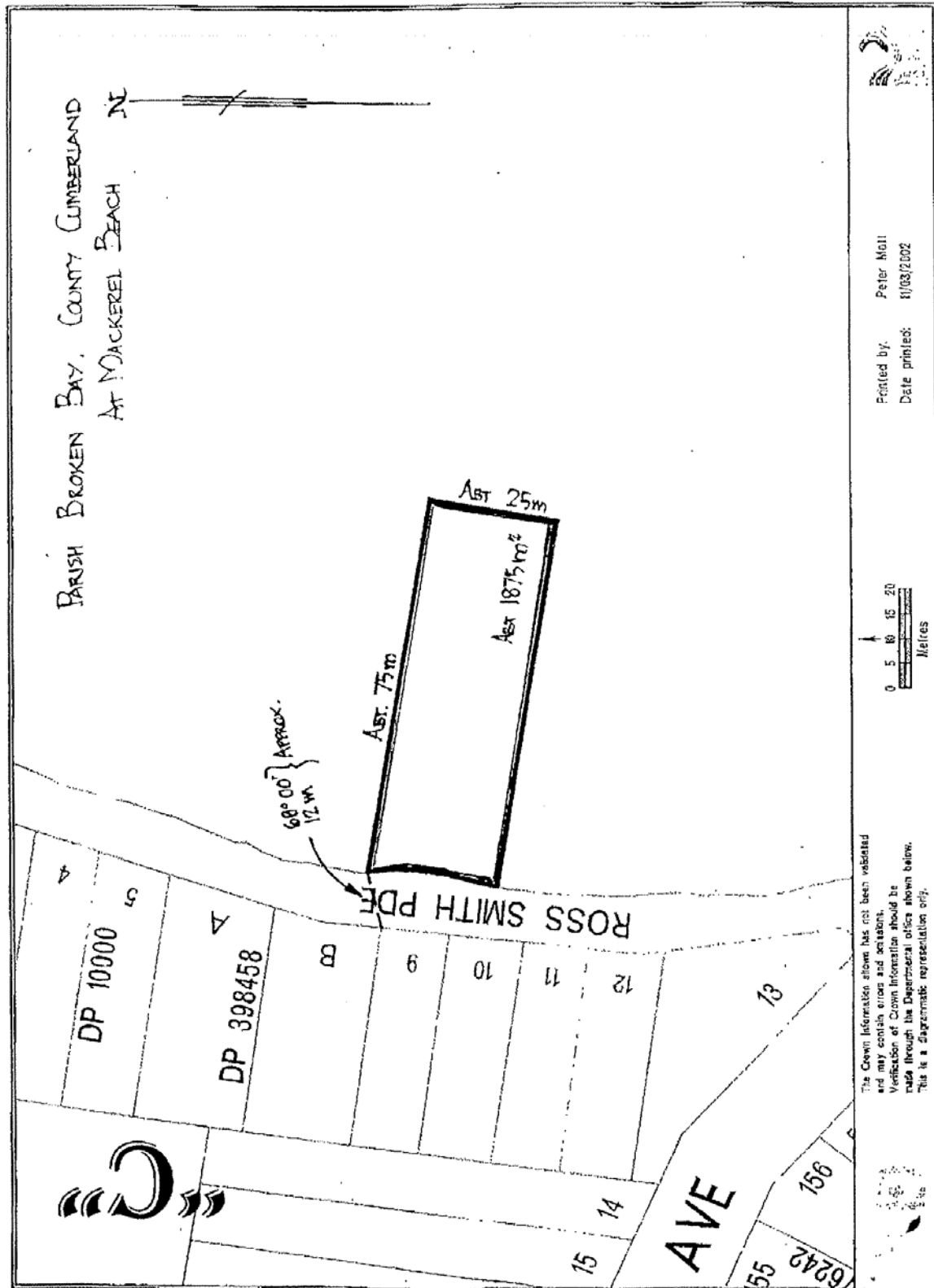
PURSUANT to Section 84 of the Crown Lands Act 1989, the dedication of Crown land specified in Column 1 of the Schedule hereunder is revoked to the extent specified opposite thereto in Column 2 of the Schedule.

**JOHN AQUILINA, M.P.,**  
Minister for Land and Water Conservation

**SCHEDULE**

COLUMN 1	COLUMN 2
Land District: Metropolitan	The part within Lot 1 D.P. 126704 comprising about 154 square metres as shown hatched on diagram hereunder.
City: Canterbury	
Parish: Concord	
County: Cumberland	
Locality: Croydon Park	
Lots: Lot 1 D.P. 126704, Lot 7067 D.P. 93375 and Lot 7070 D.P. 93373	
Area: About 3.7 hectares	
Dedicated for: Public Park	
Date of notification: 17 April 1888	
Dedication No.: 1000507	
Title Details: Certificate of Titles	
Volume 2175 Folios 187 & 188	
File No.: MN02R57	





**SYDNEY METROPOLITAN OFFICE**  
**Level 12, Macquarie Tower, 10 Valentine Avenue, Parramatta 2150**  
**(PO Box 3935, Parramatta NSW 2124)**  
**Phone: (02) 9895 7657 Fax: (02) 9895 6227**

**RESERVATION OF CROWN LAND**

PURSUANT to section 87 of the Crown Lands Act 1989, the Crown Land specified in Column 1 of the Schedules hereunder, is reserved as specified opposite thereto in Column 2 of the Schedules.

TONY KELLY, M.L.C.,  
Minister for Lands

**SCHEDULE 1****COLUMN 1**

Land District: Metropolitan  
Local Government Area:

Pittwater Council.

Locality: Scotland Island.

Lot: 7111.

DP No.: 752046#.

Area: About 891 square metres.

Parish: Narrabeen.

County: Cumberland

File No.: MN98 H 13/1.

Disclaimer: #Please note that the above Lot numbers marked # are for Departmental use only.

**COLUMN 2**

Reserve No.: 1010808.

Public Purpose: Access.

**SCHEDULE 2****COLUMN 1**

Land District: Metropolitan.  
Local Government Area:

Pittwater Council.

Locality: Coasters Retreat.

Lot: 7020.

DP No.: 752017#.

Area: About 1566 square metres.

Parish: Broken Bay.

County: Cumberland.

File No.: MN98 H 13/1.

Disclaimer: #Please note that the above Lot numbers marked # are for Departmental use only.

**COLUMN 2**

Reserve No.: 1010809.

Public Purpose: Access.

**SCHEDULE 3****COLUMN 1**

Land District: Metropolitan.  
Local Government Area:

Pittwater Council.

Locality: Coasters Retreat.

Lot: 7019.

DP No.: 752017#.

Area: About 1295 square metres

Parish: Narrabeen.

County: Cumberland.

File No.: MN98 H 13/1.

Disclaimer: #Please note that the above Lot numbers marked # are for Departmental use only.

**COLUMN 2**

Reserve No.: 1010810.

Public Purpose: Access.

**SCHEDULE 4****COLUMN 1**

Local District: Metropolitan.

Local Government Area:

Pittwater Council.

Locality: Scotland Island.

Lot: 7112.

DP No.: 752046#.

Area: About 902 square metres.

Parish: Narrabeen.

County: Cumberland

File No.: MN98 H 13/1.

Disclaimer: #Please note that the above Lot numbers marked # are for Departmental use only.

**COLUMN 2**

Reserve No.: 1010811.

Public Purpose: Access.

**SCHEDULE 5****COLUMN 1**

Local District: Metropolitan.

Local Government Area:

Pittwater Council.

Locality: Scotland Island.

Lot: 7113.

DP No.: 752046#.

Area: About 2273 square metres.

Parish: Narrabeen.

County: Cumberland.

File No.: MN98 H 13/1.

Disclaimer: #Please note that the above Lot numbers marked # are for Departmental use only.

**COLUMN 2**

Reserve No.: 1010812.

Public Purpose: Access.

**SCHEDULE 6****COLUMN 1**

Land District: Metropolitan.

Local Government Area:

Pittwater Council.

Locality: Scotland Island.

Lot: 7114.

DP No.: 752046#.

Area: About 2423 square metres

Parish: Narrabeen

County: Cumberland.

File No.: MN98 H 13/1.

**COLUMN 2**

Reserve No.: 1010813.

Public Purpose: Access.

**ESTABLISHMENT OF RESERVE TRUST**

PURSUANT to section 92(1) of the Crown Lands Act 1989, the reserve trust specified in Column 1 of the Schedules hereunder, is established under the name stated in that Column and is appointed as trustee of the reserve specified opposite thereto in Column 2 of the Schedules.

TONY KELLY, M.L.C.,  
Minister for Lands

**SCHEDULE 1****COLUMN 1**

Bell's Wharf (R1010808)  
Reserve Trust

**COLUMN 2**

Reserve No.: 1010808.  
Public Purpose: Access.  
Notified: This day.  
File No.: MN98 H 13/1.

## SCHEDULE 2

COLUMN 1	COLUMN 2
Bennett's Wharf (R1010809) Reserve Trust.	Reserve No.: 1010809. Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

## SCHEDULE 1

COLUMN 1	COLUMN 2	COLUMN 3
Pittwater Council	Hell's Wharf (R1010808) Reserve Trust.	Reserve No.: 1010808 Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

For a term commencing the date of this notice.

## SCHEDULE 3

COLUMN 1	COLUMN 2
Bonnie Doon Wharf (R1010810) Reserve Trust.	Reserve No.: 1010810. Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

## SCHEDULE 2

COLUMN 1	COLUMN 2	COLUMN 3
Pittwater Council	Bennett's Wharf (R1010809) Reserve Trust.	Reserve No.: 1010809 Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

For a term commencing the date of this notice.

## SCHEDULE 4

COLUMN 1	COLUMN 2
Cargo Wharf (R1010811) Reserve Trust.	Reserve No.: 1010811. Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

## SCHEDULE 3

COLUMN 1	COLUMN 2	COLUMN 3
Pittwater Council	Bonnie Doon Wharf (R1010810) Reserve Trust	Reserve No.: 1010810 Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

For a term commencing the date of this notice.

## SCHEDULE 5

COLUMN 1	COLUMN 2
Carol's Wharf (R1010812) Reserve Trust.	Reserve No.: 1010812. Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

## SCHEDULE 4

COLUMN 1	COLUMN 2	COLUMN 3
Pittwater Council	Cargo Wharf (R1010811) Reserve Trust.	Reserve No.: 1010811. Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

For a term commencing the date of this notice.

## SCHEDULE 6

COLUMN 1	COLUMN 2
Tennis Court Wharf (R1010813) Reserve Trust.	Reserve No.: 1010813. Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

## SCHEDULE 5

COLUMN 1	COLUMN 2	COLUMN 3
Pittwater Council	Carol's Wharf (R1010812) Reserve Trust.	Reserve No.: 1010812. Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

For a term commencing the date of this notice.

APPOINTMENT OF CORPORATION TO MANAGE  
RESERVE TRUST

PURSUANT to section 95 of the Crown Lands Act 1989, the corporation specified in Column 1 of the Schedules hereunder, is appointed to manage the affairs of the reserve trust specified opposite thereto in Column 2, which is trustee of the reserve referred to in Column 3 of the Schedules.

TONY KELLY, M.L.C.,  
Minister for Lands

## SCHEDULE 6

COLUMN 1	COLUMN 2	COLUMN 3
Pittwater Council	Tennis Court Wharf (R1010813) Reserve Trust.	Reserve No.: 1010813 Public Purpose: Access. Notified: This day. File No.: MN98 H 13/1.

For a term commencing the date of this notice.

## TAREE OFFICE

98 Victoria Street (PO Box 440), Taree NSW 2430  
Phone: (02) 6552 2788 Fax: (02) 6552 2816

## NOTIFICATION OF CLOSING OF PUBLIC ROAD

IN pursuance of the provisions of the Roads Act 1993, the road hereunder described is closed and the land comprised therein ceases to be a public road and the rights of passage and access that previously existed in relation to the road are extinguished.

TONY KELLY, M.L.C.,  
Minister for Lands

## Description

Land District -- Kempsey;  
Local Government Area -- Kempsey.

Road Closed: Lot 1, DP 1068610 at Verges Creek, Parish of Kempsey, County of Macquarie.

File No.: TE03 H 242.

Note: On closing, the land within Lot 1 remains vested in the State of New South Wales as Crown Land.

## **APPENDIX B: Heritage Listing**

### **Bonnie Doon Wharf**



<b>HARRENJOEY PENINSULA AND PITTWATER HERITAGE STUDY</b>			CONSULTANT TEAM Brian McDonald    BMcD Craig Burton        CB Wendy Thorp        WT Margrit Koettig     MK Jeff Temple          JT		
ITEM "Bonnie Doon" wharf  LOCATION    Ku-ring-gai National Park Coasters Retreat South Side		LAND TITLE	LISTING 1. National Estate 2. Heritage Council 3. National Trust 4. RAIA 5. Other	INVENTORY NO    B104	
DESCRIPTION Stone jetty with hardwood piling at end section		PRESENT USE Jetty			
		HISTORICAL PHASE II (probably)			
		THEME Transportation, leisure and tourism.			
CULTURAL SIGNIFICANCE		ASSOCIATION	ABILITY TO DEMONSTRATE	AESTHETIC	RESEARCH POTENTIAL
Association with early recreational and residential development of area. Demonstrates stone jetty construction. Aesthetic value		High	X	X	X
		Med			
		Low			
COMMENTS In good condition. Preserve in situ.		REFERENCES			
MAP/PHOTO  <div style="display: flex; align-items: center;"> <div style="flex: 1;"> </div> <div style="flex: 2;"> </div> </div>					
AUTHOR            BMcD    CB    WT    MK    JT			FILM No. B1	NEGATIVE No. 25	DATE 5.3.88



# **APPENDIX C: Preliminary Archeological Assessment**

## **Cargo Wharf**

## **Inspection of *Brachychiton populneus* (Kurrajong tree) & associated shell accumulation at Cargo Wharf – Scotland Island, Sydney**

### **1 Purpose of this report**

To provide Pittwater Council with:

- A preliminary assessment of the material evidence observed in association with the subject site.
- Suggestions regarding further research and consultation opportunities.
- Recommendations regarding management of the site.

### **2 Background to this report**

In September 2006, Andrew Knight accompanied Christopher Wright (Natural Resources Officer, Pittwater Council) during an inspection of a tree (identified as *Brachychiton populneus* or Kurrajong) growing within an accumulation of shell materials at Cargo Wharf - Scotland Island. This inspection was undertaken with a view to investigating the age of the specimen and the likely origin of the surrounding shell materials.

On the basis of subsequent enquiries a second inspection was undertaken March 2007 in order to document the visible attributes and condition of the site in more detail prior to making formal comment.

### **3 Location and context**

Map: Mona Vale 9130 – 1S 3<sup>rd</sup> edition

Scale: 1:25,000

AMG Grid reference: 341125mE 6276630mN

The subject tree and shell accumulation are located on the north western side of Scotland Island setback approximately 15m from Cargo Wharf and between 1 and 2 metres above the high tide mark.

The lower slopes surrounding the site support an open forest community dominated by spotted gum (*Eucalyptus maculata*) with a mixed understorey of native and exotic species.

The position represents a notable vantage point with views of the Broken Bay area extending from Woody Point in the north to Church Point in the south.



Photo 1: Subject specimen and context (Mar 07)

#### 4 Findings of this report

This section outlines the outcomes of the field inspections and related enquiries regarding both the tree and associated shell materials.

##### 4.1 Kurrajong specimen

**Species:** *Brachychiton populneus* ssp *populneus*

Note: There appears to be a discrepancy in the literature reviewed regarding the species name. The subject specimen was initially identified by Ms. Barbara Wiecek (Identifications Botanist, Royal Botanic Gardens, Sydney on 22 September 2006) as being *Brachychiton populneum*. Although this spelling is consistent with that provided in the text of Robinson (1991, p216), references such as Boland, et. al. (1985) listed the species as *Brachychiton populneus* as does Robinson in his index. Discussions with Ms. Seanna McCune of the Royal Botanic Gardens, Sydney on 12 April 2007 assisted in resolving this “taxonomic confusion” (using Flora of NSW, Vol. 1) providing confirmation that the full name of the subject species is *Brachychiton populneus* ssp *populneus*.

#### 4.1.1 Species description:

Boland, et. al. (1985, p639) describes the Kurrajong as being "an attractive well-shaped tree 10 - 20m in height and 0.5 - 1m in diameter". Boland also notes that "individual trees have short stocky boles (trunks) and dense rounded crowns.... and that some specimens are semi-deciduous in early summer."

#### 4.1.2 Distribution of the species:

Boland, et. al. (1985, pp 639-640) notes the following:

- "there are two forms of *B. populneus*. The eastern form is distributed on the coast, tablelands and slopes of New South Wales and Southern Queensland. The western form occurs on the western plains of NSW and northern and central Queensland."
- The species "is usually associated with woodland formations and occurs commonly as a smaller pure stand or as single trees".

Robinson (1991, p216) notes that the species is "fairly common on the Cumberland Plain, in dry clay or rocky soils" with no mention of its occurrence on the coast.

Bob Coveny of the Royal Botanic Gardens, Sydney (23 May 2007) advised that in the Sydney region naturally occurring populations of Kurrajongs "tend to be set back from the coast, e.g. Camden, Mt Druitt," Richmond, Kurrajong.

#### 4.1.3 Aboriginal usage:

Sydney Area: Some early European accounts describing the usage of the species by Aboriginal people in the Sydney area were provided by Mr. Keith Smith (July 2006) – refer Appendix 1. Additional references to Aboriginal usage include the following:

- "Aborigines used the inner bark of *Brachychiton* (and *Commersonia*) as a source of fibre for nets and twines. *Brachychiton* seeds were eaten raw or roasted, after removing the seed coats.....Flame trees (*Brachychiton acerifolius*) provide the largest and hence best eating seeds" (Robinson 1991, p216).
- Attenbrow (2002, p116) lists *B. populneus* as a probable source of bark for fishing lines.
- Boland, et. al. (1985, p639) notes that "Aborigines also used the tap roots of young [*B. populneus*] trees for food"

Note: "A few small sections of twine interpreted as fishing line, which were found in a midden in a Parsley Bay rockshelter in around 1902-1903, and some possibly woven fibrous material from Angophora Reserve, appear to be the only items of equipment made from plant material that have been found in a pre-colonial archaeological context in the Sydney region" (Attenbrow, 2002, p116).

Regional: An oral account of a traditional practice involving the collection of the subject species (most likely seeds) from inland areas and physical transportation to coastal areas for the purpose of planting them in association with the burials of significant people was provided to Warren Mayers of the DEC – an acknowledged expert in the field of scarred tree assessment – by a now deceased Worimi elder from Taree, (pers comm. W Mayers, June 2007).

#### **4.1.3 European usage**

Urban – "The tree provides good shade and is favored in many towns in NSW as an avenue and street tree." (Boland, et. al, 1984 p639)

Rural– "It is a very drought-resistant tree and is among our pre-eminent native trees for stock fodder during drought, at which time limbs are lopped from trees and fed to stock." (Boland, et. al, 1984 p639)

#### **4.1.4 Condition of the subject tree**

The specimen has at some stage incurred extensive damage with only the base of the trunk remaining intact. New shoots from the stump (coppice growth) have since established attaining a height of between 4 and 5 metres.

The root system has been partially exposed through the undertaking of earthworks and subsequent erosion. Mechanical damage to both the stump and exposed roots was noted, (refer Photo 2).



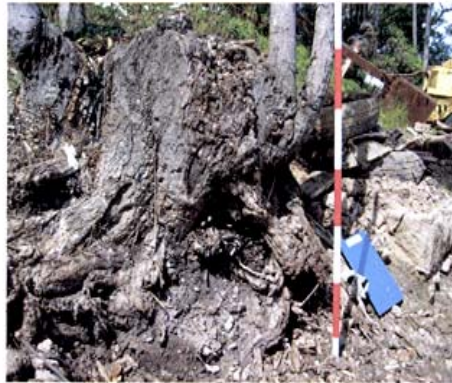


Photo 2: Base of Kurrajong (Sept 06)

On-site communications indicate that some years ago either lightning and/or the failing of an adjacent tree were responsible for the aforementioned damage and that prior to the event/s the tree was 15m+ in height.

Note: At the time of the second inspection, insect activity was observed in association with the canopy, (refer Photo 3). This activity involved the creation of near spherical structures (possibly nests) approximately 50mm in diameter comprising leaves bound together by silk-like webbing. Small reddish, wasp-like insects were observed in association with the structures. Although prolific they appeared to have no obvious effects on the health of the canopy.



Photo 3: Observed insect activity (Mar 07)

#### **4.1.5 Form, dimensions and other attributes**

The diameter of the stump at ground level is approximately 90cm (north/south) and 1.2m (east / west). The girth at ground level exceeds 3 metres.

Tissues associated with the exposed cross section of the trunk exhibit what appear to be impregnated shell materials (refer Photo 4).



Photo 4: Exposed cross section of lower trunk (Sept 06)

Note: If compared with surrounding tree species, the form of a mature Kurrajong including the height and spread of the crown, density of associated leaf material and the attributes of the leaf itself (i.e. a long, slender petiole supporting a thin ovate-shaped leaf highly responsive to even light breezes) would have provided a relatively shady, pleasant environment beneath the canopy particularly on hotter days.

#### **4.1.6 Estimated age**

The basal dimensions if compared with other Kurrajongs inspected within comparable environments along the peninsula or those provided by Boland, et. al. (1985, p639) infer that the subject tree was a mature (if not senescent) specimen of considerable size and age. A description of the tree provided by an ex-resident of Scotland Island is consistent with this.

In light of the cultural context in which the specimen exists and the ethno-historical data obtained on Aboriginal usage of the species, the possibility that the specimen may have



been established during the period in which Aboriginal people are recorded as still carrying out traditional practices within the Ku-ring-gai area warrants consideration.

Efforts to obtain copies of early photographs which clearly depict the Cargo Wharf area were made in an attempt to gain further information on the site, e.g. the form of the tree prior to being damaged, its potential age and history. These included:

- The ordering of copies of an aerial photograph of the Broken Bay area in 1947 (including an enlargement of Scotland Island) through the Department of Lands Air Photo Library.  
Outcome: Images failed to provide any useful data.
- Request for Archival Search - Australian National Maritime Museum Library February 2007.  
Outcome: No relevant material held.
- Request for Archival Search - Pittwater Library, Mona Vale (13 April 2007).  
Outcome: No relevant images located.
- Enquiries made with current and past residents.  
Outcome/s: One local advised that he was in possession of a photo depicting his children sitting beneath the subject tree prior to it being damaged.

Enquiries made through the curator of the Hawkesbury Museum regarding the age of a mature Kurrajong tree within Thompson's Square, Windsor confirmed that a specimen of lesser but comparable girth to the subject tree was planted post Federation. As such, this indicates that under favorable conditions, the species may attain such dimensions within 100 years. Although this provides an indication of the potential growth rate of the species, further deductions cannot be drawn due to contextual differences including rainfall, soil landscape, etc.

## **4.2 Shell accumulation**

### **4.2.1 Distribution of shell materials**

- Shell materials which form part of the subject accumulation were observed outside of the tidal zone (i.e. between 1 & 2m above the high tide mark).
- Surface manifestations comprised materials firmly embedded within the natural topsoil as well as some loose material (refer Photo 5). Although such material was

detected up to 15 metres from the subject tree, the majority was observed in the immediate surrounds.

- Materials were also observed in association with the excavated face of the foot slope directly below the western side of the stump. This exposure provided confirmation of a subsurface component and an insight into the nature and potential depth of deposit, with shells being distributed throughout and beneath the exposed portion of the central root system, (refer Photo 6 - below). Note: Upon re-inspection it was evident that natural fill materials had been recently dumped over much of this area precluding the opportunity for more detailed examination.



Photo 5: Exposed shell materials associated with ground surface (Sept 06)



Photo 6: Exposed shell materials associated with excavated face - central root system (Sept 06)

Although the development of the root system would presumably have resulted in some displacement of sub-surface shell materials within the top soil, it is this system which has afforded the site some level of protection in terms of limiting further erosion and containing the deposit.

On site discussions with a past resident indicate that the quantity of visible shell material has in recent years been diminished. A variety of factors may have contributed to this reduction such as –

- earthworks undertaken in association with wharf infrastructure
- erosional processes
- the use of shell materials by residents for construction purposes, e.g. pathways
- the collection of shells by children, etc.

#### **4.2.2 Visible contents**

For the purpose of identification and interpretation, photographic images of exposed shell materials were presented to Dr Val Attenbrow (Senior Research Scientist – Anthropology Branch, Australian Museum) and Dr Jim Kohen (Senior Lecturer – School of Biological Sciences, Macquarie University, Sydney).

The following list was compiled;

- Sydney cockles,
- Oysters
- Hercules Whelks, and
- Large Turbans

Although predominantly derived from estuarine and/or mangrove habitats, the presence of Turban shells indicates an oceanographic component. The range of species identified is limited but thought to be fairly typical of what could be expected of an Aboriginal midden in the Broken Bay/Pittwater area.

The majority of intact shells observed were of edible size. The condition of the shell varied with much of the material being highly weathered – its degraded state thought to be the result of in-situ weathering. Not surprisingly, broken / fragmented material made up a large proportion of what was observed.



Note:

- No measurements of shell weights, lengths, etc. were recorded. All specimens were left in situ. As such, no comparisons were made with the contents of previously recorded middens.
- Examination of exposed sections failed to identify any:
  - o Additional indicators of Aboriginal occupation such as stone, bone or shell artefacts.
  - o Historic materials.
- Whether or not activities undertaken at the location were restricted to the processing and consumption of shellfish is unclear.

## 5 Conclusions

### 5.1 Kurrajong specimen

Observations and enquiries made thus far infer the following:

- The subject species is now locally uncommon if not rare.
- On the basis of the dimensions and form of the tree's lower bole, the specimen is likely to be in excess of 100 years old.
- The subject species was an important Aboriginal bio-resource in the Sydney area.

Obtaining a more accurate assessment of tree age is necessary in order to:

- Determine whether or not the tree formed part of the cultural landscape – i.e. was established prior to the cessation of Aboriginal cultural practices on the Island.
- Establish the likelihood that the tree may have represented a cultural marker or served a cultural purpose.
- Dismiss the possibility that the subject tree may have been planted as a feature or shade tree at a later date.

If the requirements of the specimen were accommodated within any plans to complete the sandstone retaining wall it is likely that given time the tree would regain an attractive form combining to enhance the aesthetics and usability of the foreshore environment surrounding the wharf for both residents and visitors.

## **5.2 Shell accumulation**

Enquiries undertaken thus far indicate that the attributes of the subject shell accumulation including its location and observed contents (in terms of species composition, average shell size and shell condition) are consistent with an Aboriginal origin (midden) as opposed to a natural shell bed. Although grossly disturbed it is likely that a portion of the site has remained relatively intact.

Note: "There is much archaeological evidence to suggest that the coastal Aborigines buried their dead in midden deposits, both open and in shelters (Attenbrow 1990, Bowdler 1971, Dyall and Bentley 1972, Dyall 1975, Edgeworth David and Etheridge 1889, Harper 1899, Walker 1974). (Although) the archaeological evidence provides only partial detail on this aspect of prehistoric behaviour in the Sydney region" (McDonald, 1992, p 22), the information provided by Mayers regarding the planting of Kurrajongs in association with burials on the Mid North Coast of NSW, provides grounds for adopting a precautionary approach to assessment and management.

## **5.3 Significance**

When assessing archaeological significance several criteria are relevant. As a consequence of both the tree and immediate surrounds having incurred substantial damage, the integrity and current aesthetic value of the site have clearly been diminished (refer Photo 1).

In regards to research potential the possibility that detailed analysis of exposed vegetative and/or shell materials would further elucidate past behaviour and cultural interaction with the location warrants consideration.

In regards to assessing the rarity of the site, enquiries undertaken thus far indicate that the site is likely to be reasonably distinctive/somewhat unique, at least locally. However, obtaining reliable data on the likely age of both the Kurrajong and associated shell materials is considered prudent prior to making further comment.

## 6 Suggestions regarding further consultation and research opportunities

- A copy of this report be forwarded to the Metropolitan Local Aboriginal Land Council (MLALC) and an invitation to inspect the site and provide a cultural/social significance assessment including opinions regarding site management.

For further information regarding appropriate Aboriginal involvement, refer NSW NPWS Aboriginal Cultural Heritage Standards and Guidelines Kit, 1997.

- The commissioning of an assessment of the site by a specialist in shell midden archaeology.

This would only be undertaken if Council and/or the Aboriginal community is interested in obtaining a more definitive and comprehensive analysis of the shell accumulation. Such an inspection would likely provide a more detailed characterization of the site including confirmation of the origin of shell materials. In addition, such a consultant is better placed to evaluate local and regional archaeological significance.

Note: Due to the extent and nature of recent disturbance, obtaining further data may entail some form of sub-surface sampling in which case appropriate permits would need to be obtained. The potential benefits of such works would need to be evaluated.

- Radio-carbon dating of exposed heartwood sample  
This form of analysis has the potential to provide a more accurate assessment of tree age. Considering the current condition of the specimen;
  - the careful removal of a suitable sample (i.e. no larger than a cigarette pack) would have a nominal impact in terms of aesthetics or health, and
  - the commissioning of such work is viewed as a pre-requisite to assessing the trees significance and its relationship to the site.

Discussions undertaken thus far indicate that such work would not require a research permit and that provided guidelines for procurement, handling and

transportation are adhered to, the technique has the potential to provide valuable data.

Our investigations indicate that Waikato Radiocarbon Dating Laboratory ([www.radiocarbon dating.com](http://www.radiocarbon dating.com)) – an independent department within the School of Science & Engineering at the University of Waikato in New Zealand - are an appropriate and well qualified unit for undertaking such work. The cost of standard radiometric dating is around \$A 500.

- Radio-carbon dating of exposed shell material/s  
Such analysis would provide an estimate of when the associated organism/s died and therefore an insight into the period in which the shells were collected/deposited and the site utilised.  
As the shell accumulation is believed to have an Aboriginal origin, a Preliminary Research Permit would need to be approved by the DEC.

## **7 Management recommendations**

- Secure area assessed as being potentially sensitive  
Tape off area surrounding subject tree encompassing the expected root zone and all surface manifestations of the shell deposit so as not to preclude a conservation outcome.

Considering that works aimed at improving access to and capacity of the wharf area (including stone works associated with retaining the foot slopes) currently remain unfinished, there would seemingly be the opportunity to accommodate the conservation and protection of the site remnants within any plan to complete the aforementioned works.

- AHIMS search  
Undertake current AHIMS (Aboriginal Heritage Information Management System) search through the Cultural Heritage Division of the DEC, 43 Bridge St, Hurstville (ph: 9585 6470) for the purpose of:



- Reviewing copies of archaeological reports which cover Scotland Island including associated site cards. Such research is normally a prerequisite for undertaking any comprehensive archaeological assessment.
- Determining if the subject shell accumulation has been previously recorded. If not, prepare and lodge site card with copy of this report and other relevant material.
- Formulation of management plan  
Pending the outcome/s of inspections by Aboriginal community groups such as the MLALC and the results of any secondary research, a management plan would need to be developed.

Any further disturbance to the site (including removal of the tree) would necessarily require the granting of a Permit or Consent by the DEC.

If Council determines that conservation of the Kurrajong and surrounding shell accumulation is the most appropriate management option, the input of an arboricultural consultant, an archaeological consultant and relevant Aboriginal organisation is advisable.

At a minimum,

- The current position of the stone retaining wall would need to be adjusted and completed so as to facilitate reestablishment of the subject tree and prevent further damage to the shell accumulation.  
Note: The reinstatement of the natural soil level/s and adequate accommodation of future root growth being imperative.
- Appropriate backfilling and the use of geotechnical fabric would necessarily be incorporated into the plan so as not to prejudice future investigations.
- The issue of the walking track which traverses the area where the shell materials were recorded would also need to be addressed so as to reduce the potential for further erosion.

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