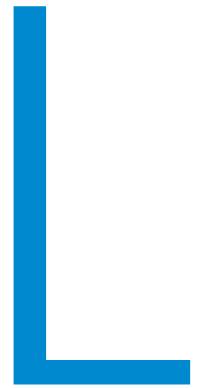


# APPENDIX



## HERITAGE IMPACT ASSESSMENT REPORTS (UMWELT AUSTRALIA)



GHD Pty Ltd

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**Aboriginal Cultural Heritage  
Assessment, Proposed Extension of  
Shipping Channels, Port of Newcastle**

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August 2003

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## 1.0 INTRODUCTION

There is an increasing demand for port facilities within Newcastle Harbour. The Newcastle Port Corporation is therefore seeking to ensure that there is a sufficient supply of serviceable port land available to meet future demand. The South Arm of the Hunter River has been identified as the most suitable location for port expansion. The development of port facilities in this location will be dependent upon the provision of a dredged navigation channel, swinging basin and berthing trenches designed to accommodate Panamax and Cape Class vessels.

The proposed dredging will be undertaken over a period of approximately two years and will extend approximately 3 kilometres from the Tourle Street Bridge to just south of the intersection of Cormorant Road and Egret Street.

This report documents the results of a cultural heritage assessment of the impacts of dredging the South Arm of the Hunter River.

### 1.1 LOCATION OF STUDY AREA

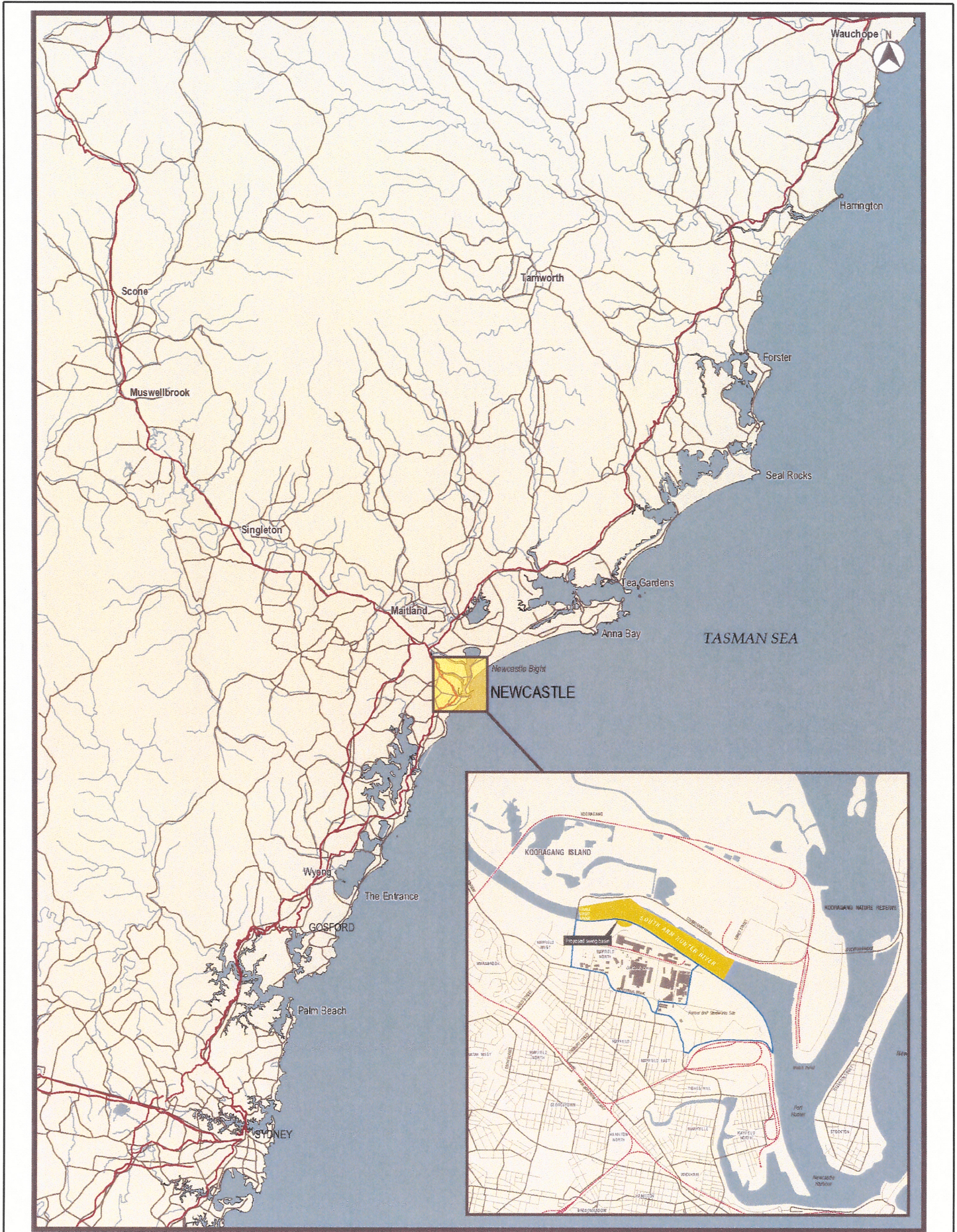
The study area is located immediately north of Newcastle (see **Figure 1.1**). The outlet of the Hunter River is located approximately 7 kilometres to the southeast of the study area. The Hunter River divides into the South Arm and the North Arm approximately 6 kilometres northwest of the study area and joins again approximately 5 kilometres to the southeast. Kooragang Island forms the centre of these two arms.

### 1.2 DEVELOPMENT PROPOSAL

The proposed project involves:

- dredging of the South Arm (see **Figure 1.1**);
- excavation of the banks of the South Arm where required above the high water mark;
- the dredging/construction of a swing basin – this will involve a portion of the OneSteel site;
- the disposal of a portion of the contaminated soft silty clays onto a land site (probably the BHP holding facility);
- the remediation of these contaminated sediments;
- the subsequent use of the remediated material on the BHP closure area or elsewhere;
- the disposal of the remaining sediments to either approved offshore dump grounds or in the case of sand to appropriate beneficial reuse;
- establishment of contractor lay-down areas, site offices and refuelling and maintenance facilities; and
- bank stabilisation – following dredging, riverbanks in the vicinity of the dredge site will be stabilised.

The current assessment only addresses the dredging stage of the project and associated facilities within an adjacent 50 metre area between the Hunter River and Cormorant Road. This assessment does not address any aspect of sediment dumping or remediation



**FIGURE 1.1**  
Location of Study Area  
and Proposed Development

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## 1.3 RELEVANT LEGISLATION

### 1.3.1 National Parks and Wildlife Act 1974

Section 90 of the *National Parks and Wildlife Act 1974* (NPW Act) provides statutory protection for all Aboriginal relics (any material evidence of the indigenous occupation of NSW). It is an offence under Section 90 of the NPW Act to knowingly damage, disturb or destroy relics, without the prior written consent of the Director-General of the NPWS. Section 84 of the NPW Act provides protection for 'Aboriginal places (areas of cultural significance to the Aboriginal community)' (NPWS 1997: 2).

## 2.0 CONSULTATION WITH THE ABORIGINAL COMMUNITY AND THEIR INVOLVEMENT IN THE PROJECT

The National Parks and Wildlife Service (NPWS) Aboriginal Cultural Heritage Guidelines outlines three principles behind the collaborative approach to Aboriginal heritage survey and site management required by the Service. These principles are that Aboriginal culture is a living culture, that the Aboriginal community are the rightful cultural owners of cultural heritage information, and that NPWS decision making on Aboriginal heritage issues is transparent. Umwelt (Australia) Pty Limited supports the principles underlying the NPWS approach and aims to involve the relevant Aboriginal community in all its heritage assessments.

The portion of the study area to the south of the South Arm of the Hunter River is within the area of interest of the Awabakal Local Aboriginal Land Council (Awabakal LALC). Ron Gordon, Chief Executive Officer of Awabakal LALC was informed of the proposed dredging of the South Arm. It was concluded that the southern bank of the South Arm was so heavily disturbed that a survey of the area was not warranted. The Awabakal LALC, however, has been consulted regarding their opinion of the proposal and its environmental impacts.

The portion of the study area to the north of the South Arm of the Hunter River is within the area of interest of the Worimi Local Aboriginal Land Council (Worimi LALC). Len Anderson, Chief Executive Officer of Worimi LALC was informed of the proposed project and coordinated representation for the local Aboriginal community.

Following the survey of the northern bank and discussions with both Land Councils, a draft copy of this report was provided to the Awabakal LALC and the Worimi LALC with a request that they consider the results and recommendations regarding the cultural heritage assessment of the proposed dredging. Comments from both Land Councils are contained in **Appendix 1**.

## 2.1 ABORIGINAL LAND CLAIMS

The Worimi LALC has a current claim under the *Aboriginal Land Rights Act 1983* which includes the current study area. This claim (Claim No. 6686) covers the Hunter River and its tributaries to the mean low water mark. It extends from the inland locations of Morpeth and Clarence Town to the river outlet (entrance of Newcastle Harbour). The claim was lodged in April 2002 and is not likely to be resolved until 2004.

Local Aboriginal Land Councils in New South Wales can claim unoccupied Crown land that is not needed for a public purpose. These claims do not rely on traditional affiliation with the land. Under the Act, land is granted as freehold. The current NSW government policy regarding unresolved claims is that no new interests will be granted over a claimed area until the claim is resolved (unless public safety is at issue). The Department of Lands is the administering authority and will consult with all known parties with an interest in the area when considering a claim.

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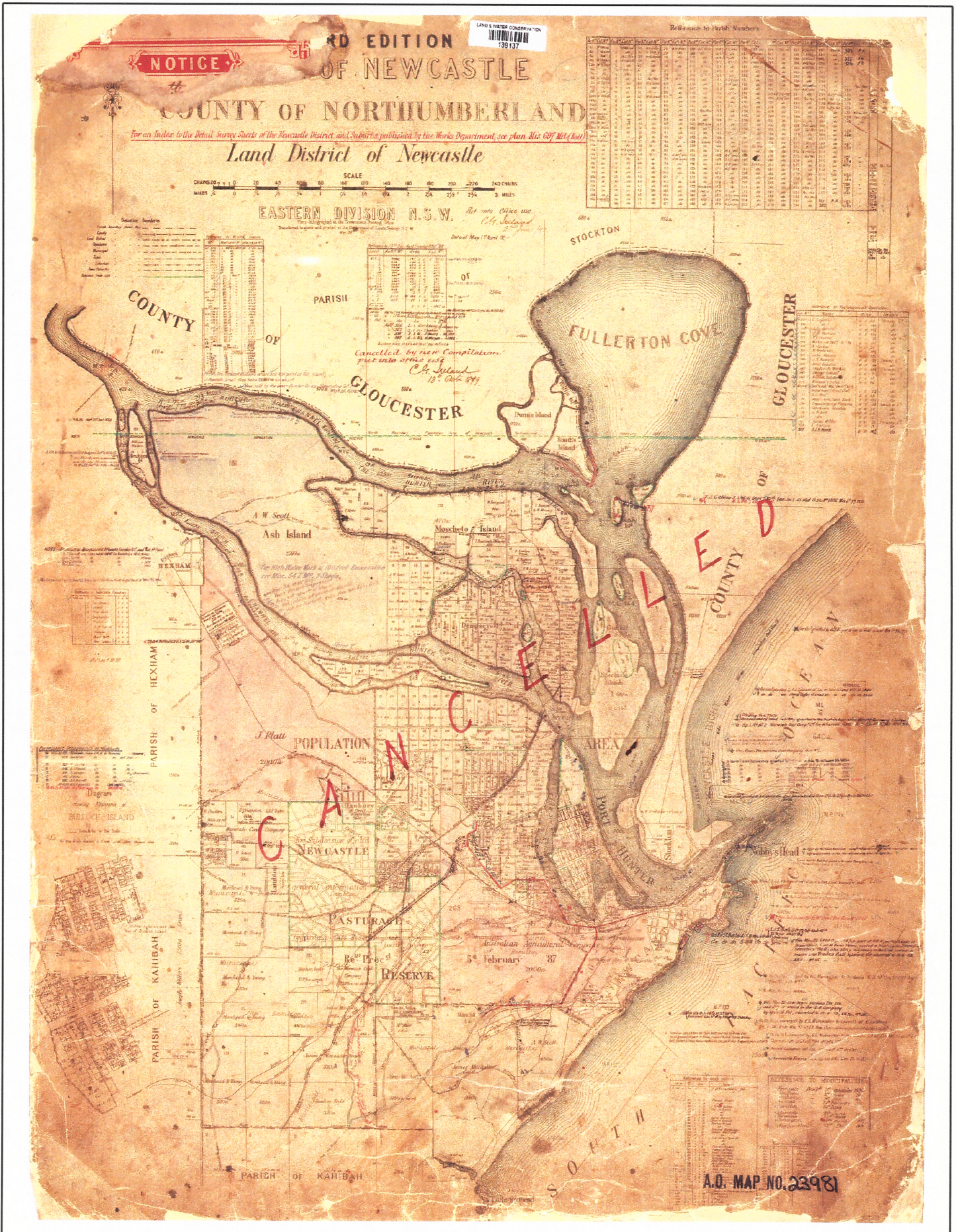
## 2.2 NATIVE TITLE SEARCH

A search request was forwarded to the National Native Title Tribunal on 24 January 2003. A search of the Register indicated that there were no entries relevant to the current study area.

## 3.0 THE ENVIRONMENTAL CONTEXT

As discussed in **Section 1.2**, the study area is located approximately 7 kilometres to the northwest of the outlet of the Hunter River. The River divides into the North Arm and the South Arm approximately 6 kilometres northwest of the study area and joins again approximately 5 kilometres to the southeast. The island created by this divide is Kooragang Island. The sedimentary and geomorphic history of the Hunter estuary is complex; however, the most dramatic changes were brought about by the reclamation of land in the area beginning in the second half of the nineteenth century for industrial purposes. A timeline of the main development of Kooragang Island most clearly illustrates the physical changes the study area has undergone (this information has been extracted from Williams, *et al* 2000).

- |              |   |
|--------------|---|
| 1801         | The lower Hunter River is surveyed by Lt. Col. W. Paterson who names Ash Island (now known as Moscheto Island which forms part of Kooragang Island) after the trees which resembled the English Ash. The area consists of up to ten islands of various sizes. |
| 1830         | First small farmers (squatters) on Dempsey Island (see <b>Figure 3.1</b> ). This would have resulted in vegetation clearance, limited drainage of wetland areas and blockage of tidal flow.   |
| 1836         | First industrial works established on Moscheto Island (saltworks, and later a sulphuric acid plant).  |
| 1845         | Dairy farming commences on the islands.   |
| 1859         | Dredging is commenced in Newcastle Harbour and approach channels. The spoil is dumped east and west of Bullock Island. Dredging continues intermittently for many years.  |
| 1860s - 1901 | Reclamation of Walsh Island and Bullock Island continues.   |
| 1896         | BHP acquires 10 hectares of waterfront land at Port Waratah to be used for smelters.  |
| 1912         | <i>Newcastle Iron and Steelworks Act</i> of 1912-13 is passed to allow the construction of heavy industrial facilities.   |
| 1915 – 1928  | Production of steel by BHP commences at Port Waratah (1915). Walsh, Goat and Spectacle Islands further consolidated by reclamation.   |
| 1930         | The flow regime in the South Arm changed when the Public Works Department constructed a weir upstream between Hexham and Ash Island. This probably resulted in the narrowing of the channel.  |
| 1947         | Newcastle Chamber of Manufacturers proposes the extension of port facilities and new industrial sites including “development of islands in the lower Hunter River into industrial land”.  |



Umwelt (Australia) Pty Limited  
 Source: NSWLPI, Newcastle County  
 Northumberland, 3rd Edition, 139137

**FIGURE 3.1**  
 Historic Map

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- 
- 1950 NSW Government approves BHP application to block off Platts Channel (to the south of the South Arm, see **Figure 3.1**) to use as a disposal site for waste and then as an expansion site for industrial facilities.
  - 1950s Further reclamation and consolidation of Walsh, Moschetto and Dempsey Islands. BHP begins to fill Platts channel, ultimately connecting Spit Island to the mainland.
  - 1965 Tourle Street Bridge is constructed linking Kooragang Island with Mayfield.
  - 1968 Kooragang Island officially named by the Geographical Names Board (and so officially recognising the amalgamation of approximately ten original islands into Kooragang Island). The construction of powerlines, railways, pipelines and service roads across the island had brought about significant changes in elevation and associated changes to drainage patterns.

The current character of the study area is therefore extremely altered from its original natural state.

### **3.1 LANDSCAPE RECONSTRUCTION AND ARCHAEOLOGICAL POTENTIAL**

Roy, Hudson and Boyd (1995) and Walker (1999) detail the evolution of the Hunter Estuary in response to sea level changes. The findings are reported below along with comments regarding the implications of the sedimentary and geomorphic changes for Aboriginal resources and occupation patterns.

#### *Last Interglacial – 120000 years ago*

It is estimated that sea level at this time was 4 to 5 metres higher than today, and raised estuarine shell beds at Largs were deposited at this time. The inner coastal barrier formed at this time (see **Figure 3.2**). Roy *et al* consider that an extensive deltaic floodplain, similar to today, formed in the lower valley. Isolated remnants of Pleistocene terrace deposits that remain in the lower Hunter Valley indicate that the Pleistocene floodplain was up to 10 metres higher than the Holocene floodplain.

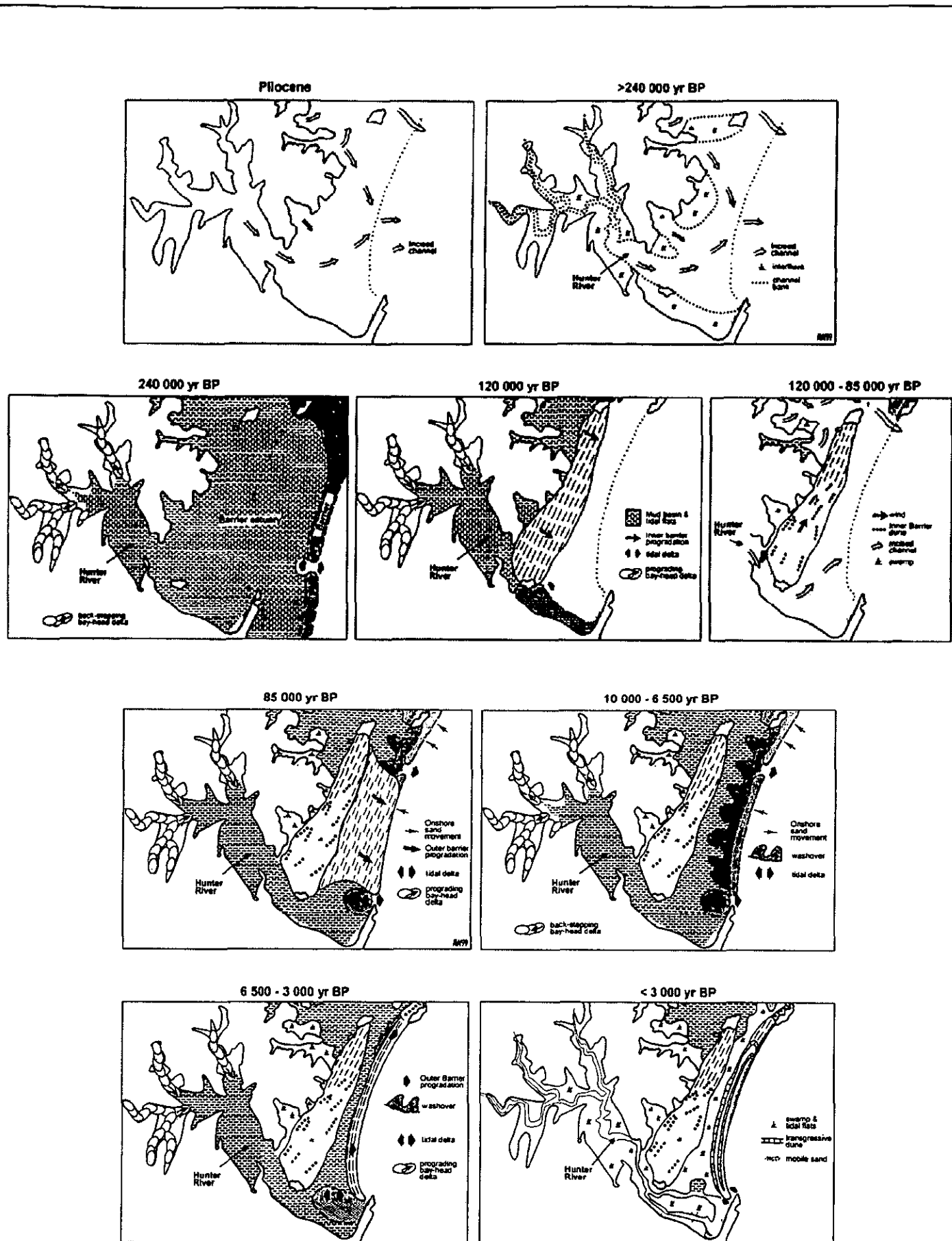
#### *Last Glacial – approximately 18000 years ago*

During this time the study area was remote from the coastline and the Pleistocene floodplain and wetlands of the lower Hunter Valley were severely dissected. A riparian habitat would have been present adjacent to the Hunter River and it is likely that most occupation activities at this time focused on the banks of the river. Resources in this area would have been entirely terrestrial. Evidence of this occupation is no longer visible due to later channel change and rapid late Holocene floodplain accretion. It is possible that Late Pleistocene and early Holocene occupation evidence is preserved beneath the accreted alluvium.

#### *Post glacial sea level rise and marine transgression – 18000 to 6500 years ago*

The post glacial transgression was characterised by repeated landward migration of sand bodies, possibly in the form of a series of short lived proto barriers (see **Figure 3.2**).

The riparian habitat along the Hunter River would have retained its terrestrial resource characteristics, with only the proximity to ocean habitats and resources changing. Given the rate of sea level rise during this period, it is unlikely that estuarine wetland habitats developed to any great extent.



**FIGURE 3.2**  
 Model of Geomorphic Evolution of  
 Hunter Estuary and Coastline

A4 Not to Scale

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### *Commencement of the Holocene stillstand – 6500 years ago*

When sea level stabilised at its present position, a new stable sandy barrier formed seaward of the old Pleistocene barrier, and “a new cycle of estuarine and deltaic sedimentation commenced in the lower Hunter valley” (see **Figure 3.2**). In the early stages of barrier formation, storm washover deposits were common. The barrier of the Hunter estuary is distinctive because of its high sediment supply and multiple phases of dune transgression that were initiated between about 5000 years ago and 500 years ago (continuing to the present).

Roy and Boyd (1996) note that infilling of the estuary involves two processes: the build up of tidal delta marine sands in the lower estuary, and fluvial estuarine sedimentation in the upper estuary (gradually migrating seaward over time). They note that the Hunter estuary has filled rapidly with sediment, but that from 6500 years ago, until perhaps 4000 years ago, the Hunter estuary would have been more like Lake Macquarie or Wallis Lake in form, with an open lake lying behind the barrier, and a narrow shallow mouth that restricted tidal ranges.

As sea level approached its current position and then stabilised, the morphology and habitats of the new Hunter estuary began to emerge. Of particular significance is the likelihood that the location of the current study area was a shallow, open estuarine bay for most of the period between 8000 and 2500 years ago. Little fresh water would have been available to Aboriginal people in the area, except along major tributary creeks or from springs if present. Abundant estuarine fish, crustacea and shellfish would have been available to Aboriginal fishers using spears, nets and lines, and gathering by hand.

### *Deposition since 4000 years ago*

Roy and Boyd (1996) note that over time the river delta extends seaward over the estuarine sediments, and that eventually the river would commence to deliver fluvial sand directly to the sea. In their view, the Hunter estuary is approaching this condition, with true estuarine environments persisting in less than 10% of the former estuary around Newcastle and Fullerton Cove. The delta front is mid way down Kooragang Island and Fullerton Cove represents the last remnant of the former estuarine mud basin. It is not clear how long Roy and Boyd consider the estuary to have been in this condition. They note that at the time of first European settlement in 1797, the lower estuary was a complex of intersecting tidal channels, tidal flats and mangrove swamps.

Rapid sedimentation and accretion of creek deltas into the estuarine bay occurred only within the last 2500 years. During this time, the study area changed from an open shallow estuarine bay to an estuarine channel surrounded by swamp and tidal flats.

On the basis of this reconstruction, the late Holocene period is likely to have been the time when the area was most attractive to Aboriginal people. The estuarine channel would have provided rich food resources, however, the tidal flats adjacent to the channel are not likely to have provided dry and comfortable places to camp. Consequently, evidence of Aboriginal occupation is likely to be limited to relatively elevated places adjacent to the channel. Such areas are difficult if not impossible to identify due to the heavy alteration and disturbance which has occurred to the landscape during the twentieth century.

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## 4.0 ABORIGINAL CULTURAL AND ARCHAEOLOGICAL CONTEXT

### 4.1 ETHNOGRAPHY

Uncertainty exists regarding Aboriginal groupings in this region. Gunson (1974:30) argues that the Awabakal were the largest clan of a tribe in the Lake Macquarie region but because of Threlkeld's (an early European missionary) well known studies in the area, Awabakal became the name that represented the whole tribe. Early government documents indicate this large tribe was composed of a number of clans – the Awabakal (Lake Macquarie and Newcastle region), the Five Islands clan, the Ash Island clan, the Kurungbong clan (Corranbong), and the Pambalong clan (Swamps district and near Newcastle). Tindale (1974) shows the Awabakal as one independent group in *Aboriginal Tribes of Australia*. **Figure 4.1** illustrates these boundaries and indicates that while the information is unclear, the broad geographical and cultural boundaries are consistent between sources. To the north of the Hunter River, the Worimi people occupied the Williams and Paterson River valleys as well as the coastline and the coastal barrier systems of Newcastle Bight (and associated estuarine habitats).

The historical information regarding Aboriginal occupation of the Hunter estuary region provides only a general insight into Aboriginal culture prior to the arrival of Europeans. It is difficult to determine how representative the early European descriptions of Aboriginal economic activity are of the actual lifestyle and technology. There must have been a tendency to describe larger and more robust implements that would have been visible from a distance, or were left behind temporarily at some sites. Notwithstanding this, there is very limited reference to tools made of flaked stone in the lower Hunter Valley. In contrast, the archaeological record is dominated by flaked stone tools.

Brayshaw (1986) provides a summary of historical references to the environment and activities of Aboriginal people in the lower Hunter Valley area generally, during the early years of the nineteenth century. These references include a number of descriptions of the Hunter estuary. Examples are noted below. One of the standout features of the ethnographic descriptions is the focus on implements that were made of plant materials. These ranged from shelters, to water containers, baskets and nets, fish traps, clubs, spear shafts and barbs, shields and other weapons. None of these materials would survive more than a short period in open campsites.

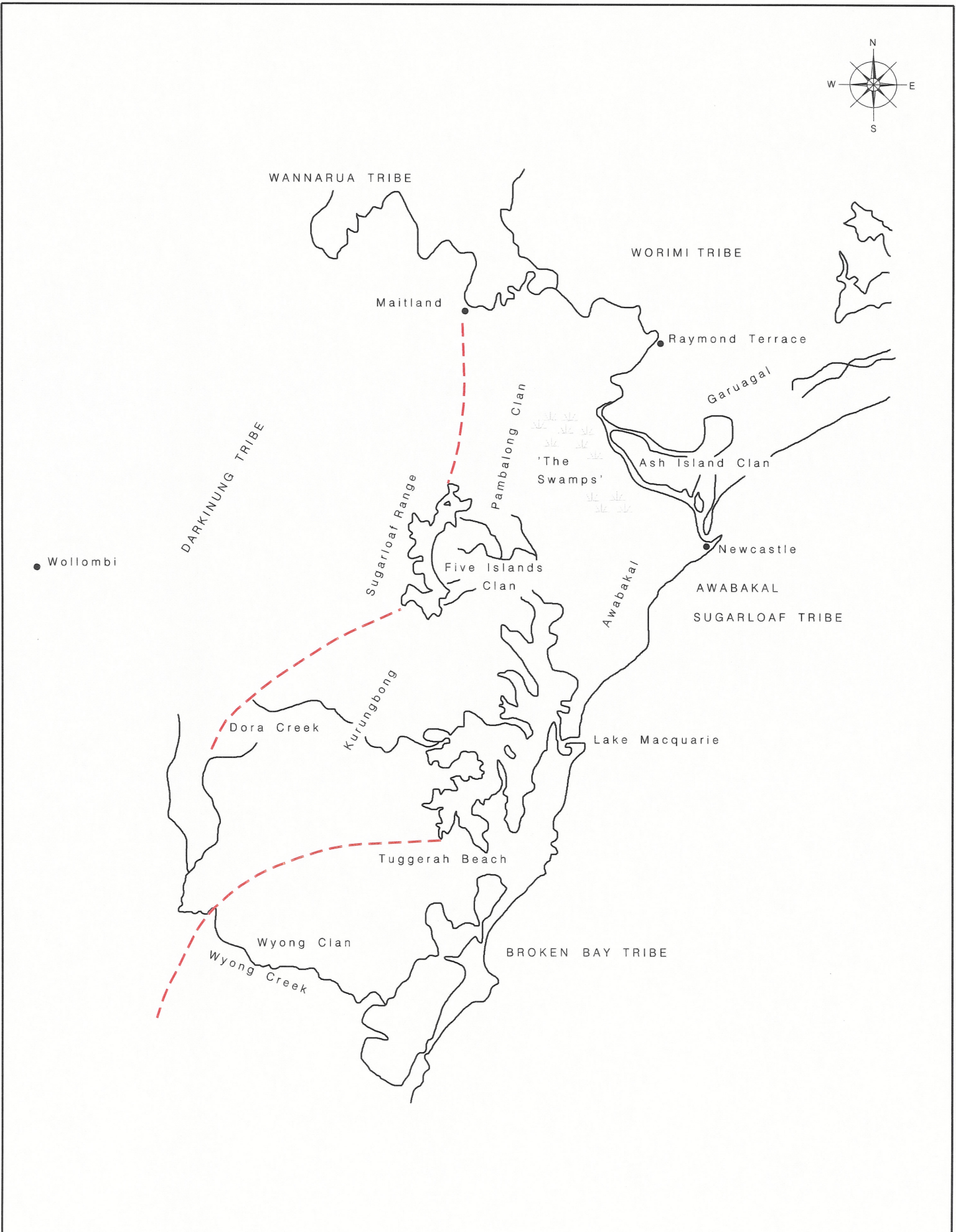
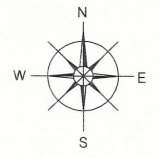
Grant (1801) observed the fires of Aboriginal people and many individuals opposite Ash Island and on the banks of a creek. In the same area, Grant observed part of a net, the remains of fires and a weir in the creek. He also described a campsite that Aboriginal people had left just before he arrived, and noted a scatter of shell fish (muscle (sic)) covering the ground.

Also in 1803, Grant observed several Aboriginal people in canoes downstream of Maitland (ie in the upper reaches of the estuary). He noted that there were fires in many canoes and also a food that the people called "cabra".

Barallier (1801) (lower Hunter Valley) saw many canoes and assumed from this that there were great numbers of Aboriginal people in the area.

In 1826, Bundock described Aboriginal people in their canoes on the floodplain after a night of heavy rain that left the floodplain covered with water. The canoes were described as being made of bark, with their ends tied with "curridgeon bark" (Kurrajong?) and sealed with grass tree gum.

There are several different descriptions of canoes from the lower Hunter Valley and Lake Macquarie, all within traditional Awabakal territory. Threlkeld (reported in Gunson 1974) describes large canoes on Lake Macquarie made of a single piece of eucalyptus bark (he considered these large enough to hold 6 to 8 people). The canoes were propelled with short paddles



**Legend**

- - - Tribal Boundary

**FIGURE 4.1**  
Aboriginal Clan Boundaries

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(especially in deeper water), one in each hand. The bark for canoes was softened and shaped by fire and the ends were tied with vines. There was a stay across both ends and a vine cord across the centre to maintain shape. A clay hearth was present in the centre. These canoes could also be anchored using cord from vines and a heavy stone. In contrast, Barallier observed Aboriginal people on the Hunter estuary propelling canoes with a long pole.

Tea tree bark was used to make water holders. Wooden bowls were used for carrying water, and were sometimes carried from place to place. Other observers note that the wooden bowls were left at regularly visited campsites.

Barallier and Threlkeld also report the use of thread made from the bark of cabbage trees to repair canoes, and cord made from Kurrajong bark to tie up the ends of canoes, make fishing lines, nets and as binding for spear shafts. This is interesting, as Kurrajong (or at least the species now identified as Kurrajong) is not common in the vegetation communities of the lower Hunter Valley.

Several early commentators from the lower Hunter Valley describe netted baskets that were worn by women around their foreheads and hanging down their backs. These baskets were quite large and were used to carry fish hooks, prepared bark for string, gum for gluing spears, and items of food.

A detailed description of fishing spears is provided by Threlkeld. He notes that the shaft was made from the stem of a grasstree, to which were added four short pieces of hardwood. These were fastened with a thread (bark) covered with grass tree gum. The total length of the spear was up to nine feet (2.7 metres). At each of the joins of the hardwood pieces, small wooden barbs were added. These were fire hardened and were also fastened with grass tree gum. To each wooden barb was added a sharp barb of bone. Hunting spears were even longer and were armoured with pieces of sharp quartz "so as to resemble the teeth of a saw".

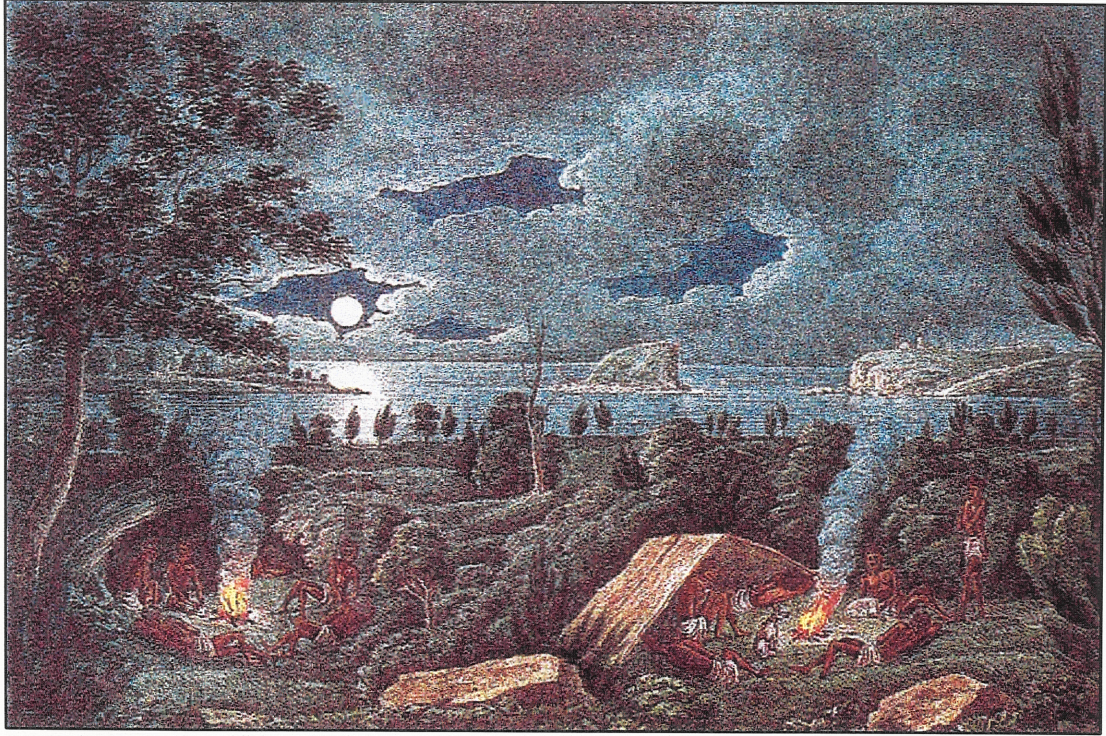
A number of detailed descriptions of fishing in and around the Hunter estuary have been recorded. Shell hooks (described as being made of oyster shell) were in use in the Hunter at European contact, with most reports referring to women fishing from canoes with hook and line. Men used spears for fishing. Both small nets and woven weirs were also used. For example, Threlkeld described:

*Planting sprigs of bushes in a zig zag form across the streams leaving an interval at the point of every angle where the men stand with their nets to catch what others frighten towards them by splashing water.*

Two illustrations from the early years of the nineteenth century show Aboriginal people on the banks of the Hunter estuary (**Plates 4.1** and **4.2**). In both cases, the scene appears to be near the mouth of the Hunter River. Although clearly somewhat stylised, these illustrations do show some interesting features. Small groups are shown using shelters made of melaleuca bark. One group has a dog that appears to be domesticated. Men are shown fishing from the rocky shoreline with spears, whilst a woman is seen collecting plant material and bringing it to shore near a canoe. Another person is visible swimming just offshore (they may have been diving for shellfish?). In one illustration, a group including men, women and children is seen on the shoreline, and another group is seen high above, in a lookout position.

## **4.2 NPWS REGISTER OF ABORIGINAL SITES**

Very few sites have been recorded in the vicinity of the study area according to current NPWS records. Two sites have been recorded on Kooragang Island. Sites in the surrounding region appear to be concentrated along the margins of Hexham Swamp, along the coastline and estuaries of Stockton Bight and in an area immediately north of the North Arm of the Hunter River (see **Section 4.3.1** for further discussion). The current distribution of sites is likely to be the result of



**PLATE 4.1**  
Aboriginal People at the  
Hunter Estuary



**PLATE 4.2**  
Aboriginal People at the  
Hunter Estuary

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the substantial modification to the environment and ground surface of the Kooragang Island area, and the associated destruction of Aboriginal sites once present in the area. However, the low number of recorded sites may also be due to the lack of intensive archaeological surveys undertaken in the area. Both sites recorded on Kooragang Island are middens. These are discussed in Sections 4.3.1, 4.3.2 and 5.1.3.

## 4.3 PREVIOUS ARCHAEOLOGICAL RESEARCH

### 4.3.1 Previous Archaeological Research in the Vicinity of the Study Area

Previous archaeological research in the region has generally been focused along the margins of Hexham Swamp; along the coastline and estuaries of Stockton Bight; and in specific areas around Tomago, less than one kilometre north of the North Arm of the Hunter River (see Figure 4.2). Only two sites have been recorded on Kooragang Island (according to current NPWS records). The first of these sites is located within the current study area (see Sections 4.3.2 and 5.1.3). The second site is located on Moschetto Island (which forms part of the combined Kooragang Island). This site was recorded in 1970 and the relevant NPWS site card contains sparse information. The description of site no. 38-4-0050 simply consists of "shell midden" and that it "has been thoroughly bulldozed". It is unlikely that any evidence of this site remains more than thirty years later.

The sites in the Tomago area consist of stone artefact scatters and middens (Dean-Jones 1990). The stone artefact scatters contain a high proportion of Shortland Tuff which outcrops in the area. Nobbys Tuff (originating from the Nobbys Headland area and south along the coastline) is also strongly represented. Shell material includes estuarine species such as cockle (*Anadara*), mud whelk (*Pyrazus*) and mud oyster (*Ostrea angasi*). A mid-Holocene age has been hypothesised for these sites based on artefact types present (ie. backed blades).

Sites in the Stockton Bight area are located in various geomorphic environments including beach/swale, Holocene transgressive dune surfaces, Pleistocene transgressive dune margins, and Pleistocene dunes/wetlands (Dean-Jones 1990). Midden material was found to be concentrated in the modern deflation basin and outer margin of the transgressive dunes. Stone artefacts (with little or no shell) were found to be concentrated on Pleistocene dunes. According to Dean-Jones (1990:93) the largest sites (containing the largest and most complex concentrations of archaeological material over an extensive area) are located:

- at the swale/active transgressive dune interface, on exposures of the former stable dune surface which is about one thousand years old;
- on stable Pleistocene dunes associated with freshwater wetlands which may have persisted throughout the last Glacial; and
- on a bedrock headland at the north eastern end of Stockton Bight (Birubi).

Proportions of shell species within these sites vary according to the geomorphic environment they are located in. Sites on frontal dunes are dominated by pipi (*Plebidonax*) with smaller proportions of estuarine species such as *Pyrazus* and *Anadara*. Sites in the vicinity of estuarine environments are dominated by estuarine species with smaller numbers of open beach species. Stone artefact raw materials include Nobbys tuff, Shortland tuff and various other types of tuff, Birubi igneous, quartzite, mudstone, and quartz. Artefact types recorded included flakes, flaked pieces, backed blades and cores.

Numerous surveys and archaeological excavations have been undertaken around the margin of Hexham Swamp (part of the Hunter estuary). In riparian corridor areas sites appear to be concentrated on areas of lower slope associated with creek lines. On swamp margins, sites are concentrated on the edges of spurs that form the swamp margin, and in the vicinity of creeks



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associated with the swamp. Silcrete and tuff are the dominant raw materials in sites around the Hunter estuary. Minor components of assemblages include chert, indurated mudstone (also known as tuff), quartz, quartzite, silicified sandstone, chalcedony, basic volcanic and acid volcanic.

The consensus amongst archaeologists working in the area is that the artefact assemblages recorded to date in the lower Hunter Valley date from the mid-Holocene. This position is consistent with the geomorphic evidence that suggests that the Hunter estuary area would have been more attractive for occupation in the latter part of the Holocene.

All the alluvial units in tributaries around the margin of Hexham Swamp are mid Holocene or younger. Possible locations of earlier deposits include the northern side of the Tank Paddock site, and extending upstream in Bluegum Creek (on the Riverdean and Hamilton Soil Landscapes). Further upstream in the Hunter estuary, Roy and Boyd (1996) have mapped several Pleistocene terrace deposits, and Pleistocene terraces are also known from the central lowlands of the Hunter (eg see Hughes and Hiscock 2000). Along the main part of the Hunter floodplain and estuary, alluvial deposition over the last 3000 years or so has completely masked any earlier floodplain sites.

Hexham Swamp itself has only existed as an estuarine waterway since sea level stabilised at its current position. During the late Pleistocene, former alluvial deposits in this area would have been eroded, and the channels of Bluegum Creek, Minmi Creek, Wentworth Creek and Ironbark Creek would have flowed across the hinterland terrain. It is possible that late Pleistocene occupation would have been associated with these drainage lines, but such sites would have been either reworked or drowned by rising sea levels.

Pleistocene sites have been recorded in the lower Hunter Valley on the inner barrier of Newcastle Bight, adjacent to wetlands that may have persisted throughout the last Glacial (see Baker 1994 and Dean-Jones 1991). The inner barrier is a Pleistocene deposit, although its surface was reshaped by aeolian processes during the last glacial.

#### **4.3.2 Previous Archaeological Research within the Study Area**

A midden site was recorded by Moore during a survey of the lower Hunter Valley (NPWS Site No. 38-4-0041) March 1970. The relevant NPWS site card contains little information:

*Midden by new bridge is almost completely bulldozed. In small undisturbed parts there are very marked lines of shells. Sample of shell types collected. No artefacts.*

From this description it can be assumed that the small undisturbed parts of the midden were stratified. In order to see such stratification it is likely that the site was located on the channel bank (rather than 63 metres north of the bank as indicated by the grid coordinates referenced). The fact that the site was almost completely destroyed (bulldozed) over 30 years ago indicates that none or it is unlikely that any evidence of the site remains today very little evidence is likely to remain today. The area contains a vehicular track and the banks of the channel have been disturbed by this use. Additionally, the area also appears to be heavily used and trampled by fishermen.

#### **4.4 PREDICTIVE MODEL**

Previous geomorphic research indicates that on the basis of broad resource accessibility, there is a possibility of long term low intensity use of the area where the South Arm of the Hunter River is now located, with more intensive use developing only in the latter part of the Holocene (see **Section 3.1**).

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From the previous ethnographic and archaeological research in the Hunter estuary area (see **Section 4.1**) it can be predicted that:

- Stone artefact scatters, isolated finds and shell deposits (middens) are the most likely evidence of such occupation.
- The most likely landform units on which these sites will occur are along the bank of the channel or on relatively elevated areas across Kooragang Island (where the natural ground surface is still in existence).
- The most likely stone artefact types will be flakes, broken flakes and flaked pieces. There is a possibility of finding retouched flakes, cores and edge ground axes, however, these will only make up a minor component of any assemblage.
- The most likely shell species within middens will be estuarine species such as *Anadara*, *Pyrazus* and mud oyster.
- It is unlikely that Aboriginal sites will be located on original low lying wetland areas due to the persistent past inundation of these areas.
- Evidence of Late Pleistocene and early Holocene Aboriginal occupation evidence may be present in the South Arm/Kooragang Island area, but it is likely that such evidence is buried beneath many metres of alluvium.

## **5.0 ABORIGINAL HERITAGE SURVEY AND RESULTS**

### **5.1 NORTH BANK OF THE SOUTH ARM**

A survey of the northern bank of the South Arm of the Hunter River was undertaken on 23 January 2003 by Jamie Merrick and Rebecca Anderson (representing Worimi LALC) and Katie Sachs (archaeologist, Umwelt (Australia) Pty Limited). The first section of the survey was undertaken from east to west, commencing from just south of the intersection of Egret Street and Cormorant Road and ending at the wind turbine located between the northern bank of the river and Cormorant Road (and approximately half way along the survey route). The second section of the survey was undertaken from west to east, commencing at the Tourle Street Bridge and again ending at the wind turbine.

A width of approximately 50 metres from the bank was inspected where possible, except in the vicinity of the proposed swing basin where the entire area likely to be impacted by this facility was inspected (although this was limited to available areas of ground surface visibility). One person walked on or immediately adjacent to the river bank. The other two people walked parallel to this line, approximately 25 metres apart, inspecting all areas which offered some level of ground surface visibility.

The study area is flat to gently sloping. The area is highly disturbed and the majority of the area consists of boulders and imported sandy fill which was placed during the reclamation and formation of Kooragang Island. The area originally consisted of silty/clay mudflats. The most easterly section of the study area (a length of approximately 200 metres) was fenced and not accessible at the time of survey. The area, however, appears extremely disturbed. A large proportion of the ground surface is covered in asphalt and stockpiles of concrete and building refuse. A large concrete canal also crosses the study area in this location. The eastern half of the study area then generally consists of introduced and native grasses, bitou bush, scattered mangroves and small clumps of tea trees, casuarinas and eucalypts (these have been planted at some time in the past). There are numerous unsealed tracks in this area and a large amount of

rubbish. The banks of the river along this section are steep and consist of boulders and sandy fill. There are numerous shells but these do not have a cultural origin as evidenced by their regular small size; the fact that they are intermingled to depths of over one metre with refuse such as bricks and concrete; and the lack of cultural material such as charcoal or stone artefacts.

The central section of the study area (in the vicinity of the wind turbine) is characterised by grasslands and saltmarsh closer to the river bank. The saltmarsh includes various species of rushes, native grasses, native geranium and pig face. This area is again very disturbed, with numerous unsealed tracks and a large amount of dumped rubbish. The river bank along this small section is gently sloping and sandy.

The western half of the study area (approximately between the Tourle Street Bridge and the wind turbine) mainly consists of mangrove forest and saltmarsh, with grassland covering only the central section in the vicinity of the wind turbine. The mangrove forest stretches along the entire length of river in this section, prohibiting access to the banks. This forest also extends to the edge of Cormorant Road along one section of the study area. Ground surface visibility within the saltmarsh was generally zero, being limited to areas where the vegetation naturally thinned, allowing limited visibility. The ground surface here consisted of shelly sand. Ground surface disturbance in this section consists of a short unsealed road running from Cormorant Road to the river bank adjacent to the Tourle Street bridge, a sealed/unsealed road from Cormorant Road to the vicinity of the wind turbine, and a large excavated area containing saltmarsh.

A description of the transects walked and the associated ground surface visibility is contained in **Appendix 2**. The location of the transects is shown on **Figure 5.1**.

### 5.1.1 Effective Cover

An estimate of effective cover is contained in **Appendix 2**. Ground surface visibility across the study area varied from 0% (in areas of dense vegetation such as saltmarsh) to 60% (on unformed vehicle tracks). Environmental data was collected during transects to provide an indication of effective cover of the study area. Effective cover was calculated by determining the total area of the study area (a 50 metre area parallel to the channel bank, plus the area to be impacted by the swing basin), the proportion of that covered by foot transects (the width of a transect covered by one person was estimated to be five metres), and the average ground surface visibility recorded during the foot transects. **Table 5.1** summarises the results of the calculation of effective cover.

**Table 5.1 - Effective Cover**

Approx. Area of Study Area (m <sup>2</sup> )	Effective cover (m <sup>2</sup> )	Effective cover (%)
148000	5509	4

Approximately 4% of the study area was covered by the survey. Visibility was mainly hampered by dense vegetation. It is considered that the survey was adequate in determining the archaeological sensitivity of the area, the majority of available exposures were inspected thoroughly and it was concluded that the majority the study area consists of imported fill.

### 5.1.2 Results

No Aboriginal heritage sites were located during the survey. This result was not unexpected due to the fact that a large proportion of the study area appears to consist of imported fill.



**FIGURE 5.1**  
Location of Transects

**Legend**

- ⊙ Midden
- ② Transect Route and Number

A3 Scale 1:30 000      Ref No.:R02\_V1/1661\_007.dgn

0      0.5      1      2 km

---

### 5.1.3 Previously Recorded Site(s) within Study Area

The NPWS site register indicates a shell midden (NPWS No. 38-4-0041) within the study area, in the vicinity of the Tourle Street Bridge. The grid coordinates on the site card place it 63 metres from the northern bank of the South Arm and just outside the proposed development zone. An attempt was made to relocate this site during the current survey without success, and it is possible that the grid coordinates on the site card are not accurate. The site was recorded in 1970 using a different map reference system to that used today and the current site coordinates have been converted to match the current system. The conversion process often results in inaccurate results (sites generally seem to be too far east) with sites along the coast often appearing to be in the ocean. This suggests that the site may actually be further to the west than it now appears. However, its present grid coordinates place the site within 13 metres of the proposed development zone and in an area that may be impacted.

Len Anderson of the Worimi LALC reports that this site was apparently inspected by Worimi Aboriginal Sites Officer during a survey of the area in 2000 and that there is some doubt as to the origin of the shell material. A search of the current NPWS database did not locate the report documenting the results of 2000 survey (the database is not up to date) and the relevant Sites Officers could not be contacted during the current study (Gavin Kelly is in Cairns and Laith Anderson is overseas). Len Anderson of Worimi LALC, is however, satisfied that sufficient investigation of this area has been undertaken for Worimi LALC to make informed decisions in regard to management options for the site.

The Sites Officers participating in the 2000 survey also reported to Worimi LALC that they located glass artefacts on the bank of the South Arm in the vicinity of the wind turbine. These artefacts were described as flakes manufactured from thick green glass (Len Anderson pers. comm. 2002). Again, there was no documentation regarding this site held by NPWS and the artefacts could not be located during the present survey. Once again, Len Anderson of Worimi LALC is satisfied that sufficient investigation of this area has been undertaken for Worimi LALC to make informed decisions in regard to management options for the site.

## 5.2 SOUTH BANK OF THE SOUTH ARM

The South Bank of the South Arm of the Hunter River is used for industrial purposes. The major site uses are a Rod Mill and Bar Mill and associated storage areas; a metal scrap consolidation and storage area; an 'Industrial Park'; and recycling and processing of slag materials (CH2MHILL 2002).

The upper three to four metres of the channel bank is a revetment wall. This consists of a combination of rock and building rubble and steelworks waste. Inland from this wall, the original mud flats are also overlain by fill. The reclamation of Platts Channel (see **Figure 3.1**) involved the use of slag from the blast furnace, coke oven by-products, and slurry from coal washery. Waste tar, oil and grease were disposed of in several areas. Two tar pits were in fact located within the swing basin footprint (CH2MHILL 2002).

The complete destruction/reclamation of the south bank of the South Arm in this area negated the need for a cultural heritage survey to be undertaken. Any Aboriginal cultural heritage sites once located here would have been completely destroyed many years ago.

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## 6.0 SIGNIFICANCE ASSESSMENT

### 6.1 ABORIGINAL CULTURAL SIGNIFICANCE

The Aboriginal cultural significance can only be assessed by the traditional owners and local Aboriginal community and is often different to that of scientific significance. Comment from the Worimi LALC regarding site no. 38-4-0041 as well as the impact of the proposed development in general is provided in **Appendix 1**.

The Awabakal LALC has no concerns regarding the proposed development. Their comment has also been provided in **Appendix 1**.

### 6.2 ARCHAEOLOGICAL OR SCIENTIFIC SIGNIFICANCE

There are several criteria for assessing the archaeological significance of Aboriginal sites. The most common are:

- research potential (which depends on factors such as the potential of the site to answer questions of relevance to the contemporary archaeological/Aboriginal community; the site's uniqueness/rarity; the site's archaeological integrity; the site's relationship with other known sites);
- representativeness (which depends on a site's uniqueness; relative integrity; conservation status; and whether similar sites have already been researched); and
- teaching potential (which depends on the location and accessibility of a site and whether the site would suffer degradation if visited on a regular basis).

#### 6.2.1 Archaeological Significance Assessment

The severe disturbance to the area containing site no. 38-4-0041 has resulted in the site no longer having research or teaching potential, apart from the knowledge that it once (may have) existed in that location. The site has no other scientific value.

## 7.0 DISCUSSION AND MANAGEMENT RECOMMENDATIONS

The banks of the South Arm of the Hunter River are likely to have been used and occupied by Aboriginal people during the latter part of the Holocene. The area would have provided rich plant and food resources. However, it is likely that any evidence of this occupation has been destroyed by the reclamation and development of the area which commenced in the mid nineteenth century. The majority of the area to be impacted by the proposed development consists of imported fill and the natural ground surface is at least two metres beneath the current surface.

No Aboriginal archaeological evidence was identified during the current survey. The previously recorded midden within the study area could not be relocated and it is considered that none or very little evidence of this site remains. Additionally, the previously reported site containing glass artefacts was not located.

The following recommendations are made on the basis of:

- the legal requirements imposed by Section 90 of the *National Parks and Wildlife Act 1974* which states that it is an offence to knowingly disturb, deface or cause or permit the destruction of relics or an Aboriginal place without the written consent of NPWS;

- 
- the results of the Aboriginal cultural heritage survey and assessment;
  - an evaluation of the impact of the proposed development on cultural heritage;
  - inferences in relation to geo-archaeological potential;
  - assessment of the archaeological significance of the site previously recorded within the study area;
  - consultation with Worimi LALC in relation to the Aboriginal significance of the site and the impact of the development on their cultural heritage generally;
  - consultation with Awabakal LALC regarding the impact of the proposed development on their cultural heritage generally; and
  - consideration of the possible management options for the site in consultation with the Worimi and Awabakal LALCs.

It is recommended that the proponent submit a Consent to Destroy application for site no. 38-4-0041 at least three months prior to any works commencing. Additionally, due to previous reports that site 38-4-0041 was still in existence in 2000 and glass artefacts were noted on the bank of the South Arm, the Worimi LALC have requested that an Aboriginal Sites Officer be present to monitor all dredging and excavation activities throughout the proposed project.

Due to the claim under the *Aboriginal Land Rights Act 1983* over the current study area, the Worimi LALC should be consulted throughout the planning and construction phase of the project.

## 8.0 REFERENCES

CH2MHILL 2002. *Summary of the Benzene Impacted Area Characterisation Studies from February 2001 to May 2002*. Report to OneSteel Rod and Bar Mills – Newcastle.

Roy, P.S. Hudson, J.P. and Boyd, R.L. 1995. "Quaternary geology of the Hunter Delta – An estuarine valley-fill case study". In Sloan, S.W. and Allman, M.A. (eds) *Conference on Engineering Geology of the Newcastle-Gosford Region*. Australian Geomechanics Society, Sydney.

Walker, A. 1999. *Quaternary Sequence Stratigraphy of the Lower Hunter River Valley*. MSc Thesis, Newcastle University (unpublished).

Williams, R.J., Watford, F.A. and Balashov, V. 2000. *Kooragang Wetland Rehabilitation Project: History of Changes to Estuarine Wetlands of the Lower Hunter River*. NSW Fisheries Office of Conservation, Cronulla Fisheries Centre, NSW.

1892 Parish Map, Newcastle, Co Northumberland, Third Edition, NSWLPI 139137.

## **APPENDIX 1**

**Comment from Awabakal Local  
Aboriginal Land Council and Worimi  
Local Aboriginal Land Council**



**AWABAKAL  
LOCAL ABORIGINAL LAND COUNCIL  
127 MAITLAND ROAD  
ISLINGTON NSW 2296  
ABN: 19 759 066 759**

6<sup>th</sup> March, 2003

Katie Sachs  
Umwelt (Australia) Pty Ltd  
P.O. Box 838  
TORONTO NSW 2283

Dear Katie

Re: Proposed Dredging of the South Arm of the Hunter River

This project will not impact on any Aboriginal sites of cultural significance in this area due to BHP Steelworks Complex which was built on this site hundreds of years ago. The banks of the Hunter River has been backed filled over a long time with fill from other areas.

The Awabakal Local Aboriginal Land Council have no objections to the proposed dredging of the South Arm of the Hunter River.

Yours truly,

Ron Gordon  
Chief Executive Officer

**AWABAKAL LOCAL ABORIGINAL LAND COUNCIL**  
Phone: 02 4965 4532 FAX: 02 4965 4531  
PO Box 437 HAMILTON NSW 2303



# WORIMI LOCAL ABORIGINAL LAND COUNCIL

ABN: 51 352 201 603

P.O Box 56 Tanilba Bay 2319 NSW

PHONE: (02) 4982 3405 FAX: (02) 4982 3596

E-Mail: [worimi@bigpond.com](mailto:worimi@bigpond.com)

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20<sup>th</sup> March 2003

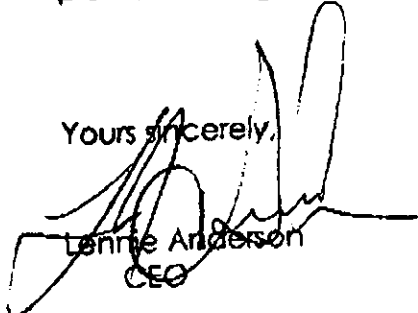
Umwelt Australia

Attention: Katie Sachs

Dear Katie,

After reviewing both our sites officer's report "Rebecca Anderson" Hunter South Arm and the Management Plan and report submitted by yourself representing Umwelt Australia, both myself and other preventatives of the Traditional owners do agree with the structure of the combined reports and do give notice of our intent to endorse the plan of management in its present state.

Yours sincerely,



Lenne Anderson  
CEO

# **ABORIGINAL HERITAGE ASSESSMENT.**

Newcastle Port Corporation  
23<sup>rd</sup> January, 2003.

## **WORIMI LOCAL ABORIGINAL LAND COUNCIL.**

- **REBECCA ANDERSON**
- **JAMIE MERRICK**

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- ~ Methodology, pg,5 & 6  
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- ~ Recommendations, pg,7.
- ~ ~~Appendix 1 = Map of Area Surveyed.~~



## **INTRODUCTION.**

The purpose of the investigation was to identify and locate any Aboriginal sites, relics or objects that may be impacted upon by the proposed development.

An Aboriginal Heritage Assessment has been carried out for Newcastle Port Corporation, the proposed development will extend approximately 3 kilometres east of the Tourle Street Bridge to just south of the intersection of Egret Street and Cormorant Road on Kooragang Island ( see appendix 1). This was undertaken by Katie Sachs (Archaeologist), Rebecca Anderson of Fern Bay and Jamie Merrick of Tanilba Bay (Site Surveyers) on the 23<sup>rd</sup> of January, 2003.

## **OBJECTIVES OF ABORIGINAL HERITAGE ASSESSMENT.**

The objectives of the assessment is to:

- Assess the proposed development for the impact on Aboriginal sites, relics and cultural heritage to allow for the development of an area which will be utilised as a property development.
- Protect and preserve Aboriginal heritage and cultural sites if found.
- Evaluate potential impacts of the proposal on any such sites or significance.
- Provide management recommendations to mitigate potential impacts.

## **ABORIGINAL CONSULTATION.**

The Aboriginal heritage assessment for the proposed development was commissioned to the Worimi Local Aboriginal Land Council to undertake. This has been carried out in complete consultation with the Worimi local Aboriginal community and the Land Council.

~ This report has been verified by the Worimi Traditional Aboriginal Owners Group.



For further consultation or enquires contact: Len Anderson (Chief executive Officer) Worimi Local Aboriginal Land Council- 49823405, PO BOX 56 Tanilba Bay, 2319.

### **DESCRIPTION OF STUDY AREA.**

The Aboriginal Heritage survey was undertaken for the proposed dredging and excavation of the South Arm of the Hunter River. The area which was investigated extends for 3 kilometres east of Tourle Street Bridge and is approximately 50 metres in width from the Hunter River bank running north to Cormorant Road. Between 800 metres and 1300 metres east of Tourle Street Bridge our survey was extend to the edge of Cormorant Road, this is to be utilized as a swinging basin to facilitate the turning and berthing for large commercial vessels.

### **QUALIFICATIONS.**

I have completed a degree at Newcastle University, studying an Arts Degree, majoring in Aboriginal studies and Sociology and Anthropology.

I also attained a certificate for attending an Aboriginal Sites School conducted by the National Parks and Wildlife Services.

I have been working in this profession for over 2 years.

### **LEGISLATIVE FRAMEWORK.**

The rezoning proposal and planning report of which this Aboriginal Heritage assessment and archaeological survey is a part, has been prepared to comply with the legislative requirements of the *Environmental Planning and Assessment Act 5, 1979 and Environmental Planning and Assessment Regulation 1994.*

*The National Parks and Wildlife Act 1974* provides statutory protection for all Aboriginal relics under section 90 of the act and for Aboriginal places under section 84. The protection provided to Aboriginal relic applies to all sites, irrespective of the level of significance or land tenure. Under **section 90** it is an offence to knowingly disturb, damage or destroy relics or Aboriginal places without the prior written consent of the Director-General of the NPWS. Damage to an Aboriginal relic or place may be direct damage or may result from indirect impacts.

## ENVIRONMENTAL SETTING.

The surrounding area had minimal vegetation, the predominant species was Bidou bush (salt bush) which covered most of the river bank system. Grass cover was apparent most of the survey with small wattle trees existing along bank line and roadside. Throughout the middle section of the assessment vegetation increased with Mangrove trees dominating the swampy areas. At the most western point of the survey tall river reeds were evident.

## SITE PREDICTION.

Within National Parks and Wildlife Records a site has been identified in the northern corner of the eastern end close to the Bridge, this site should not be impacted upon during development. If any artifacts are identified they would most probably be rested on top of the original clay, although in the past kooragang Island has been filled with industrial fill of approximately 2-3 on top of the original clay.

According to Aboriginal Heritage and the Aboriginal community and archaeological records the most common Aboriginal sites found in this area of Port Stephens/ Worimi, is the open surface scatter of stone artifacts and shell middens, along with scarred trees.

### Stone Artifacts.

Stone artifacts are the most common form of archaeological evidence found in Australia. An artifact is anything which has been made or modified by the Aboriginal people. The term stone artifact includes both the finished implement and the debris which is a by-product of it's manufacture. In areas where the landscape has not been drastically altered by European settlement stone artifacts can be found in quite large numbers. Some areas have been heavily impacted on, here, stone artifacts can be found in exposures caused by erosion, road works or ploughing, etc. Stone artifacts were used as tools for all types of traditional work. Axes, chisels and saws were manufactured and used for such methods as wood working, or



spears and knives were made for such things as plant and food preparation, or making nets, baskets or other tools.

### Shell Middens.

Shell middens are areas where debris from eating shellfish has accumulated. Shell middens also may have bones from animals which were used for food or tools made from stone, shell or bone. Shell middens provide a lot of information about Aboriginal activities in the past. Different types of shell can indicate different habitats, seasons and changes in diet. Shell middens are found usually close to shellfish sources, this can occur on the coast or inland near lakes, swamps and river banks.

### Scarred Trees.

Trees which show evidence of Aboriginal use, are known as scarred trees. Scarred trees can be put into 3 groups; 1- trees from which bark has been removed for use, an example of this is the Aboriginal people using the bark for shelter. 2- trees from which wood has been removed for use, for objects such as canoes or coolamons. 3- trees which show evidence of hunting and climbing, for such things as observation or look out trees.

## METHODOLOGY.

The field investigation at Kooragang Island south of Cormorant Road was undertaken by foot, covering a perimeter of 3 kilometres east to west and 50 metres south to north. The area was covered in 3 transects, with sites officers and archaeologist being 20 meters apart. The area was looked at in three sections, starting with most eastern end near the Egret Street and Cormorant Road intersection and continuing toward open area of grasslands. After this section was looked at, then section 2 was covered, which extended from the fence line at the open grasslands to the large fan, walking east to west. The third section was to examine the next to Tourle Street Bridge and walk west to east back to the large fan. These areas were covered by Katie, Rebecca and Jamie. The parts of the survey area which have been looked at are on the map (Appendix, 1). There was approximately 3 hours spent in the field.



## Fieldwork Investigation.

### **Section 1.**

This area was examined and walked in an east to west direction. Grass cover was thick and visibility was very poor with only small patches of exposures. The vegetation surrounding the area was Bidou bush and small wattle and gum trees. Some of the area was fenced off and no access to this area was given. Approximately 200 metres west of Egret Street a large cement drain ran south to north from the river bank to close to the road. This section also had lots of rubbish which had been dumped. This area was looked at thoroughly and the section was to the end of the fenced off area. No cultural material was noted.

### **Section 2.**

This area was open grass lands with vegetation being predominant on the most southern side close to the river bank. This consisted also of Bidou bush, wattle and gum trees. Small exposures of sand patches existed approximately 2mx2m. Shell scatter was found throughout sand, this shell was crushed into small pieces due to destruction and disturbance and was identified as industrial fill. The historical records show that 2-3 metres of industrial fill has been placed on top of the original clay in the past to create Kooragang Island. Most of the shell was not edible except the large mud oyster was present. Visibility throughout this stage remained at 0-5% with only some small patches of exposures. Grass cover thickens and thins in some sections and along the river bank line large rocks and boulders are present. Our survey continued to the large fan. No cultural material was noted.

### **Section 3.**

This section was walked west to east from Tourle Street Bridge. Vegetation was very dense with tall river reeds and large mangrove trees which extended all the way along the bank line back to the fan. This resulted in ground visibility being very poor, and swampy areas along the side of Cormorant Road and amongst the mangrove trees. Small patches of the industrial fill with the shell scatter were found and noted. Between 800- 1300 metres east of the bridge of the study area, our survey extended to the road, to allow for excavation and dredging. No cultural material was noted.



## RESULTS.

No Aboriginal sites or relics were located during the field investigation for the Aboriginal Heritage Assessment for the proposed development of Newcastle Port Corporation's dredging and excavation of the South Arm of the Hunter River.

## DISCUSSION.

The effectiveness of the Aboriginal Heritage Assessment is to a large degree related to ground surface visibility and the amount of disturbance in the area which was mainly poor throughout the field survey. Although no Aboriginal sites were found within the surveyed area, due to our cultural background and knowledge of the Port Stephens area, the presence of Aboriginal sites can not be ruled out. This is justified by the Aboriginal site which has been recorded adjacent to the area being developed. This site was quickly investigated by the field workers though, due to ground visibility and recent movement the site was not identified. This site should not be impacted upon with the development by Newcastle Port Corporation.

## RECOMMENDATIONS.






1. If perimeter or area is changed, the Worimi Land Council must be contacted and a more thorough investigation of the area where the site has been recorded by N.P.W.S would be undertaken.
2. If in the process of development any artifacts are found, then work must cease and the Worimi LALC must be contacted immediately. To knowingly remove or destroy artifacts without a permit is an offence under section 90, of the NPWS Act, 1974.

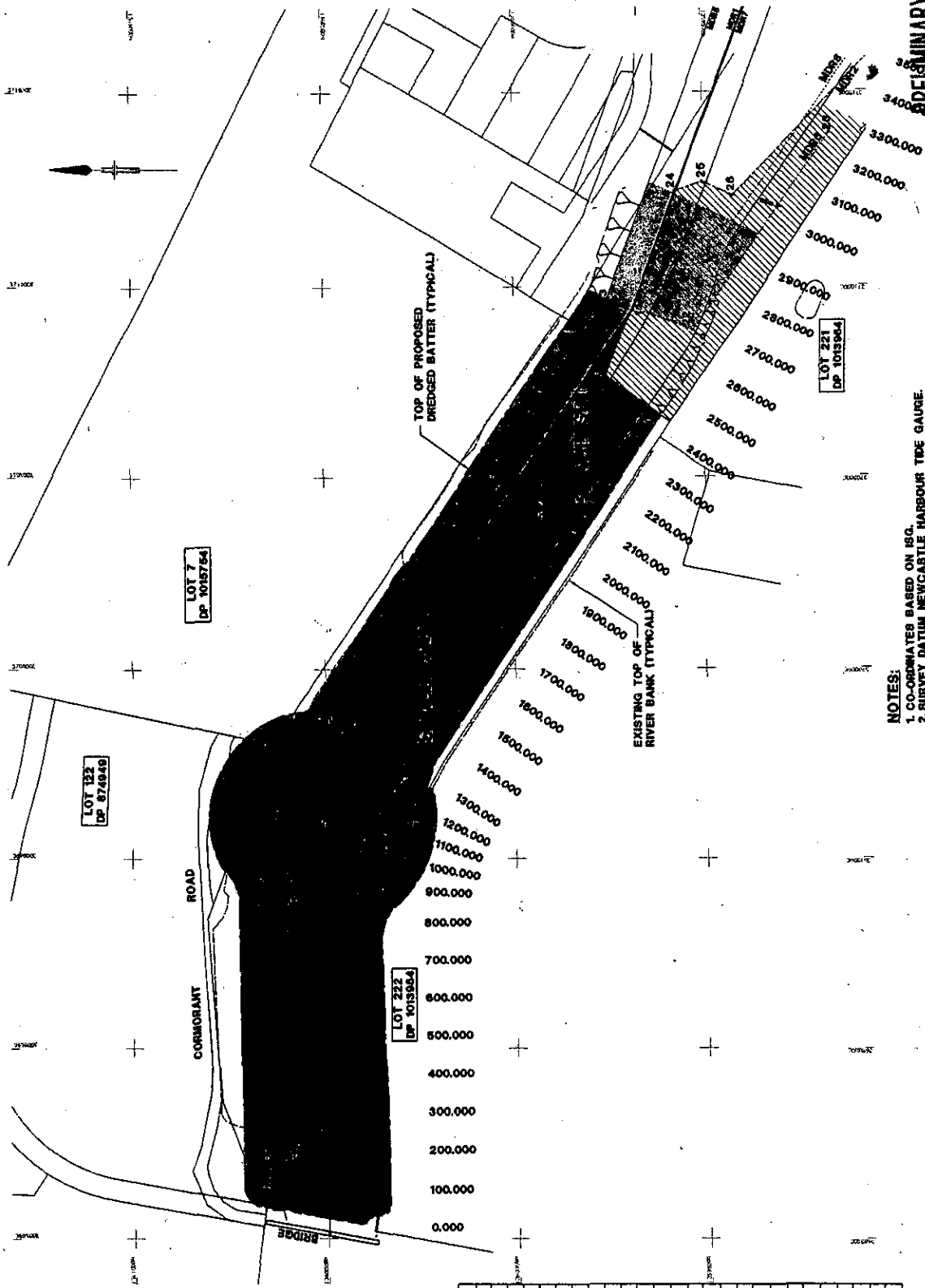
APPROVED AHS NOTES WTAEOG  
1- FEBRUARY - 2003



DO NOT SCALE

**LEGEND**

-  NPC
-  PWCS BERTH K7
-  MPT STAGE 2
-  LOT BOUNDARY
-  TOP OF BANK



POINT	EASTING	NORTHING
1	370938.051	1359684.774
2	370921.695	1359695.805
3	370969.350	1359751.866
4	369852.001	1360417.299
5	369863.446	1360498.718
6	369858.837	1360511.438
7	369415.965	1360677.583
8	369404.737	1360672.269
9	368643.693	1360660.720
10		
11		
12		
13	368596.365	1360415.106
14		
15	369376.275	136028.910
16	369366.488	1360597.782
17	369732.893	1360291.375
18		
19		
20		
21		
22	370083.673	1359527.679
23		
24	371241.739	1359572.889
25	371266.496	1359500.275
26	371230.843	1359220.411
27	371793.080	1358871.332

**NOTES:**  
 1. CO-ORDINATES BASED ON IBC.  
 2. SURVEY DATUM NEWCASTLE HARBOUR TIDE GAUGE.

**PRELIMINARY**

NEWCASTLE PORT CORPORATION  
 HUNTER RIVER SOUTH WYRRH  
 DREDGING MASTER PLAN  
 DREDGING AREA SET-OUT

Scale: 1:1000  
 Date: 10/3/2010  
 Project No: 10370 - C01

10 West Bank, Sydney, NSW 2000  
 Telephone: (02) 923 7100 Facsimile: (02) 923 7188  
 Email: [enquiries@npps.com.au](mailto:enquiries@npps.com.au)  
 Website: [www.npps.com.au](http://www.npps.com.au)

Geotechnical Engineer: [Signature]  
 Date: [Date]

Lot 222 (DP 1015754)  
 Lot 7 (DP 1015754)  
 Lot 221 (DP 1015754)



## **APPENDIX 2**

### **Effective Cover**



## Effective Cover

Transect Number	Transect Area (m <sup>2</sup> )	Average Exposure (%)	Area of Exposure (m <sup>2</sup> )	Exposure Surface	Origin of Exposure	Average Visibility (%)	Constraints to Visibility	Area Available for Detection (m <sup>2</sup> )
1. Along channel bank	960 x 5 = 4800	5	240	Sand, shell, bricks, metal, concrete, boulders (fill)	Near vertical bank of channel	60	Vegetation	144
2. 25m and 50m north of channel bank	960 x 10 = 9600	60	5760	Sand, gravel	Natural exposures in vegetation, vehicle track	60	Vegetation, gravel	3456
3. Along channel bank	300 x 5 = 1500	5	75	Sand, shell	Gently sloping bank of channel	50	Vegetation, rubbish	37.5
4. 25m and 50m north of channel bank	300 x 10 = 3000	60	1800	Sand, gravel	Natural exposures in vegetation, vehicle tracks	60	Vegetation, gravel	1080
5. Adjacent to Cormorant Road	390 x 5 = 1950	<5	97.5	Sand, gravel	Natural exposures in vegetation	90	Gravel	87.75
6. Approx. 50m north of channel bank	390 x 10 = 3900	10	390	Sand, gravel	Natural exposures in vegetation, unformed vehicle tracks	80	Vegetation, gravel	312
7. Adjacent to Cormorant Road	570 x 10 = 5700	<5	285	Sand, gravel	Natural exposures in vegetation	90	Vegetation	256.5

### Effective Cover (cont)

Transect Number	Transect Area (m <sup>2</sup> )	Average Exposure (%)	Area of Exposure (m <sup>2</sup> )	Exposure Surface	Origin of Exposure	Average Visibility (%)	Constraints to Visibility	Area Available for Detection (m <sup>2</sup> )
8. Approx. 25m north of channel bank	360 x 10 = 3600	<5	180	Sand, shell	Natural exposures in vegetation	50	Vegetation	90
9. Approx. 50m north of channel bank	360 x 5 = 1800	<5	90	Sand, shell	Natural exposures in vegetation	50	Vegetation	45

GHD Pty Ltd

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**Historical Archaeology Assessment,  
Proposed Extension of Shipping  
Channels, Port of Newcastle**

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August 2003

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## **APPENDICES**

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## 1.0 INTRODUCTION

GHD Pty Ltd (GHD) commissioned Umwelt (Australia) Pty Limited (Umwelt) to undertake a study and analysis of the historical archaeology of the banks and foreshores of the South Arm of the Hunter River from the Tourle Street Bridge easterly for a distance of approximately 3 kilometres, at Waratah, New South Wales ('the study area'). It is proposed to dredge the bottom of the study area without disturbance of the bank structure and to create a swing basin for shipping between approximately 800 metres and 1350 metres east of the Tourle Street Bridge (the development). Historical studies have suggested that the study area possesses no known elements or resources of historical heritage and that much of the present bank and foreshore structures have been either constructed as an incident to industrial expansion or substantially modified during the twentieth century.

This report documents the study and analysis of the historical archaeology. This report does not address the potential of the study area as a resource for Aboriginal cultural heritage, which is the subject of a separate report prepared by Umwelt.

### 1.1 OBJECTIVES OF THE STUDY

Historical material relating to the settlement and development of the study area is relatively diverse and episodic. This study integrates the results of investigation of the archaeological and historical records and the physical evidence of the study area. The principal objective of the study was to identify material cultural evidence that may be located on the study area or at some risk from direct or peripheral effects of the development.

Within the framework of this general objective, the study was undertaken on the basis that it may identify archaeological resources within, and provide insights into the development of, the study area and its occupational and social fabric that are not available from the historical record. In abstract, this study was approached upon the basis that archaeological interpretation of the study area might provide some definitive or representative information useful in the study of the archaeology and history of comparable locations relating to such themes as:

- the socio-economic development and use of land and resources for primary/secondary purposes during the late nineteenth and the twentieth centuries (the period);
- the commencement and evolution of industrial/commercial construction, method and fashion during the period;
- the recycling and/or adaptive re-use of land and buildings during and after the period; and
- in respect of all of the above, the different emphases and inferences that may attach to the historical phases of use/occupation/development of the study area.

Within this context, the study has been unable to conclude that any part of the study area possesses cultural significance or archaeological resources of value for future studies. This study concludes that the physical impact of the development will have no impact upon the heritage values of the locality or region (refer to **Section 5.2**).

### 1.2 LOCATION AND FEATURES OF THE STUDY AREA

The study area is located in and adjacent to the Hunter River at Mayfield North in the Newcastle metropolitan area, New South Wales. The study area is primarily located between the northern and southern banks of the South Arm with bank works on the northern and southern foreshores, from

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the Tourle Street Bridge for a distance of approximately 3 kilometres downstream. The north bank is accessible from Cormorant Drive, however, access to the south bank is limited, from Industrial Drive through private properties and only with the consent of property owners.

Other relevant information about the location of the study area is shown in **Table 1.1**.

**Table 1.1 - Location Data**

Topographic Map Sheet	9232-2-S Newcastle 9232-3-S Wallsend
Portions	Parts of the former 98, 99, 100, 100 <sup>A</sup> , 91, 92, 70 71 and 72
Parish	Newcastle
County	Northumberland
Local Government Area	Newcastle City

The regional location of the study area is shown on **Figure 1.1**.

### **1.3 METHODOLOGY AND REPORTING**

This study and analysis has been undertaken broadly within the framework of the *NSW Heritage Manual* of the Heritage Office and the Department of Urban Affairs and Planning, NSW. The sequential steps of the study have been as follows:

- the archaeological and historical records of the study area have been researched, with particular attention to dominant aspects of its post-contact occupation and land use. Research results are abstracted in **Sections 2** and **3** respectively;
- the spatial context of the study area has been determined by field survey, with particular attention for previously identified elements. The observations made during field survey were recorded by field notes and the results are presented in **Section 4**;
- based on the results of context studies and the statement of physical impact anticipated in the development, a formal statement of heritage impact is contained in **Section 5**; and
- the report identifies the issues and options for management of any hitherto unknown archaeological/heritage resource in the environment of its proposed future use, and makes recommendations for their management, in **Section 6**.

### **1.4 STUDY PERSONNEL**

Paul Rheinberger, Senior Archaeologist, Umwelt, undertook the research of the archaeological and spatial contexts and the review and research of the historical context for this assessment. He wrote this report.



## 2.0 ARCHAEOLOGICAL CONTEXT

The site of the former BHP Steelworks has been archaeologically surveyed and its context studied in considerable detail. The surrounding area was undoubtedly reconnoitred in the course of the heritage studies for the Newcastle City LEP (the LEP) and the Hunter REP (the REP). The LEP recorded no sites within the study area but the following sites and heritage resources in the study area locality

**Table 2.1 – Heritage Resources: The LEP Heritage Study**

Item	Address
First Mill building including columns	1-21, 29, 30-33 Industrial Drive, Mayfield North
AC Saltwater Pump House	Ingall Street, Mayfield North
Administration Building and gardens	51 Industrial Drive, Mayfield North
Administration Buildings No's. 2, 3, 4 and associated gardens	Industrial Drive, Mayfield North
Administration Building	Ingall Street, Mayfield North
Apprentice Training Centre	Ingall Street, Mayfield North
BOS Plant	Ingall Street, Mayfield North
Capital Shop and Reservoir	Industrial Drive, Mayfield North
Cycle Sheds and No. 2 Rod Mill	Ingall Street, Mayfield North
DC Substation	Ingall Street, Mayfield North
Delprat's Quarters	Ingall Street, Mayfield North
Master Mechanics Office	Ingall Street, Mayfield North
Mill Building and Stake Yard	12 Ingall Street, Mayfield North
Mill Building and Stake Yard	18 Ingall Street, Mayfield North
Old Conditioning Building	Ingall Street, Mayfield North
No. 1 Change House	Industrial Drive, Mayfield North
No. 3 Blast Furnace	Ingall Street, Mayfield North
No. 4 Blast Furnace and Stoves	Ingall Street, Mayfield North
No. 1 Bloom Mill and Rail Mill	Ingall Street, Mayfield North
No. 1 Blower House	Ingall Street, Mayfield North
No. 1 Rod Mill Building	Ingall Street, Mayfield North
Open Hearth Change House Building including No. 2 Open Hearth (Brick)	Ingall Street, Mayfield North
Original Timber Wharves	Ingall Street, Mayfield North (actually south bank of the South Arm channel)
Pattern Store	Ingall Street, Mayfield North
Powerhouse	Ingall Street, Mayfield North
Quality Control Laboratory	Ingall Street, Mayfield North
Remnant of No. 1 Blast Furnace	155 Ingall Street, Mayfield North
Simpson's Cottage	64 Industrial Drive, Mayfield North
Soaking Pits Building	Ingall Street, Mayfield North
Steel Foundry	Ingall Street, Mayfield North
Tool Room	Ingall Street, Mayfield North
Water Tower and associated Changehouse and related buildings – precinct	Industrial Drive, Mayfield North

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The REP recorded no sites and/or heritage resources in the study area locality.

Entries relevant to both of these resources contained in the NSW State Heritage Inventory are copied in **Appendix 1** of this report.

Research of the:

- Register of the National Estate (RNEDB) maintained by the Australian Heritage Commission indicated that the nearest recorded heritage item in that database was Ingall House at 61 Crebert Street, Mayfield, more than 1 kilometre from the study area.
- State Heritage Register and State Heritage Inventory maintained by the NSW Heritage Council, confirmed that there is no entry relevant to the study area or the locality contained in the State Heritage Register, while the State Heritage Inventory confirmed the listings of heritage resources contained in the LEP (see above) while confirming that the REP listed no items in the study area or the locality.
- Register of the National Trust (NSW) revealed that the only relevant listing in that database was Simpson's Cottage, referred to as being located in Bull Street, Mayfield, but described in the LEP as being located at 64 Industrial Drive, Mayfield North. The Register generally disclosed no heritage resources within or proximate to the study area that are not disclosed in the LEP and REP.

The marine archaeology of the locality of the study area appears not to have been previously studied in detail although, again, the surrounding area was undoubtedly reconnoitred in the course of the heritage studies for the LEP and the REP. For the purpose of reviewing the marine/maritime archaeological context of the study area, reference was made to:

- records previously extracted for the Hunter area from the Australian National Shipwreck Database (now inaccessible), formerly conducted by the Australian Institute for Marine Archaeology;
- the Maritime Heritage database maintained by the NSW Heritage Office;
- the 'Shipwrecks of Queensland and NSW, Australia' database maintained at [www.ion.com.au/~stevel/](http://www.ion.com.au/~stevel/); and
- the publication 'Wrecks on the New South Wales Coast' (Loney, 1992).

This review of known shipwrecks indicated that there are no known maritime/marine archaeological resources in or proximate to the study area other than as disclosed in the LEP (eg. the original timber wharves of the BHP Newcastle Steelworks).

### **3.0 HISTORICAL CONTEXT**

The historical research of the use, occupation and development of the study area has been limited specifically to those contexts that have a direct relationship to the archaeological study and evaluation of historic heritage of the study area.

The research of historical context has been based on reviews of:

- historical maps of the Parish Newcastle County Northumberland;
- the publication 'Wrecks on the New South Wales Coast', by Jack Loney;

- the publications 'Coal Mining in Newcastle', 'Manufacturing in Newcastle', by J W Turner;
- the publication 'A Future More Prosperous', by Christopher Jay;
- an unpublished document titled 'OneSteel Rod & Bar Mills & Industrial Park – Lot 222 Newcastle – Final Assessment Report of the Voluntary Investigation of 222 – Characterisation Studies from February 2000 to September 2002', kindly provided by OneSteel Market Mills (OneSteel);
- a series of 25 archival photographs, kindly provided by OneSteel Market Mills;
- the unpublished report 'Archaeological Management Plan: BHP Steelworks Site, Newcastle, NSW', July 2001; and
- archival material provided by the archivist/librarian, BHP Billiton.

The review of marine historical resources, reinforced by observations of the NSW Heritage Office (*D Nutley, pers comm*) indicate that there is no historical record of any vessel being lost within, or proximate to, the study area. The only maritime resource indicated to be proximate at the level of river bank is the residue, if any, of the original timber wharves of the BHP Newcastle Steelworks (*Umwelt 2001*). This residue, if any, is located outside the study area on the southern bank at the South Arm and east of the study area.

The history of land development proximate to the study area needs to be preceded by a brief description of the landform itself. The original conformation of the area involved a broad expanse of the South Arm of the Hunter River between the mainland and Dempsey Island and Ash Island. For the greater part of the length of the study area, this expanse of river was intersected by the eastern sector of Spit Island. This study has concerned itself solely with the northern frontage to the river of the eastern sector of Spit Island and the southern exposure to the river of the southwestern corner of Dempsey Island and the southeastern corner of Ash Island. This limitation has been predicated by reclamation works undertaken by the BHP Company Limited during the second half of the twentieth century, which is described below. The original conformation of the South Arm of the Hunter River is depicted in **Figure 3.1**, a detail extracted from the second edition of the map of Parish Newcastle, County Northumberland of 1 January 1912.

As appears from **Figure 3.1**, the land in the location of the projected swing basin was originally granted:

- along the northern shoreline of Spit Island, to:
  - W T Brain of Portion 98, 18a.2r. granted 1 May 1849, Portion 99, 21a.2r. granted 1 June 1854 and Portion 100, 17a. granted 1 March 1852; and
  - Reserve from grant generally, the easterly tip of Spit Island, initially identified as Portion 100<sup>A</sup> and subsequently renumbered Portion 23<sup>A</sup>, initially indicated as containing 9a. but subsequently (after the preparation of a new litho and probably a significant mud accretion) containing 13a.1r.;
- on the southern shoreline of the former Ash Island and Dempsey Island (now consolidated into Kooragang Island) to:
  - R Fisher of Portion 91, 24a.2r. on 1 March 1852;
  - M Nowlan of Portion 92, 33a. 2r.31p. on 1 March 1852;
  - G K Mann of Portions 70, 71 and 72, respectively 20a., 21a.2r. and 24a.3r. all granted on 28 February 1845.



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There is no evidence to suggest that these portions were ever used for a purpose other than rural/grazing and, in its original configuration, the land was low-lying on mud flats susceptible to flooding and subject to tidal influence. Easterly of the location of the projected swing basin, on the southern side of the South Arm of the Hunter River, the bank is almost entirely artificial, constructed in circumstances described below.

The land, having a frontage to the South Arm of the river on the opposite side, is contained within Portion 73, 20a granted to J Baker; Portion 74, 26a.2r to M Richardson; Portion 49, 10a to J Baker; Portion 48, 22a to J McGinn; and Portion 47, 27a F W Lodge; all the parcels therein been granted between 1845 and 1854. Again, there is no evidence to suggest that these parcels were ever used for a purpose other than for rural/grazing and like the land to the west, initial landform was of a low-lying mud island subject to flooding and to tidal influence. In particular, there is no evidence of previous mining or industry on Ash Island or Dempsey Island, or Spit Island otherwise than as described below.

The first industrial development in the general area appears to have been the development of a mine and surface facilities on Portion 83 of Parish, in or about 1862, by the Waratah Coal Company. In the meantime, the Wallaroo Mining and Smelting Company had been formed in 1859 to process copper from the company's mine at Wallaroo, near Adelaide. This company opened its smelter in 1866 on land leased from the Waratah Coal Company. These industrial developments appear to have been the only significant developments on the land in the locality prior to the aggregation of both into the development of the BHP Newcastle Steelworks from 1912. To this time, all were in the locality of, but not within or abutting, the study area.

Further developments in and about the study area thereafter are totally involved with the expansion of the BHP Steelworks and its peripheral effects. Prior to 1950, the BHP Company Limited had planned the westward extension of the existing plant, involving an ambitious plan of reclamation and had acquired the title to land on Spit Island. In 1950, the NSW Parliament enacted the BHP Company Limited (Reclamation & Exchange) Agreement Ratification Act (the Act) which authorised:

- the acquisition by the Company of 27a.3r on the northern side of part of the frontage of Portion 100 and Portion 100<sup>A</sup> (the Reserve) on Spit Island to the river and north of the lien from the tip of Spit Island to existing bank of Platts Channel;
- the acquisition by the Company of 193a. contained within Platts Channel;

all for the purpose of reclamation and reconstruction to a height of between three and four metres above river high tide level; and

- the excision from Portions 98, 99 and 100 of 11a.3r.22¼p. for excavation and incorporation in a newly aligned South Arm channel.

The impact of the reclamation program is graphically demonstrated by a comparison of the line of the South Arm channel detailed in **Figure 3.1** and **Figure 3.2**. The latter comprises a detail from the map of Parish Newcastle, County Northumberland, Edition 8, of 1 January 1959. In this map, the projected form of the southern bank of the South Arm shows in the form of a regular, constructed partly straight and (westerly) a gently curved line. In relation to this map we draw attention to interpolation notes:

- No.218, the text of which is 'surrendered under the BHP Company Limited (Reclamation and Exchange) Agreement Ratification Act 1950' . . . ; and
- No.229, the text of which reads 'Portions subject to the BHP Company Limited (Reclamation and Exchange) Agreement Ratification Act 1950'.

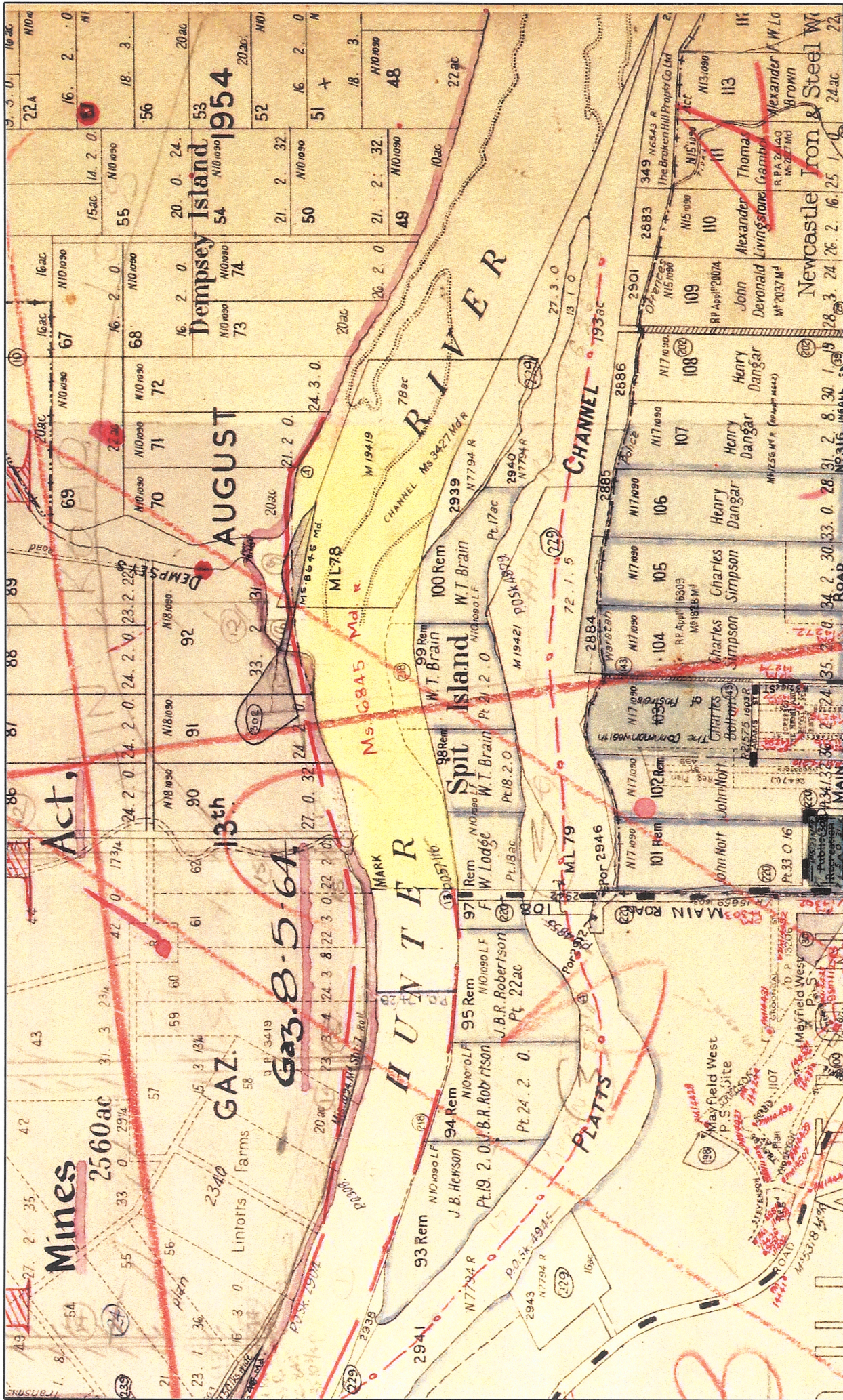


FIGURE 3.2

The effect of Reclamations and Exchanges pursuant to the Act

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We also draw attention in this map to interpolation note No.220 which records the alignment of Tourle Street as being a dedication pursuant to the Act. The Tourle Street Bridge was constructed from about 1962.

In consequence of the various reclamations and exchanges undertaken pursuant to the Act, Platts Channel was infilled with steelworks waste material and built up to a height between approximately three and four metres above high water level. The residue of Spit Island after excision was completely covered by the same material to an equivalent height and the area easterly of the northwestern sector of Portion 100 was reclaimed in a similar manner to Platts Channel, having the effect of extending the northern frontage, of the mainland to Platts Channel, across artificial ground to a reconstructed, stable high bank with a regularly graded frontage to the South Arm of the Hunter River.

The original land and river form of the area is illustrated in aerial photographs dated 1946 and 1947, attached as **Figures 3.3** and **3.4**. This photograph has been provided from BHP archives and, by a line denoting a proposed bank and light hatching, can be seen a projected scheme of reclamation that included the excision of the northernmost aspect of Spit Island. **Figure 3.4** is an oblique aerial photograph exposed from a point west of Spit Island and showing the eastern elevation of Ash Island, across Dempsey and Moscheto Islands and Spit Island, to Stockton Bight, with the mainland shoreline at photograph right and clearly illustrating the position of the BHP Newcastle Steelworks. The photograph tends to emphasise the undeveloped nature of both sides of the South Arm of the Hunter River in the locality of the study area, by contrast with the heavy industrial development immediately easterly of the study area on the southern bank. The photograph also tends to indicate the relatively limited area of higher ground on Spit Island.

The reclamation program undertaken by the BHP Company Limited was commenced in 1950. The first stage appears to have been the construction of a dyke or seawall along the proposed bank alignment, impounding the eastern and western openings of Platts Channel, while concurrently destroying the landform of those parts of Portions 98, 99 and 100 proposed to be excised. After work had been underway for a relatively short time in 1950, the configuration of the channel was as shown on the photograph comprising **Figure 3.5**. Taken from a point above and adjacent to the blast furnace area of the BHP Newcastle Steelworks, the figure shows the construction of the dyke/seawall across the eastern and western openings of Platts Channel and across the projected shoreline frontage north of the eastern end of Spit Island. The photograph emphasises the extent of artificial construction of the present southern shoreline of the South Arm of the Hunter River.

Approximately 11 years later, the reclamation program had been substantially completed and the uncomplicated line of the southern shore of the South Arm is clearly demonstrated in **Figure 3.6**. Some ponding remains evident within the reclaimed area and the western end of Platts Channel remains to be reclaimed. In the meantime, a substantial building can be seen constructed on reclaimed land in the centre foreground. This building housed the Rod Mill, construction of which appears to have commenced in late 1961. The photograph comprising this figure is suggested to have been taken in late 1961, however, this seems unlikely having regard to other photographs in the series relating to the construction of the Rod Mill.

As an illustration of the size and composition of fill material used in the reclamation, **Figure 3.7** comprises a photograph taken on 5 December 1962. The photograph depicts fill of steelworks slag and includes one large boulder. Based on the one foot marker placed beside the boulder, it is estimated that this boulder was over two metres in length and one metre in width, probably between 600 and 750 ml thick.

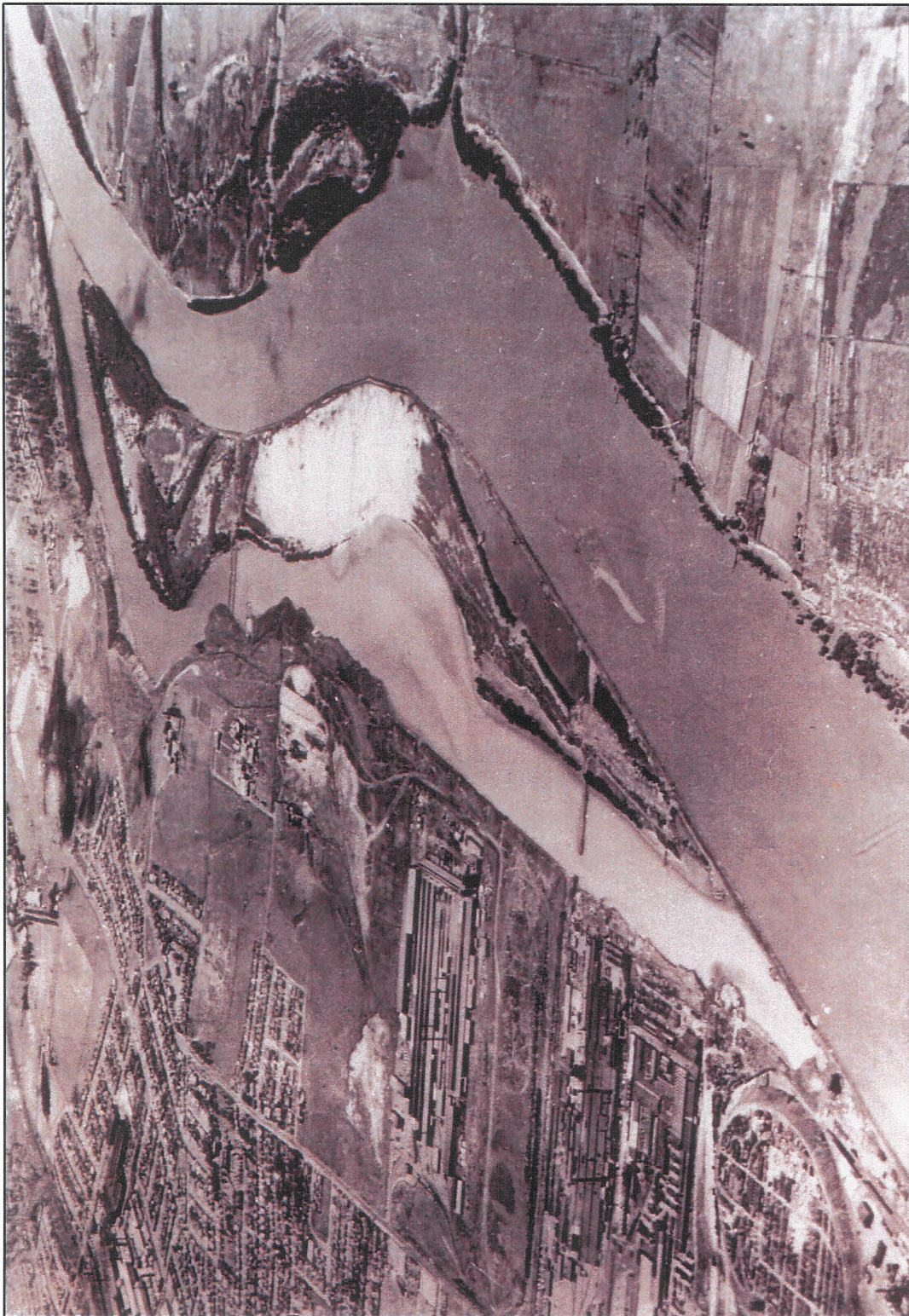
During the period 1950-2000 the only other substantial building that appears to have been erected upon reclaimed land in proximity to the study area is the No.2 Bar Mill located due west of the Rod Mill, which can be clearly identified in **Figure 3.6**.





Oblique aerial photograph from west across the eastern end of Ash Island and across Spit, Dempsey and Moscheto Islands to Stockton Bight. The lack of development and signs of former development are demonstrated.

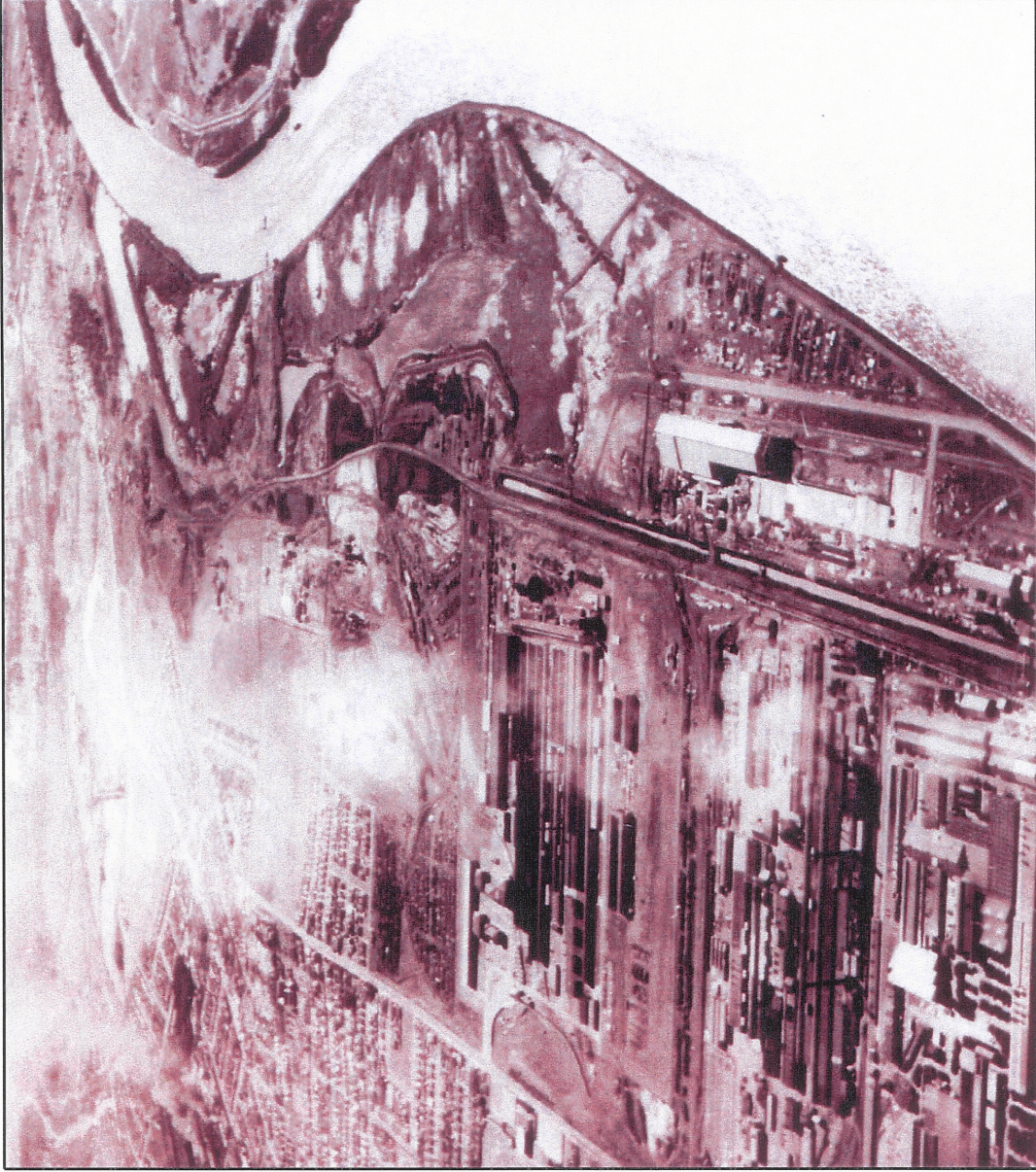
**FIGURE 3.4**  
Aerial Photo showing Ash, Dempsey  
Spit and Moscheto Islands



The impending Platts Channel and the reclamation area north of Spit Island can be seen – Dated 1950

**FIGURE 3.5**

Aerial looking west from a point adjacent to the BHP Newcastle Steelworks

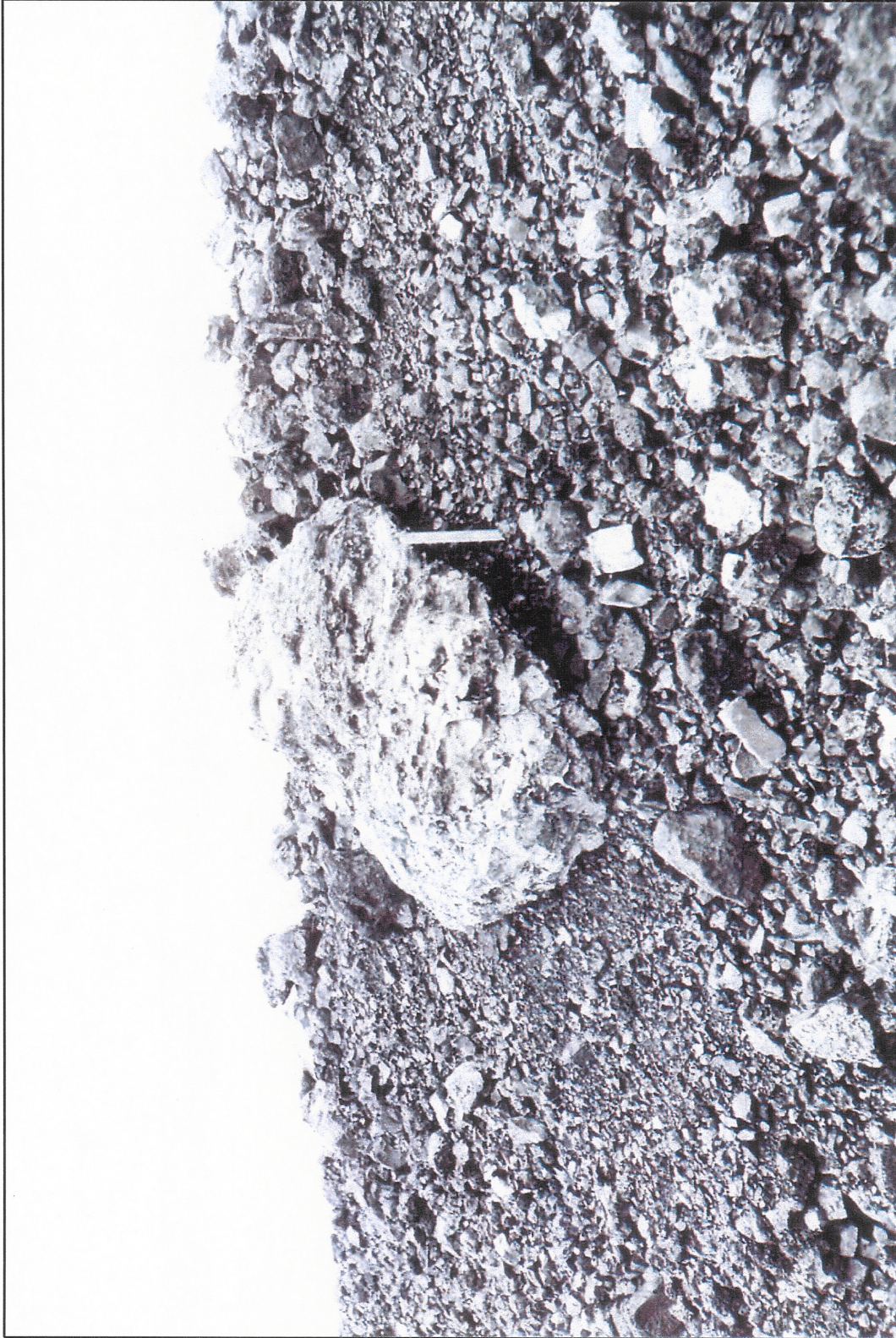


In this view, comparable to Figure 3.5, the river frontage has been reclaimed and the reclamation of Platts Channel works complete. One substantial building stands on reclaimed land - Dated 1961

**FIGURE 3.6**  
Aerial looking west across Steelworks  
and Reclamation Area

A4 Not to Scale

Ref No.:R01\_V1/1661\_015.dgn



Coarse steelmaking material (slag and skulls).  
The marker beside the large boulder is a 1-foot ruler. Dated 5/12/62.

**FIGURE 3.7**

A view of a representative example  
of reclamation material

A4 Not to Scale

Ref No.:R01\_V1/1661\_016.dgn



The Rod Mill building can be identified and, west of that building, the No.2 Bar Mill

**FIGURE 3.8**  
Concurrent aerial view of the southern part of the Study Area

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The footprint of the projected swing basin is located on land now described as Lot 222 in DP 1013964 and the only development or use, to which the potentially affected area has been put, is summarised as follows:

- 1950-1970: the reclamation of Platts Channel, Spit Island and some offshore reclamation north of the eastern aspect of Spit Island was undertaken using steelmaking slag, ashes from a variety of sources, coal washery slurry, finishing and rolling mill wastes and coke oven by-products. Two tar pits were located in the swing basin footprint and one to the south of this area. The pits are said to have been used for disposal of tar, oil and grease.
- between the early 1970s and the late 1980s: the No. 5 Scrap Yard was located north of the Bar Mill, east of the current Steelstone lease. The Scrap Yard was used to store a variety of scrap materials including slag and scrap metal.
- during the 1990s: Steelstone commenced operations, involving extracting metallic residues from slag for recycling and the preparation of residual slag for road base and clean fill. The Steelstone operations were at this time located easterly of its present lease area, to which it moved shortly before the closure of the BHP Newcastle Steelworks.

(OneSteel nd; CH2MHill 2002)

The present conformation of that part of the study area related to the potential of the projected swing basin is depicted in **Figure 3.8**, an aerial photograph exposed on 25 April 2001, on which the location of the Rod Mill and the No. 2 Bar Mill can be clearly identified.

## 4.0 SPATIAL CONTEXT

### 4.1 METHODOLOGY

The assessment of spatial context results from observations made in the course of a physical archaeological surface survey of the study area.

The northern bank of the study area was readily accessible from Cormorant Road, Kooragang Island. The bank was clearly delineated as a shallow, sloping shelf and virtually the whole of the length of the study area was lined by a substantial growth of mangroves immediately below the high water mark.

The southern bank of study area was not accessible, although the vertical exposure of this bank was readily visible from the northern side.

Otherwise, the survey was undertaken of the study area, with a particular emphasis on the limited land-based aspect of the projected development. In general, the survey sought to identify residual material evidence of any former operation and occupation of the study area and of any marine residue and, if any such material evidence was found, to make a preliminary record and interpretation of such material.

Based on the review of archaeological and historical context, it was not anticipated that significant material evidence would be located in the course of survey. Nonetheless, in the course of all field investigations, attention was directed to identifying:

- vessels/wreckage, structures and/or the remains of structures or demolition material;
- signs of ground disturbance that might be associated with non-indigenous settlement and/or industrial activity, such as site levelling for buildings or infrastructure and the like;

- 
- artefacts or the indication of the possible presence of artefacts that might have an association with the former use(s) or application(s) of the study area;
  - non-building structural modifications on the ground, such as, fencing and yards or their residue; and
  - in respect of all of these investigations, in respect of any material evidence that might be located, to prepare a preliminary site plan incorporating the limits and features of the study area and to make a preliminary photographic record of the salient features of such material evidence.

## 4.2 RESULT OF FIELD SURVEY

Surface survey of the study area identified no resources or elements associated with former historical activities at or on the study area. This result was not unexpected.

Although there is no surface evidence to this effect, the possibility cannot be discounted that the material evidence of an unrecorded shipwreck exists within the South Arm channel and in the study area. Acknowledgement of this possibility gives rise to the only substantive recommendation made in **Section 6.0**.

In the absence of material evidence, an address to archaeological zoning, the concept and assessment of significance is unwarranted and there is no subject for consideration of condition and integrity.

## 5.0 CONDITION AND INTEGRITY

This section addresses matters that combine to allow a formal *Statement of Heritage Impact* to be appropriately validated. *Physical Impact* assesses the nature and extent to which the resource will be modified as the result of the projected development.

### 5.1 PHYSICAL IMPACT

The implementation of the development in the study area presently projected will result in:

- the allocation on the bank(s) of the South Arm of an area for the establishment, assembly and management of dredging equipment and the provision of surface facilities;
- the extraction of material from the river bottom by a variety of methods including suction, cutter-suction and land based excavation. It is not intended that excavation of the river bottom include substantial damage to banks other than in the area of the swing basin;
- the excavation by conventional excavation plant of reclamation fill, and the underlying natural sediment formerly comprising the surface and substrate of Spit Island, to a level consistent with adjacent dredging methodology;
- establishment of a temporary stockpile of spoil within the BHP Closure Area, at a location that has been previously investigated for heritage values and which has been subsequently cleared;

- 
- transport of clean spoil, suitable for recycling as fill, to appropriate disposal areas and material otherwise unsuitable for use as fill at approved disposal/dump locations; and
  - stabilisation of the river banks by suitable batters, following dredging operations.

The total area to be affected by physical disturbance as a result of the development is indicated schematically in **Figure 5.1**, an aerial photograph upon which has been imposed, in yellow, a schematic indication of the location of the projected swing basin and lines of batter of the finished dredged channel in the South Arm. **Figure 5.1** is in a form for ready comparison with aerial photography figures in **Section 3**, particularly **Figure 3.8**.

## 5.2 STATEMENT OF HERITAGE IMPACT

Having regard to the study and assessment of the context of the study area and the practical impact of the proposed development, although it appears that there may be a substantial impact it is unlikely that there will be any impact on the heritage values of the locality as the result of the development:

- the development is acknowledged to impact on the landscape of the study area both in the area of the river bottom and by way of stabilisation of banks and to a limited extent in the present (largely artificial) surface in the swing basin area. Studies undertaken in connection with this report indicate that there is no known potential for heritage resources to be located within the study area and that it is unlikely that hitherto unknown heritage resources will be disturbed; and
- on the basis of the above, the development is formally assessed as having no impact on any known heritage resources and is considered to pose no threat to the heritage values of the locality or region.

## 6.0 RECOMMENDATIONS

This section defines the issues for management of the study area in the light of material contained in **Sections 2, 3, 4 and 5** of this report, and makes recommendations concerning the implementation of the development.

### 6.1 ISSUES AND OPTIONS FOR SITE MANAGEMENT

Ideally, culturally significant archaeological resources might be conserved *in situ* within the framework of the Burra Charter. Such a course is frequently impossible or impractical and questions are posed by the conflicting claims of cultural heritage on the one hand and progress and development on the other. Relevant to the concurrent questions of site conservation and site management/usage are the following matters:

- *heritage legislation*, the major implications of which are summarised in **Table 6.1**. In particular this summary addresses the implications of the *Heritage Act 1977* (NSW) and the *Environmental Planning and Assessment Act 1979* (NSW);



**FIGURE 5.1**  
Schematic representation of  
Development Impact Area

**Table 6.1 - A Summary of Statutory Provisions (NSW)**

<p>The <i>Heritage Act</i>, 1977 (NSW)</p>	<p>provides for the protection of historic heritage and provides the process and criteria for listing of heritage deposits and/or relics that are of State significance on the state Heritage Register and those that are of Local significance on the State Heritage Inventory. Archaeological sensitivity and the potential for heritage value may be indicated by historical research and/or site-based archaeological study. Where historical research and/or archaeological study indicates sensitivity, the discovery of relics is highly likely if the ground surface is disturbed. The Heritage Act defines a relic as:</p> <p style="padding-left: 40px;"><i>Any deposit, object or material evidence -</i></p> <p style="padding-left: 40px;">(a) <i>which relates to the settlement of the area that comprises NSW, not being Aboriginal settlements; and</i></p> <p style="padding-left: 40px;">(b) <i>which is 50 or more years old.</i></p> <p>The Act further provides statutory protection from disturbance/destruction of sites and relics in a range of descriptions (ss.24-34, 35A-55B, 130, 136-7, 139) and for their registration of listing (ss.26(2)(b), 35A,36,37, 44). In particular, it provides that no disturbance or excavation may proceed for the discovery of relics except with an Excavation Permit and that an excavation permit is required if a relic is:</p> <ul style="list-style-type: none"> <li>• listed on the State Heritage Register (s60)</li> <li>• not listed on the State Heritage Register (s. 140).</li> </ul>
<p>The <i>Environmental Planning and Assessment Act</i> 1979 (NSW)...</p>	<p>contains similar protective measures to those contained in the <i>Heritage Act</i>. The act also provides for sites to be in Local and Regional Environmental Plans, as sites in development control plans or subject to development controls and/or as subject to planning controls or additional conservation provisions (ss.24-72, 76).</p>

- *the nature and potential impact* of the proposed re-development of the study area, that is to anticipate that:
  - alteration/penetration of the present ground surface will disturb and/or modify and/or expose the residual sub-surface context, possibly containing material evidence;
  - peripheral activities (eg: movement of vehicles and plant on the site) have the potential to disturb, damage or destroy residual material evidence;
  - construction will result in penetration of the surface at predictable locations;
- the formal *Statement of Heritage Impact*, which is summarised as:
  - the development is acknowledged to impact on the landscape of the study but there is no known potential for heritage resources to be located within the study area and that it is unlikely that hitherto unknown heritage resources will be disturbed;
  - it is considered that the development will have no impact on the heritage values of the study area, its locality or the region.

The options for conservation management that are theoretically available to address these issues range from taking no conservation management action to preserving all elements of archaeological resource *in situ*:

**Option 1:** *Taking no conservation management action would (theoretically) allow development to proceed unobstructed although there is some limited potential that progress of the development would result in the destruction or irretrievable modification of a hitherto unknown archaeological/heritage resource. In that the archaeological resource is non-renewable, such an option might result in the loss*

---

*not only of the archaeological resource but also of the opportunity of recording and interpreting the resource and thereby preserving:*

- *for future study, an opportunity to incorporate data about the resource into further studies;*
- *the present and future, a tangible account of the heritage values of the study area.*

**In present circumstances, this option is considered an inappropriate management action.**

**Option 2:** *Modification of projected works to preserve all elements of the archaeological resource* would or might, on the other hand, while restricting or preventing any modification or any hitherto unknown resource exposed by the development, thereby secure the archaeology at the expense of the projected re-development, in an environment where such resource may not be properly investigated, evaluated, recorded, comprehended and/or and communicated.

**In present circumstances, this option is considered an inappropriate conservation management action.**

**Option 3:** *Alternative courses* lie in:

1. *varying (where necessary) projected or future development* to minimise impact on the archaeological resource, and/or
2. *further investigation of the river bottom by electronic means* without excavation, and interpretation of results to isolate and identify potential archaeological material that may have been hitherto unknown, and/or
3. *archaeological investigation and recording* of any potential resource exposed as a result of Alternative 2. above, or otherwise in the course of implementation of the development, that has the potential to be disturbed, damaged or destroyed by development, and/or
4. *archaeological monitoring* of the development process, limited to those areas in the vicinity of material that has been exposed as the result of Alternative 2 above, or otherwise in the course of implementation of the development, in circumstances where monitoring is considered to be warranted as the result of investigations undertaken pursuant to Alternative 3. above.

*or any appropriate combination of the above.*

The result of such alternative courses would be that either elements of the archaeological resource would be conserved or that those modified or destroyed would be fully and appropriately recorded and the nett loss in heritage values would be minimised.

**In the present circumstances, the combination of the second, third and fourth components of this option is considered an appropriate conservation management action.**

## **6.2 RECOMMENDATIONS**

These recommendations are made on the basis of:

- the synthesis of archaeological, historical and spatial contexts of the study area;
- appreciation of the actual and heritage impacts of the proposed development; and

- 
- acknowledgement of the issues and options for management of the resource.

**It is recommended that:**

1. Prior to the commencement of any work having the potential to disturb the bottom of the South Arm of the Hunter River, that an electronic examination by sonar/side-scan be undertaken and the results of such investigation be interpreted to determine whether there is evidence of hitherto unknown archaeological material with heritage potential located underwater.
2. In the event that archaeological material evidence is identified as the result of work undertaken as the result of **Recommendation 1** or in the course of the implementation of the development, all work having the capacity to disturb, damage or destroy the potential material evidence will cease in its location, subject to acknowledgement of and compliance with **Recommendation 3**.
3. In general, in connection with the development, the attention of the developer and all contractors, sub-contractors and employees is directed to the provisions of the *Heritage Act 1977* (NSW) and in particular to:
  - (a) the definition of relic under that Act;
  - (b) the provisions of sections 24-34, 35A-59, 130, 136-7 139 and 146 of that Act;
  - (c) the requirement for, and the conditions that may attach to, a grant of an Excavation Permit under s60 of the Act in respect of a site that is registered on the State Heritage Register; and/or s140 of the Act in respect of a site that is not so registered;
  - (d) the basic requirements that if:
    - [i.] a relic is suspected, or there are reasonable grounds to suspect a relic in ground, that is likely to be disturbed damaged or destroyed by excavation;
    - [ii.] any relic is discovered in the course of excavation that will be disturbed, damaged or destroyed by further excavation;the developer must notify the Heritage Office of New South Wales or its delegate and suspend work that might have the effect of disturbing, damaging or destroying such relic until the requirements of Heritage Office have been satisfied.
  - (e) the base level of requirements by the NSW Heritage Office in the event of discovery or exposure of material evidence (relic) may be anticipated as the application for and issue of an Excavation Permit as above, subject to archival recording of any such relic in terms of the criteria detailed in the NSW Heritage Manual and monitoring of its disturbance.
4. Otherwise than as above, on the grounds of the historical archaeology of the study area, there appears to be no reason for further constraint or modification of the proposed development.

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*Guidelines for Photographic Recording ...*  
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## **APPENDIX 1**

# **State Heritage Inventory Search Results**



## Listing Heritage Items

### › State Heritage Inventory Search Results

#### Tool Room

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

Name of Item: Tool Room

Primary Address: Ingall Street, Mayfield North, NSW 2304

Address:

Local Govt. Area: Newcastle City

Area:

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

Assessment Criteria: Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03-Jul 92	083

#### References

None

#### Source of information for this entry

Name: Statutory Listings from NSW Gazette

Email: [watters@heritage.nsw.gov.au](mailto:watters@heritage.nsw.gov.au)

Web Page: [www.heritage.nsw.gov.au](http://www.heritage.nsw.gov.au)

#### Administration

Database Number: 11529

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## Listing Heritage Items

### State Heritage Inventory Search Results

## Steel Foundary

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

Name of Item: Steel Foundary

Primary Address: Ingall Street, Mayfield North, NSW 2304

Address:

Local Govt. Area: Newcastle City

Area:

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

Assessment Criteria: Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

Name: Statutory Listings from NSW Gazette

Email: watters@heritage.nsw.gov.au

Web Page: www.heritage.nsw.gov.au

### Administration

Database Number: 11554

Number:

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## Soaking Pits Building

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Soaking Pits Building

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11542

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## Listing Heritage Items

### ► State Heritage Inventory Search Results

## Simpsons Cottage

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Simpsons Cottage  
**Primary Address:** 64 Industrial Drive, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
64 Industrial Drive	Mayfield North	Newcastle City		
Bull Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11504

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## Listing Heritage Items

### State Heritage Inventory Search Results

#### Remnant No. 1 Blast Furnace

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

Name of Item: Remnant No. 1 Blast Furnace

Primary Address: 155 Ingall Street, Mayfield North, NSW 2304

Address:

Local Govt. Newcastle City

Area:

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
155 Ingall Street	Mayfield North	Newcastle City		

Assessment Criteria: Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

Name: Statutory Listings from NSW Gazette

Email: watters@heritage.nsw.gov.au

Web Page: www.heritage.nsw.gov.au

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## Listing Heritage Items

### State Heritage Inventory Search Results

## Quality Control Laboratory

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Quality Control Laboratory  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## Powerhouse

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Powerhouse

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11544

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## Listing Heritage Items

### State Heritage Inventory Search Results

### Pattern Store

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** Pattern Store

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

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## Listing Heritage Items

### State Heritage Inventory Search Results

### Original Timber Wharves

Note: There are incomplete details for a number of Items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** Original Timber Wharves

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11549

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## Open Hearth Change House Building incl No2 Open Hearth

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Open Hearth Change House Building incl No2 Open Hearth Brick

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
<i>Local Environmental Plan</i>		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11510

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## Listing Heritage Items

### State Heritage Inventory Search Results

#### No.1 Rod Mill Building

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** No.1 Rod Mill Building  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11551

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## Listing Heritage Items

### State Heritage Inventory Search Results

#### No.1 Blower House

Note: There are incomplete details for a number of Items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these Items as resources become available.

#### Item

**Name of Item:** No.1 Blower House  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11512

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## Listing Heritage Items

### › State Heritage Inventory Search Results

#### No.1 Bloom & Rail Mill

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** No.1 Bloom & Rail Mill  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11555

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## Listing Heritage Items

### State Heritage Inventory Search Results

#### No. 4 Blast Furnace & Stoves

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** No. 4 Blast Furnace & Stoves  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11537

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## No 3 Blast Furnace

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** No 3 Blast Furnace

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11546

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## No 1 Change House

Note: There are incomplete details for a number of Items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these Items as resources become available.

### Item

**Name of Item:** No 1 Change House  
**Primary Address:** Industrial Drive, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Industrial Drive	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11507

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## Mould Conditioning Building

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Mould Conditioning Building  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11556

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## Mill Building & Stack Yard

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Mill Building & Stack Yard

**Primary Address:** 12 Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
12 Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11552

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## Listing Heritage Items

### State Heritage Inventory Search Results

### Master Mechanics Office

Note: There are incomplete details for a number of Items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these Items as resources become available.

#### Item

**Name of Item:** Master Mechanics Office

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11536

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## Listing Heritage Items

### › State Heritage Inventory Search Results

### Delprat's Quaters

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** Delprat's Quaters  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11547

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## Listing Heritage Items

### › State Heritage Inventory Search Results

### DC Substation

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** DC Substation

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11550

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## Cycle Sheds & No. 2 Rod Mill

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Cycle Sheds & No. 2 Rod Mill  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
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### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11535

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## Listing Heritage Items

### ► State Heritage Inventory Search Results

## Carpenters Shop & Reservoir

Note: There are incomplete details for a number of Items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Carpenters Shop & Reservoir  
**Primary Address:** Industrial Drive, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Industrial Drive	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11515

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## Listing Heritage Items

### State Heritage Inventory Search Results

### BOS Plant

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** BOS Plant

**Primary Address:** Ingall Street, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11539

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## Listing Heritage Items

### ► State Heritage Inventory Search Results

## Apprentice Training Centre

Note: There are incomplete details for a number of Items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these Items as resources become available.

### Item

**Name of Item:** Apprentice Training Centre  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11543

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## Listing Heritage Items

### › State Heritage Inventory Search Results

## Administration Building

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** Administration Building  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11548

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## Listing Heritage Items

### ► State Heritage Inventory Search Results

### Admin Buildings 2,3,4 & associated garden

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** Admin Buildings 2,3,4 & associated garden

**Primary Address:** Industrial Drive, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Industrial Drive	Mayfield North	Newcastle City		

**Assessment Criteria:** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11508

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## Listing Heritage Items

### State Heritage Inventory Search Results

### Admin Building & gardens

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** Admin Building & gardens  
**Primary Address:** 51 Industrial Drive, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

#### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
51 Industrial Drive	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11506

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## Listing Heritage Items

### State Heritage Inventory Search Results

## AC Saltwater Pumphouse

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

### Item

**Name of Item:** AC Saltwater Pumphouse  
**Primary Address:** Ingall Street, Mayfield North, NSW 2304  
**Local Govt. Area:** Newcastle City

### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
-----------------	-------------------	----------------	-----------------	-------------------

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Ingall Street	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette  
**Email:** watters@heritage.nsw.gov.au  
**Web Page:** www.heritage.nsw.gov.au

### Administration

**Database Number:** 11545

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## Listing Heritage Items

### State Heritage Inventory Search Results

#### 1st Mill Building Incl columns

Note: There are incomplete details for a number of items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these items as resources become available.

#### Item

**Name of Item:** 1st Mill Building Incl columns

**Primary Address:** 1-21,29 30,3 Industrial Drive, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

#### Property Description:

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
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#### All Addresses

Street Address	Suburb/Town	LGA	Parish	Coun
1-21,29 30,3 Industrial Drive	Mayfield North	Newcastle City		

**Assessment Criteria** Items are assessed against the **State Heritage Register (SHR) Criteria** to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

#### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

#### References

None

#### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** watters@heritage.nsw.gov.au

**Web Page:** www.heritage.nsw.gov.au

#### Administration

**Database Number:** 11582

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House and Picket fence	72 Elizabeth Street	Mayfield	Newcastle City	LGI
House and Picket fence	41 Elizabeth Street	Mayfield	Newcastle City	GA
Ingall House	61 Crebert Street	Mayfield	Newcastle City	GA
Ingall House group	47,51 Crebert Street	Mayfield	Newcastle City	GA
Master Mechanics Office	Ingall Street	Mayfield North	Newcastle City	GA
Mill Building & Stack Yard	12 Ingall Street	Mayfield North	Newcastle City	GA
Mill Building & Stack Yard	18 Ingall Street	Mayfield North	Newcastle City	GA
Mould Conditioning Building	Ingall Street	Mayfield North	Newcastle City	GA
No 1 Change House	Industrial Drive	Mayfield North	Newcastle City	GA
No 3 Blast Furnace	Ingall Street	Mayfield North	Newcastle City	GA
No. 4 Blast Furnace & Stoves	Ingall Street	Mayfield North	Newcastle City	GA
No.1 Bloom & Rail Mill	Ingall Street	Mayfield North	Newcastle City	GA
No.1 Blower House	Ingall Street	Mayfield North	Newcastle City	GA
No.1 Rod Mill Building	Ingall Street	Mayfield North	Newcastle City	GA
Open Hearth Change House Building Incl No2 Open Hearth Brick	Ingall Street	Mayfield North	Newcastle City	GA
Original Timber Wharves	Ingall Street	Mayfield North	Newcastle City	GA
Pattern Store	Ingall Street	Mayfield North	Newcastle City	GA
Powerhouse	Ingall Street	Mayfield North	Newcastle City	GA
Quality Control Laboratory	Ingall Street	Mayfield North	Newcastle City	GA
Redemptorist Monastery	68 Woodstock Street	Mayfield	Newcastle City	GA
Remnant No. 1 Blast Furnace	155 Ingall Street	Mayfield North	Newcastle City	GA
Simpsons Cottage	64 Industrial Drive	Mayfield North	Newcastle City	GA
Soaking Pits Building	Ingall Street	Mayfield North	Newcastle City	GA
Steel Foundary	Ingall Street	Mayfield North	Newcastle City	GA
Tool Room	Ingall Street	Mayfield North	Newcastle City	GA
Water Tower & associated Change House etc.	Industrial Drive	Mayfield North	Newcastle City	GA

There were 39 records in this section matching your search criteria.

There was a total of 39 records matching your search criteria.

**Key:**

LGA = Local Government Area  
GAZ = NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government Agency.

**Note: The Heritage Office seeks to keep the State Heritage Inventory (SHI) up to date, however listings in Local and Regional Environmental Plans (LEPs and REPs) may not yet be included with the relevant Local Council or Shire for the most recent listings.**



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## Listing Heritage Items

### ► State Heritage Inventory Search Results

### Statutory Listed Items

Information and items listed in the State Heritage Inventory come from a number of sources. This means several entries for the same heritage item in the database. For clarity, the search results have been divided into sections.

- The first section contains items listed on the State Heritage Register, covered by an Interim Heritage Order under section 130 of the NSW Heritage Act. This information is provided by the NSW Heritage Office.
- The second section contains items listed by Local Councils & Shires and State Government Agencies. These items also contain additional information on some of the items listed in the first section.

#### Section 1. Items listed under the NSW Heritage Act.

The search results can be resorted by clicking on the (sort) option at the top of each column.

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	State (sort)
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There were no records in this section matching your search criteria.

#### Section 2. Items listed by Local Government and State agencies.

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Item ID (sort)
1st Mill Building Incl columns	1-21,29 30,3 Industrial Drive	Mayfield North	Newcastle City	GA
AC Saltwater Pumphouse	Ingall Street	Mayfield North	Newcastle City	GA
Admin Building & gardens	51 Industrial Drive	Mayfield North	Newcastle City	GA
Admin Buildings 2,3,4 & associated garden	Industrial Drive	Mayfield North	Newcastle City	GA
Administration Building	Ingall Street	Mayfield North	Newcastle City	GA
Apprentice Training Centre	Ingall Street	Mayfield North	Newcastle City	GA
Bella Vista	105 Crebert Street	Mayfield	Newcastle City	GA
BOS Plant	Ingall Street	Mayfield North	Newcastle City	GA
Carpenters Shop & Reservoir	Industrial Drive	Mayfield North	Newcastle City	GA
Cycle Sheds & No. 2 Rod Mill	Ingall Street	Mayfield North	Newcastle City	GA
DC Substation	Ingall Street	Mayfield North	Newcastle City	GA
Delprat's Quarters	Ingall Street	Mayfield North	Newcastle City	GA
Elladale	358 Maitland Road	Mayfield	Newcastle City	GA



## Listing Heritage Items

### ► State Heritage Inventory Search Results

## Water Tower & associated Change House etc.

Note: There are incomplete details for a number of Items listed on the State Heritage Register. The Heritage Office develop or upgrade statements of significance for these Items as resources become available.

### Item

**Name of Item:** Water Tower & associated Change House etc.

**Primary Address:** Industrial Drive, Mayfield North, NSW 2304

**Local Govt. Area:** Newcastle City

**Property Description:**

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number

### All Addresses

Street Address	Suburb/Town	LGA	Parish	County
Industrial Drive	Mayfield North	Newcastle City		

**Assessment Criteria:** Items are assessed against the State Heritage Register (SHR) Criteria to determine the level of statutory protection. Refer to the Listings below for the level of statutory protection.

### Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number
Local Environmental Plan		1987	03 Jul 92	083

### References

None

### Source of information for this entry

**Name:** Statutory Listings from NSW Gazette

**Email:** [watters@heritage.nsw.gov.au](mailto:watters@heritage.nsw.gov.au)

**Web Page:** [www.heritage.nsw.gov.au](http://www.heritage.nsw.gov.au)

### Administration

**Database Number:** 11509

Every effort has been made to ensure that information contained in the State Heritage Inventory is correct. If you find any omissions please send your comments to the Database Manager.

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