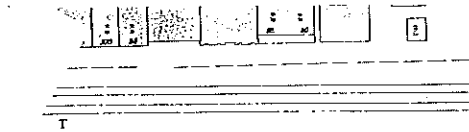


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Newcastle City Council

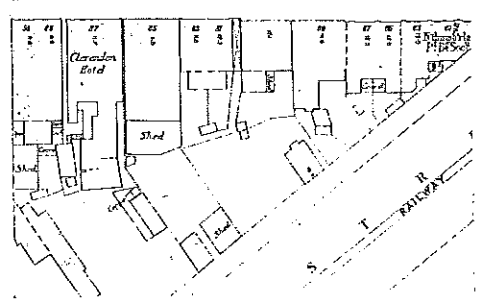
Newcastle

Archaeological

Management

Plan

Volume 1:
 Study Report



ARCHAEOLOGICAL RESOURCE
 Original sand progressively reduced by quarrying. Earlier features including tunnel (powder gaters) may be expected to survive. Also 1850's storage sites.

CONSERVATION VALUE
 Multiple historic sites
 Site
 archaeological resource
 Export Building

SIGNIFICANCE:
 Nobby's Head is associated with the genesis of Newcastle, its changing occupation and uses strongly linked to phases in the development of the city and port.

HISTORY OF OCCUPATION
 Convicts stationed on the island as place of punishment, and during construction of the Macquarie Pier which linked the island to the mainland in 1848. Island progressively modified by quarrying, which reduced its height and altered its form. During the 1850s proposals advanced to remove the island by blasting, a tunnel or powder gaters was excavated for this purpose but not used. 1858 - Lighthouse, cottages and signal station built.

DATE
 February 1997

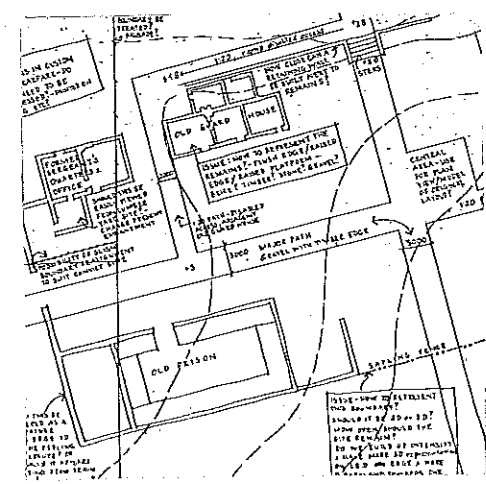
PROJECT
 3867

Prepared by
Suters Architects

In association with
Siobhan Lavelle
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Date
 February 1997

Project
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Foreword

Newcastle is one of Australia's major cities. Its CBD consists of around 1,100 commercial buildings. It has a workforce of over 20,000 in 2,200 private and public sector enterprises, which are engaged in a wide range of economic activities that truly reflect Newcastle's status, not only as the capital of the Hunter Region with a population of over 500,000, but also as Australia's largest export port and the largest metropolitan centre outside the state capitals.

Newcastle is also one of the oldest European settlements in Australia, being discovered exactly 200 years ago in 1797, and with a fledgling camp established on the harbour foreshores in 1801. In 1804 Newcastle was permanently established as a penal colony to tap its rich natural resources of coal, timber and other items, until 1822 when it was declared a free town. By then the foundations of modern Newcastle as a regional centre for coal mining, manufacturing and agriculture, with a secure deep water port, were already being set in place.

Newcastle expanded as a shipping port with the introduction of the railways in the 1850's. By 1910, Newcastle had become one of Australia's major port-cities. Street grid patterns and orientations had expanded along with the various rail lines. Many of the City's most substantial structures had been built. Many suburbs developed as estates which contain a consistent range of buildings in the Federation or subsequent styles.

In the latter half of this century however, development has generally been slow, with the city centre and other business districts remaining mostly free of large scale redevelopment, while the residential suburbs have continued to expand through surrounding areas of what had been farmland or bushland. Those new buildings that have appeared are, with a few notable exceptions, compatible in terms of height and mass with the earlier buildings.

Thus Newcastle remains basically a Victorian city. It also retains a general plan form and many structures from earlier periods, right back to the early convict settlement. It has only been in the last decade, with the need for higher densities and the provision of contemporary amenities, that this character has come under threat due to large scale redevelopment. Part of the intention of this Archaeological Management Plan is to ensure that redevelopment is undertaken in such a way that the City's historic character is preserved, while its infrastructure is allowed to evolve to meet contemporary demands.

Executive Summary

Archaeology is a discipline which seeks to explain the past by studying physical evidence. Many aspects of past societies, environments, cultures and places are studied using excavated evidence, objects and other material culture. Historical archaeology is a more recent branch of the discipline, which deals specifically with the archaeology of those eras which have written records in addition to surviving archaeological evidence. Historical and archaeological evidence, when used together, enables a more complete picture of the past to be revealed. Historical archaeology not only deals with buried evidence but considers sites and objects of all kinds, including buildings, structures, ruins, objects of everyday use, tools, equipment and machinery, as well as maritime sites such as shipwrecks. The study of the age, type, origin, construction and location of these items can contribute new information about past changes and the evolution of our present society and environment. In Australia, Historical Archaeology is largely concerned with the study of our history since the occupation of the country as a place of European settlement in 1788.

The objectives of this study were to provide a clear indication of the nature and extent of historical archaeological sites in central Newcastle, and then to formulate a procedural framework that ensures

the city's archaeological resource is recognised and integrated into the urban planning framework, particularly where redevelopment of a site is proposed. Some of the sites are known to exist due to past archaeological excavations or being otherwise visible, however many are rather identified as potential sites, where the survival of some archaeological evidence is considered highly likely.

This study has been prepared in two stages. Stage 1 included identification of pre-1853 archaeological sites with an emphasis on the convict settlement c.1804-1822. Stage 2 included identification of post-1853 archaeological sites with an emphasis on the industrial development of Newcastle, particularly the coal mines, railways and the port. However the inventory of sites prepared in the two stages have been combined as one, and the research objectives and management strategy formulated are applicable to the city's archaeological resource as a whole.

The principle findings of the study may be summarised as follows:

The Archaeological Resource

Initial fieldwork indicated that about 75-80% of the allotments in the city centre have the potential to retain an archaeological resource from earlier developments, that is perhaps some 5000 allotments. This is much greater than indicated by a similar analysis of Sydney (5-10%) or Melbourne (20-25%). Historic research suggests that the nature of the resource should be roughly evenly split between historical and industrial archaeological sites.

The Convict Settlement and Early Government Town

Within this resource, a great number of sites are related to the original convict settlement and its later development as a government town. While other eastern seaboard cities including Sydney, Hobart, Brisbane and Port Macquarie also had their origins as convict settlements, they are considered unlikely to achieve the level of archaeological survival or extent and significance of resource predicted for Newcastle. As such, the archaeological resources of Newcastle are of considerable significance not only locally but at the State and National level.

The Inventory Database

A computer database was compiled for all possible archaeological sites identified. This included some 425 known or potential sites, with almost half relating to the convict settlement and early government town pre-1853. Of these, some 301 sites are recommended for scheduling by Council in a planning document for protection as heritage items.

Conservation Policy

The general conservation policy for the resource has been formulated to ensure that, whenever practicable, the historical foundations, cultural, physical and archaeological evidence of the City will be preserved in order to provide a direct link and continuity with the past as an essential part of the cultural heritage of the wider community. It notes that the archaeological resource forms a finite and irreplaceable part of the heritage of the City of Newcastle, and that archaeology should be a fundamental planning consideration in any redevelopment proposal.

Research Objectives

The formulation of consistent and accepted research themes for the city, based on its historic development, was a primary objective. This study proposes that a consistent range of data should be collected from each separate archaeological investigation within the city, and that this data should be presented in such a way which enables collation and comparison of the results. In time, the accumulated information can be built into a comprehensive database for use in later research. As more certainty is gained about the nature of the resource, the emphasis of the research themes may be altered.

Management of the Resource

The study proposes that all significant archaeological sites identified in the inventory should have comprehensive archaeological investigations undertaken prior to any redevelopment that may disturb an archaeological resource on the site. Allotments which have a low level of disturbance and are therefore considered potential archaeological sites, or allotments which are adjacent to known archaeological sites, should be subject to a preliminary archaeological assessment to determine whether further investigations are required. Allotments with a high level of disturbance are considered to have little or no archaeological potential and any further investigations may not be necessary.

Acknowledgments

This study has been prepared over a considerable length of time. We believe that it has been worth the effort, and that the resulting study and recommendations will assist Newcastle City Council in maintaining Newcastle's historic character and the significance of its archaeological resource.

We wish to acknowledge the important role played by Rachel Kelly of Newcastle City Council in her co-ordination of the project, one constant through the various changes of the project participants and the brief. We also acknowledge the valuable input contributed by the various officers of the Heritage Office (formerly the Heritage Branch, Department of Planning) who have been involved with the project, including Lisa Newell, Iain Stuart, Tracy Ireland, Susie Hoppe, Rob Power and, more recently, Cath Snellgrove. We also extend particular thanks to the staff at the Local History Section of the Newcastle Regional Library who, as always, have given cheerful and knowledgeable assistance during the search for historic information about their city.

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1. Introduction

1.1 The Nature of Historical Archaeology

Archaeology is a world-wide discipline which seeks to explain the past by studying physical evidence. Many aspects of societies, environments, cultures and places dating from different times in the past are studied using excavated evidence, objects and other material culture. Historical archaeology is a more recent branch of the discipline which deals specifically with the archaeology of those eras which have written records in addition to surviving archaeological evidence. When used together, historical and archaeological evidence enable a much more complete picture of the past to be revealed.

In Australia, Historical Archaeology is largely concerned with the study of our history since the occupation of the country as a British colony in 1788. Historical archaeologists examine the material remains of items made and used by people in the past to obtain information about past conditions, and explanations of past behaviour and activities. Historical archaeology not only deals with buried evidence, it also considers sites and objects of all kinds. These may include buildings, structures, ruins, objects of everyday use, tools, equipment and machinery as well as maritime sites such as shipwrecks. The study of the age, type, origin, construction and location of these items can contribute new information about past changes and the evolution of our present society and environment.

The physical investigation of archaeological sites and relics is usually undertaken after the completion of historical research which will usually include the review of written documents, maps, pictures and any other relevant information such as oral history. Although historical archaeologists and historians may overlap at some points, they will generally examine different types of evidence and have both different areas of interest and different research questions.

Whilst a major purpose of historical archaeology is the recovery, compilation and interpretation of the surviving evidence of the past, an aspect with growing importance is the presentation and interpretation of archaeological work and findings to the general public, which may include the preservation of archaeological sites in situ. Many people in the broader community are enthusiastic and interested in the subject of historical archaeology, and past experience has shown that large numbers of lay people will join in the work as volunteers on urban archaeological excavations. The educative value of such projects is tremendous and an increased public participation in archaeological projects has resulted in a wider recognition of the value of archaeological sites throughout the community.

Recent years have also seen a constant growth of interest in the historic environment and heritage places in general. One practical benefit of this has been an increase in cultural tourism. Many important tourist places are sites of historical or archaeological importance. Several major sites have benefited from the completion of archaeological research and excavations which have enabled them to be presented to visitors in a more comprehensive and interesting way.

Archaeological sites occur in limited numbers, and many individual sites are unique examples of their kind, making our archaeological heritage a fragile and irreplaceable resource. It is for this reason that archaeological sites and relics are formally protected by legislation. Predicting what type of historical archaeology may survive and where it may be found is an invaluable aid for present-day decision makers. Studies such as this Archaeological Management Plan, which identify specific allotments and areas where important archaeological sites may occur, allow local governments, developers, archaeologists and others to become aware of the existence of archaeological sites and relics. Project managers and consent authorities are then able to ensure that appropriate management practices, such as archaeological assessments, occur at a timely stage in the development process and thereby

avoiding or minimising the costs and delays experienced by the inadvertent discovery of archaeological relics or other material.

1.1.1 General Practice in Relation to Historical Archaeological Sites

The likelihood of a site to retain archaeological evidence is assessed by research to indicate:

- whether any past human activity ever occurred on the site;
- if this activity is likely to have left physical evidence; and
- whether later events would have disturbed or destroyed any such evidence.

Even where a site may be identified as likely to retain archaeological evidence, the information to be gained from that evidence will not necessarily be of sufficient significance to warrant its further investigation. This may be because:

- there is historical information available that already adequately explains the site;
- poor preservation of the evidence due to outside factors;
- the existence of many similar sites exist that are more readily accessible; or
- the historic themes relevant to the site are not considered significant within a local or broader context.

These issues should be considered when determining the archaeological *research potential* of a site. The Heritage Office "Archaeological Assessment Guidelines" note that research potential "*is the most relevant criterion for assessing (the significance of) archaeological sites*". The guidelines go on to note three basic questions that should be asked about a site to determine its research potential.¹ That is:

1. *Can the site contribute knowledge that no other resource can (eg. historical/documentary evidence)?*
2. *Can the site contribute knowledge that no other (archaeological) site can?*
3. *Is this knowledge relevant:*
 - *to general questions about human history?*
 - *to other substantive questions relating to Australian history?*
 - *to other major research questions?*

Another important issue is that excavation and removal of relics from a site, while providing knowledge, actually destroys the archaeological evidence and makes it unavailable for future generations, and for that reason '*where a site is not under threat, archaeological deposits are safer in the ground*'.² The Burra Charter sets out three circumstances in which excavation is appropriate.³ These are where excavation will:

- '*provide data essential for the conservation of the place*'; and/or
- '*to secure evidence about to be lost or made inaccessible through necessary conservation or other unavoidable action*'; or
- where research has indicated that excavation will add '*substantially to a scientific body of knowledge*' about the site or related research questions.

The Charter goes on to note that excavation should then only be undertaken by suitably qualified archaeologists with experience in the relevant field, following a soundly based research design and archaeological strategy, and where sufficient funds are available to complete the project through to archiving and publication of the results.

Archaeological excavations are often required only when an archaeological site is in imminent danger of destruction due to redevelopment. The objective of so-called '*rescue excavations*' is to secure archaeological information before it is lost, and is often funded by the developer as a condition of development approval from the planning authority. Full excavation of the site may not be necessary where it is considered to have limited archaeological potential, and instead archaeological monitoring

¹ Heritage Office, *Archaeological Assessment Guidelines* 1996 p.27, from Sullivan & Bickford, 1984.

² Department of Planning, *Historical Archaeological Sites, Investigation and Conservation Guidelines*, 1993, p.31.

³ Australia ICOMOS *The Burra Charter* Article 24.

may be undertaken during general site excavations associated with the redevelopment. This is also referred to as a "watching brief", and involves the presence of an archaeologist on site during excavations associated with demolition, footings, service pipes, tanks or other works. The archaeologist has full responsibility for halting works if archaeological evidence is discovered during the works, and for recording the resource. An excavation permit is still required for works subject to archaeological monitoring.

However an alternative to the excavation and removal of archaeological evidence is for its conservation within the redevelopment, with two approaches possible:

- the excavation and display of the archaeological evidence in situ, with the new development designed to incorporate, and perhaps interpret, the site; or
- the design of the development to avoid impact upon the archaeological evidence, and thereby maintaining it intact for possible future archaeological investigation.

1.2 Background to the Plan

1.2.1 Commissioning of the Study

This study was initially commissioned by Newcastle City Council in February 1993. After some initial work, the study was split into two separate stages; Stage 1 was to consider pre-1853 sites only, and was completed in March 1995; Stage 2 considered post-1853 sites and reviewed the management recommendations as a whole. Specific details about the development of the study brief are provided below (Section 1.3)

Both stages of the study have been funded jointly by Newcastle City Council and through a grant from the NSW Heritage Office (formerly the Heritage Branch of the Department of Urban Affairs and Planning) under the Heritage Assistance Programme.

The members of the study team comprised:

- Suters Architects:
 - Brian Suters, Director in charge.
 - Randal Boydell, Project co-ordination and mapping.
- Siobhán Lavelle:
 - Historical archaeology and team leader
 - Field Survey, Stage 1 Inventory, and Research Design Overview.
- C & MJ Doring Pty Limited:
 - Carl Doring, Industrial archaeology, Stage 2 Inventory.
- Dr John Turner, Hunter History Consultants:
 - Historical research, historic overview.

1.2.2 Study Area

Newcastle is one of the oldest European settlements on the Australian continent. It has a unique physical character and is greatly influenced by its environmental and urban context. The environmental context is dominated by the contrast in land form between the steeply sloping hillside surrounding the historic centre, and the flat plains and swamp lands to the west. The location of the city centre on the harbour at the mouth of the Hunter River has also had a major influence on development patterns. Items of heritage significance dominate the eastern precinct. This is also the most intensely developed part of the CBD. The western precinct contrasts with less intense development, and generally of more recent historic origins.

The Study Area principally comprises the Newcastle Central Business District (CBD). Some land immediately adjacent to the north and east, which was associated with the early settlement and development of the Newcastle district and is accordingly strong in archaeological interest, has also been included. This covers parts of Cooks Hill, The Hill and Wickham. The area is defined partly by

waterline and partly by streets or other land based features. It may also include some individual buildings or sites outside this defined area where they are considered significant.

1.2.3 Study Objectives

The stated objectives of the study are:

- *To combine detailed historical research and field survey information to provide a clear indication of the nature and extent of archaeological resources in central Newcastle; and*
- *To provide a procedural framework that ensures archaeological resources are recognised and integrated into the urban planning framework.*

It is understood that the information and recommendations contained in this Archaeological Management Plan will be taken into consideration during the future planning and possible redevelopment of sites in the study area, and ultimately through formal adoption as a Development Control Plan or adaptation of the existing Local Environmental Plan.

Pressure for large scale redevelopment, particularly within the CBD, is likely to increase markedly over the coming years as Newcastle expands as a major population and business centre. In the light of this context, it should be further noted that the aim of this Plan is not to preclude development, but to identify sites which may have archaeological potential, and then set guidelines for appropriate management of this potential before development is allowed to proceed. Having said this, it is considered important that the historic character of the city as a whole is maintained and other studies, including the City-Wide Heritage Study currently being prepared for Council, make recommendations to this end.

Note that the study considers items of European Cultural significance only. It does not consider natural or Aboriginal sites or relics, though reference may be made to such sites and the legislation governing them.

1.2.4 Approach to the Study

The approach to formulating the study has involved the following areas of research, as detailed in subsequent sections:

1. Prepare a brief overview of the history of the study area from the time of European settlement, to assist in the identification of significant archaeological resources.
2. Conduct a field survey of the study area to determine the likelihood of each allotment or feature to contain a significant archaeological resources.
3. Identify archaeological resources by comparison of field survey and historical information, and prepare an inventory of such archaeological resources and/or potential resources.
4. Prepare a Statement of Significance for the archaeological resources of the study area.
5. Review existing planning controls relevant to archaeological resources.
6. Identify Conservation and Research Objectives for the archaeological resources of the study area.
7. Propose a strategy for the management of such resources for future implementation by Council.

1.3 Development of the Study Brief

1.3.1 The Initial Brief

The initial study brief was as follows:

- *To prepare a brief overview of the history of the study area from the time of European settlement, to assist in the identification of significant archaeological sites and relics;*

- *To prepare an Archaeological Zoning (Management) Plan and schedule of sites which will identify the nature and approximate location of known or potential archaeological features or relics which could constrain or influence, or be affected by, future development of the study area; and*
- *to recommend further archaeological investigation of particular sites within the study area, if this is considered necessary.*

The study outline went on to state that *"the study area includes land involved in the earliest stages of European arrival and settlement"*, especially important considering the origins of Newcastle as a penal settlement. It further noted that *"the later development... for commercial, industrial, maritime or railway purposes, is equally significant historically, and will find equal attention in the study. This later period is just as likely to have left physical evidence of relevance to... future development"*.

Research commenced in February 1993, with Dr Turner providing the draft of the historic overview in May. At that point a brief analysis of likely archaeological potential was made, and it was evident that there was a roughly even division between potential historical and industrial archaeological sites. Thus it was determined that equal emphasis should be given by the study team to each.

Fieldwork was undertaken by Siobhan Lavelle and Dana Mider in June/July 1993. This involved a brief visual assessment of each allotment or item to determine the likelihood of any archaeological relic to survive. It was determined that there was a potential survival rate of approximately 75-80% of total land area, possibly some 5,000 separate contemporary allotments. This was higher than anticipated, and considerably greater than indicated by similar fieldwork in Sydney (5-10%) or Melbourne (20-25%).

It was now obviously not possible to research and/or inventory individual allotments to any great level of detail within the existing budget. After discussions with Council and the Department of Planning, two alternatives for completing the study were identified:

- i. Continue on our current course, providing an overview of the archaeological potential of the study area and comprehensive guidelines for dealing with development within the city as a whole. Research on significant sites would be limited to their identification and scheduling only.
- ii. Revise the range of research or the study area, limiting it to that considered particularly significant or threatened. A second stage was proposed to complete the study.

The then Department of Planning proposed that the second alternative be adopted, with the focus to shift to the area of the original convict settlement, and a cut off date of 1853. The brief for Stage 1 was revised accordingly, as follows.

- Compilation of an inventory of pre-1853 archaeological sites which:
 - a. *appear in the historical record; and*
 - b. *survive according to the visual survey.*
- Preparation of a Management Plan including:
 - a. *Statement of Significance for archaeological resources;*
 - b. *Conservation Objectives for archaeological resources;*
 - c. *Explanation of the requirements of Planning and Heritage legislation; and*
 - d. *When and how the Archaeological Management Plan should be used and how it integrates with planning procedures.*

1.3.2 The Stage 2 Brief

Stage 2 was to proceed as a separate though obviously related component. The consultant team submitted a brief for the Stage 2 works which was subsequently approved by Council and the Department, and approval was given to proceed. The brief was accepted as follows:

- *Completion of the Inventory: Covers archaeological items dating from post-1853 up to and including 1945 (an appropriate cut-off date as it covers the "50 years" relics provisions and includes the end of WWII). Includes below ground items only ie. in-ground items, including any below or within existing structures. No limitation on depth eg. includes mine workings, though the water table will in practice be a general limitation.*

- *Revise and expand upon the Stage 1 report sections covering the Statement of Significance and the Conservation Objectives for the resource based on the expanded inventory. The Sections on the Planning Framework and Field Survey will not be revised unless major issues arise.*
- *Formulation of an appropriate Management Strategy for the resource as a whole, including recommendations for the future formal scheduling and protection by Council of both Stage 1 and Stage 2 Inventory items.*
- *Preparation of guidelines for implementation of study's recommendations for use by Council officers, developers and the community, including:*
 - *means of formal implementation.*
 - *preparation of the text for an information brochure.*
 - *participation in two workshops/seminars to be organised by NCC, one for NCC/DOP officers, and one for Developers/Chamber of Commerce and the community generally. Maximum half-day each.*
 - *identification of appropriate areas for interpretation.*
 - *identification of appropriate issues for further research eg. precincts, walking tours, guide maps, identification plaques.*
- *Identify Research Objectives for the resource. Their purpose is to both:*
 - *ensure that an appropriate basis for future research is established*
 - *establish the areas where further research should precede development**Input is to be sought from the wider archaeological community, including a seminar of archaeologists and historians familiar with the Newcastle archaeological resource to discuss the research directions they see as appropriate. This is to be arranged through the DoP. It shall include discussion of the inventory items identified and review of recent studies dealing with archaeological resources on a similar scale, such as the Port Macquarie AMP, or the Cumberland Street site report. It is seen as important that the DOP play a major role in developing the research objectives.*

1.3.3 Format of the Final Report

While the study process had been divided into two distinct components, it was noted that the final report should be compiled with no such distinction. This was to avoid any apparent importance being given to one era over the other, and allow for ready appreciation of the full significance of the resource and implementation of an appropriate management strategy for the city centre as a whole.

Hence, this Stage 2 report is a direct extension of Stage 1, expanding upon previous statements rather than writing separate though related components. Sections which have been expanded or amended are as follows:

1. Introduction: no major change, addition of Stage 2 objectives.
2. Historic overview: no change.
3. Field Survey: no major change, though some additional notes relating to additional field work undertaken during preparation of the stage 2 inventory.
4. Identification of Archaeological Sites: no major change to the bulk of the existing text, though with additional information relating to the stage 2 inventory items and additional precincts.
5. Significance: revise to provide a general statement of significance for the archaeological resource as a whole, with separate sections for the Stage 1 and Stage 2 items.
6. Legislation: no change
7. Research Objectives: rewritten completely and expanded, including review of current practice in archaeological research design, both from previous archaeological management plans prepared for other urban centres in Australia, and general practice in other countries.
8. Management Strategy: no major change to existing text, but with an additional section providing a general policy statement for conservation of the resource.

Note that the proposed seminar regarding Research Objectives was not undertaken. The workshops with Council/Developers will be held after completion of the study.

The ultimate goal for the Archaeological Management Plan is to provide a document that is both useful to the Council in directing future development of the CBD in relation to archaeological resources, and provides a positive approach about the worth to the community of retaining or researching such resources.

1.4 Report Format and Use

This report is the culmination of several draft reports which have been circulated for discussion amongst the study team, Council representatives and the Department of Planning. The final Stage 1 report was substantially revised and expanded at the conclusion of Stage 2, as noted above.

Sections, Appendices, Maps and Plates are cross referenced throughout the text eg. (Section 3.2). Important points or phrases which have specific definitions within this report are underlined eg. archaeological potential. Inventory numbers are also noted in square brackets where relevant eg. [115].

1.4.1 Terminology

General conservation terminology used in this report is consistent with that defined in the Burra Charter, including *preservation*, *conservation* and *restoration*.

Other terminology which relates specifically to archaeology, and which is used frequently in this report, is defined below. These words or phrases are commonly used when discussing archaeology, though they are often interpreted differently by different people, even by those within the archaeological profession. These include terms such as *archaeological potential* and *archaeological resource*. Generally the definitions are as stated in the "Archaeological Assessment Guidelines" as published by the Heritage Office in 1996, and such definitions are shown in *italics*. These definitions are elaborated on, and other words or phrases added, where they have a specific meaning in the context of this report.

Archaeological Assessment: *A study undertaken to establish the archaeological significance (research potential) of a particular site and to identify appropriate management actions.*

Archaeological Evidence: A general term referring to any archaeological items that may occur at a place, including archaeological features, deposits, relics, artefacts, building remnants etc.

Archaeological Excavation: The process of excavating a site to identify and record archaeological evidence present beneath the surface. This generally means a manual process designed to expose items without damage, including such gentle tasks as brushing and sieving of soil. It may however also include large scale mechanical excavation, particularly to remove initial overburden. Items unearthed are recorded as to their exact location, are assessed against the known history of the site, and may then either be left in situ or removed and archived. An archaeological excavation should be undertaken by a professionally qualified archaeologist, and will usually require the granting of an Excavation Permit.

Archaeological Feature: *Any physical evidence of past human activity. Archaeological features include buildings, works, relics, structures, foundations, deposits, cultural landscapes and shipwrecks. On archaeological excavations the term 'feature' may be used in a specific sense to refer to any item that is not a structure, a layer or an artefact (for example, a post hole).*

Archaeological Monitoring: Where excavations being undertaken for other reasons (for example, digging trenches for building foundations or drainage lines) are supervised by an archaeologist in order to identify any archaeological evidence that may be unearthed in the process. The archaeologist is responsible for stopping work should items be discovered, and then recording, collating or further assessing those items as appropriate. Such excavations may require the granting of an Excavation Permit. Also referred to as a 'watching brief'.

Archaeological Potential: *The degree of physical evidence present on an archaeological site, usually assessed on the basis of physical evaluation and historical research. Common units for describing archaeological potential are:*

- *known archaeological features/sites (high archaeological potential)*
- *potential archaeological features/sites (medium archaeological potential)*

- no archaeological features/sites (low archaeological potential)

Archaeological Precinct: An area where a common pattern of development has occurred (for example, chronologically, because of its strategic location, or common ownership), and which may be expected to contain various archaeological features of some cohesive characteristic relating to that pattern. The precinct boundaries have arisen from study of the area's history to identify important historic patterns. Precincts from later eras may overlap earlier precincts. A precinct may contain a number of allotments, streets, open spaces and/or whole blocks. A precinct may contain a number of identified archaeological sites or potential sites.

Archaeological Proposal: If an Archaeological Assessment recommends that archaeological excavation or other field work is appropriate, then an Archaeological Proposal is required. The proposal should be submitted with the application for an Excavation Permit. A proposal should include:

- i. a research design drawn from the findings of the Archaeological Assessment and any further research that it recommends;
- ii. an outline of field methods, including excavation, survey, analysis of standing structures etc.;
- iii. an outline for the analysis of collected data;
- iv. a description of the team and its expertise;
- v. an outline of the arrangements for logistical support and project management up to report presentation;⁴ and...
- vi. policy for the management and conservation or disposal of any archaeological evidence found.

Archaeological Resource: All of the archaeological features of a defined area when considered as a whole, including all relics, artefacts, sites etc. within that area. The defined area may be simply a specific archaeological site, or may be as large as the whole city CBD as covered by this study.

Archaeological Sensitivity: *A term used by some archaeologists to refer to archaeological potential.*

Archaeological Significance: *A category of significance referring to scientific value or 'research potential', that is, the ability to yield information through investigation. Fits into the category of Scientific Significance in the four criteria defined by the Heritage Office for evaluation of heritage significance.*

Archaeological Site: *A place that contains evidence of past human activity. Below ground archaeological sites include building foundations, occupation deposits, features and artefacts. Above ground archaeological sites include buildings, works, industrial structures and relics that are intact or ruined. An archaeological site will probably contain a number of archaeological features grouped together. It may relate only to a single historical period of development of activity, or it may have several different phases of use and activity. The crucial point is that the site is known to exist, for example due to past archaeological excavations or being partly exposed above ground, rather than having the potential to exist (see also Potential Archaeological Site).*

Artefacts: *An object produced by human activity. In historical archaeology the term usually refers to small objects contained within occupation deposits. The term may encompass food or plant remains and ecological features (for example, pollen).*

Contact Sites: *Sites which are associated with interaction between Aboriginal and non-Aboriginal people.*

Excavation Permits: *A permit to disturb or excavate a relic issued by the Heritage Council of New South Wales under Section 60 or Section 140 of the NSW Heritage Act 1977.*

Historical Archaeology: *The study of the human past using both material evidence and documentary sources. In Australia, historical archaeology excludes Aboriginal archaeology prior to non-indigenous occupation, but may include contact sites.*

Historic Evidence: *Documentary evidence about past human activity, which is used to determine whether any significant activity ever occurred on a particular site that may have left archaeological*

⁴. *ibid.*

evidence. Documentary evidence is considered to include not only written and graphic sources (for example, maps, photographs and writings), but also oral or anecdotal evidence (that is, people's recollections or interpretations).

Initial Assessment: *A basic overview study, sometimes referred to as a "baseline assessment", undertaken to determine whether a particular site warrants further investigation. Initial assessments are used to determine the need for a full assessment for a specific site and to identify sites that should be subject to environmental planning instruments or archaeological management plan provisions.* This study has undertaken an initial assessment for all sites within the study area, and recommendations for legal protection of specific sites have been made based on that assessment.

Level of Disturbance: The assessed disturbance of a site as a high/medium/low level according to the extent of disturbance caused by the most recent or most intense development of the site, and hence the likelihood for earlier archaeological features to survive. It is related to Archaeological Potential in that a site with a low level of disturbance will have high archaeological potential, while a site with a high level of disturbance will have low archaeological potential.

Occupation Deposits: *Accumulations of cultural material that result from human activity. They are usually (but not always) associated with domestic sites; (for example, under flow or yard deposits)*

Post-contact: *A term used to refer to study of archaeological sites dating after European occupation in 1788.*

Potential Archaeological Site: *A place that may contain evidence of past human activity. The important distinction is that while all the research may indicate an archaeological feature is likely to exist on the site, it is not known with absolute certainty to exist. This is in contrast to an Archaeological Site, where archaeological features are known to actually exist, due to archaeological excavations or being otherwise visible or identifiable.*

Relic: *Any deposit, object or material evidence relating to non-Aboriginal settlement which is more than 50 years old. A general term used to describe any archaeological feature, especially small isolated items (for example, a well, a bottle).*

Research Design: *A set of questions which can be investigated using archaeological evidence and a methodology for addressing them. A research design is intended to ensure that archaeological investigations focus on genuine research needs. It is an important tool which ensures that when archaeological resources are destroyed by excavation, their information content can be preserved and can contribute to current and relevant knowledge.*

Research Potential: *The ability of a site or feature to yield information through archaeological investigation. The significance of archaeological sites is assessed according to their ability to yield information to substantive research questions.*

Research Themes: Broad research areas which set the parameters for further investigation of an archaeological site ie. the basis upon which the research design has been formulated. They may be based on historic activities that had a physical presence, or on more abstract social interactions. The themes must however be relevant to our understanding of the history of the city, the state, or Australia as a whole, while the research design looks at these themes within the context of a specific site to identify what information it may contribute to their understanding.

2. Historic Overview

2.0.1 Introduction

The compilation of a thorough site history is an essential first step in the preparation of Management Plans for Heritage items, in this case for archaeological resources. While by necessity comprehensive, it is not intended that such a history should research every aspect of a place's history in detail. Rather it provides sufficient historical information to allow for the identification of archaeological resources, and against which the significance of such resources can be assessed.

The following Historic Overview of the City of Newcastle has been prepared by Dr John Turner.

2.1 Newcastle 1804-1993, an Overview

The presence of abundant coal-reserves within easy reach of the sea is the economic foundation on which the City of Newcastle was built. Coal was discovered in other locations in New South Wales but the estuary of the Hunter River gave that locality a unique advantage. The development of railways in the 1850's further stimulated Newcastle's basic industry and also made it the entrepot of northern New South Wales for the remainder of the century. Assisted by these vital transport systems, the city built an international coal trade and a colonial commerce of such proportions that it had outstripped Maitland, the earlier regional capital, by the 1860s, and was never challenged again as the dominant urban centre of northern New South Wales.

After two decades as a convict settlement, Newcastle stagnated in the 1820's and was overtaken by the booming triangle of towns - West Maitland, East Maitland and Morpeth. Intended as the leading town, the seaport languished until the modern collieries of the Australian Agricultural Company and the steadily growing coal trade caused its population to double between 1856 and 1861. Thereafter, its economic base developed rapidly and the population of Newcastle expanded vigorously until the severe depression of the 1890s. Coal output soon recovered from that setback, but the industry was less prosperous and local manufacturing tended to fall off in the face of competition from Sydney producers who were linked in 1889 to the northern New South Wales railway system.

The decline of coalmining in the inner Newcastle area around 1900 had a strong influence on the growth of the city, freeing large areas of land used for mining and railway purposes for future development. However, the city's population growth slowed despite the continued development of its port which was serving the large new collieries of the south Maitland coalfield as well as mines being opened up south of the city along the Sydney-Newcastle railway. Thus the population of the combined Newcastle and Lake Macquarie urban areas was less than 70,000 in 1911.

By its 1912 decision to open a steelworks in Newcastle the Broken Hill Proprietary Company transformed the city into a vibrant industrial centre within a decade. Construction of the plant began in 1913, it opened in 1915 and flourished to such an extent during the First World War that it attracted labour from all over Australia. As a result, the city's population increased rapidly reaching 105,000 by 1921, an increase of 50% in a ten year period. Such a rate of expansion had remarkable effects on housing and transport and growth of such magnitude confirmed the city's status as capital of the Hunter Region.

The following decade, the 1920s, brought serious declines in the city's major industries - steelmaking, shipbuilding and coalmining - but this was temporary, and after the Great Depression, the BHP Company rose to new levels of output and efficiency, rivalling in efficiency steel producers in Germany and the United States, and capturing the Australian market for steel because of its low prices and high quality products. Part and parcel of this process was the establishment of a string of subsidiary plants

which turned the steel of the BHP Port Waratah works into a variety of finished metal products. Thus, when war came again in 1939, the City of Newcastle, the industrial capital of Australia, was poised for further expansion and development.

The Second World War stimulated Newcastle's manufacturing base and raised expectations of further industrial development in the post war period. New plants were expected to appear in industrial zones around the steelworks and on Kooragang Island, and Newcastle foresaw continuing manufacturing growth and a population that would double between 1947 and 2002. These expectations assumed a flourishing central business district catering for the commercial and entertainment needs of a population expected to approach 350,000 in total (Lake Macquarie Shire 140,000; the City of Newcastle 200,000) by the end of the century. However, these hopes and plans proved to be unrealistic, and the central business district was severely affected by population decline in the inner city and by the rise of regional shopping centres.

As J C Docherty has shown, the City of Newcastle lost 5000 residents between 1947 and 1961, while the population of Lake Macquarie Shire grew in the same period by 36,000. Fundamental changes in retailing concepts in the 1960's led to the establishment of suburban shopping centres with huge department stores and extensive free parking to cope with the increasing use of private motor vehicles. Under threat from these developments, the Central Business District has failed to attract new commercial ventures and the inner city has tended to decline in regional importance.

2.2 Discovery of the Hunter River

Captain Cook sailed past the mouth of the Hunter River in 1770, noticing only Nobbys Island; a party of escaping convicts led by William Bryant came closer in 1791, but it was Lieutenant John Shortland who first sailed into the river in September 1797 (Map 1). Merchants seeking timber and coal followed and then Governor King decided to make a more systematic exploration of what was to become the site of the city of Newcastle.⁵

This voyage of discovery, which was made by Lieutenant Colonel William Paterson and party in the *Lady Nelson* and the *Francis* in June and July, 1801, inspired its commander to report:

*that Government might derive many advantages by forming a small settlement at this place. In the 1st instance, the coals are a principle [sic] object. 2nd. Boiling salt, which could be done with little labour. 3rd. Burning shells that are here in great abundance. Besides, salting of fish might be carried on with considerable benefit if some industrious fisherman could be found for that purpose, as the fish are plentiful and good. There is excellent pasture for cattle, but until where the rivers meet is not fit for cultivation. What I term forest land is remarkably fine soil.*⁶

By 4 July the miners were hewing 'a strata [sic] of coals nearly four feet in thickness', lying 'entirely from side to side through the hill' (Signal Hill) (Map 2). Twenty four tons of this coal, which was highly praised by Platt, were loaded on the schooner *Francis* which also carried Paterson's highly favourable report to the Governor.

King was so impressed by his deputy's account and 'so anxious to hope for great advantages from the river', that he decided to make the settlement permanent by despatching his other miner, a corporal and five private soldiers with another young soldier as storekeeper to join the miners and sawyers already at the Hunter River. Paterson was instructed to establish a permanent mine on the site chosen by his miners and to continue to produce coal, and presumably timber, but the Governor reserved his decision on lime and salt, merely stating that these were 'a sure resource'.

From the proclamation of regulations governing access to Hunter's River and the establishment of a settlement, the systematic exploitation of the region's resources may be said to have begun but it was

⁵ J W Turner, *Manufacturing in Newcastle 1801-1900* (henceforth *Manufacturing*, Newcastle, 1980, p.9).

⁶ *ibid.*

soon to be interrupted by the withdrawal of the colonising party. Neither the first commandant, Corporal Wixstead, nor his successor, Surgeon Martin Mason, proved to be capable of controlling the convicts so King recalled the party on 8 December, 1801.

As Paterson had noted, the estuary of the Hunter was not attractive to agriculturalists: to the south it was hilly and elsewhere the predominance of swamps and sand dunes ensured that Newcastle would have to depend for development on its coal and its port potential.

2.3 Newcastle as a Penal Colony 1804-1822

2.3.1 The Settlement of Newcastle

When Newcastle was resettled in March 1804 by a party of convicts and soldiers under Lieutenant C A Menzies, Governor King was still interested in the resources of the Hunter region and anxious to isolate rebellious convicts who appeared to him to be threatening the security of the colony.⁷ The 'disaffected Irish, who were lately sent here for sedition and rebellion' were worrying the Governor in 1800 and this strengthened his interest in forming a coal mining settlement in the north. Its re-establishment permitted the removal of 'about forty of the worst' of the Castle Hill rebels and to these 'Irish', King added a contingent of English convicts who had been unruly on the voyage out but who were 'not of a worse cast than people of that description generally are'. This indication that the new settlement was not seen as a purely penal outpost is confirmed by King's plan to send free settlers there from Norfolk Island and his suggestion that a volunteers' association be formed to strengthen the garrison against mutiny.

However these plans were not fulfilled and until 1822 the vast majority of those who landed at Hunter's River were men and women sent to serve colonial sentences. They formed a large part of the workforce available to commandants for the settlement's major purpose - the exploitation of its resources of coal, timber, salt and lime.

For seven years after its re-establishment Newcastle's total population fluctuated around 100. Until 1808 Norfolk Island continued to receive many of those who were banished by colonial courts, but thereafter the Hunter River was the usual destination. By 1815 the population had passed 500, in 1819 it was 846, and growth was so rapid in the next two years that the total reached 1169 in 1821, a figure which was not to be exceeded for three decades.

Table 1 - Convict Population for Newcastle 1804-1821⁸

Year	Adult male	Adult female	Total
1804	80	14	94
1805	73	18	91
1806	50	22	72
1807	63	21	84
1810	69	-	69
1811	73	-	73
1812	100	34	134
1813	123	31	154
1814	149	39	188
1815	215	39	254
1816	245	42	287
1817	394	46	440
1819	696	86	782
1821	1001	50	1051

⁷ J W Turner, *Newcastle as a Convict Settlement* (henceforth *Convict Settlement*), Newcastle, 1973, p 9.

⁸ J W Turner, *Coal Mining in Newcastle 1801-1900* (henceforth *Coal Mining*), Newcastle, 1982, p 19.

2.3.2 The Production of Timber

It is quite likely that the first European product from the Hunter Valley was not coal but timber, almost certainly cedar.⁹ Timber for building purposes was readily saleable in Sydney and attempts were also made to export it in the early years when colonial and foreign merchants were searching for an export staple. Colonel Paterson's expedition had commented on the value of these timbers and when systematic exploitation began in 1804 many species were found to have utility.

Cedar (*Cedrela toona var australis*) was the most sought after timber particularly for use in house fittings but Brush Cypress (*Callitris macleayana*) was obtained for floorings, several species of gum for roof timbers and beefwood (*Stenocarpus salignis*) for shingles. Rosewood (*Dysoxylon fraserianum*) which was well suited to turning and veneering was used for fine furniture and other timbers were used for industrial purposes.

Many of Sydney's carts would have been made from blue gum (*Eucalyptus saligna*) or flooded gum (*Eucalyptus grandis*) and these woods were also employed in the making of handles for agricultural implements and in shipbuilding. Because the flooded gum grew up to 150 feet high, was very straight and with few branches, it was used for ships' spars and was considered by the convict carpenter Patrick Riley to be stronger than the Baltic pine widely used for the purpose. Mangroves (*Avicennia officinalis*) were cut from the shipments until a source of good quality was discovered. Two years later, there were several hundred logs on the beach but they did not satisfy Macquarie because very few could be squared at more than thirty inches. On other occasions special measures had to be taken to meet demands from Headquarters as in 1810 when the *Lady Nelson* visited Lake Macquarie to obtain rosewood or when the Sydney shipwrights ordered twenty five pieces of 'crooked honeysuckle' which was exhausted on the Hunter River by 1818.

From the withdrawal of the convict settlement, timber getting and processing ceased to be one of the principal activities of Newcastle. It had made a significant contribution to the colony's building programme and may be regarded as one of the most successful of the pioneer industries of the Hunter Valley.

2.3.3 Coal Mining

Throughout Newcastle's period as a penal settlement, coal mining remained small scale and primitive.¹⁰ Late in 1801 three miners were digging nine tons of coal per day from a thirty yard 'adit' at Colliers' Point, but Surgeon Mason, who was commanding the tiny settlement, planned to increase the output to 190 tons per week by employing more miners. He also suggested such improvements as a slab path for the carriers from the mine and a properly constructed wharf as well as candles for use below ground, but there was little time to achieve these aims before the settlement was abandoned.

Lieutenant Menzies opened a new mine in what was probably the Dudley Seam and ordered that it be systematically developed to permit further expansion. Additional mines were opened when accumulations of water or the occurrence of faults created problems but it is difficult to establish their exact locations. However, they were all within a mile of Colliers' Point, and until 1817 most of the coal would have come from the more accessible Dudley and Nobby's Seams with the former being preferred for its better quality. From the opening in that year of the first shaft mine in the vicinity of the present Watt Street Hospital it was possible to tap the even better coal of the Yard Seam.

The driving of this 111 feet shaft was not continuous: it was carried on when miners were not producing coal, but the great effort it required shows how limited were the resources and technology available. A windlass had to be employed for conveying men and tools into the pit and for raising coal, and though Captain Wallis asked for a horse gin to facilitate the raising of coal in 1817, the windlass was still there seven years later. The ventilation of the new mine also proved more difficult except when southerly breezes prevailed, and when fires were lit at the bottom of the shaft the problem was intensified. Primitive oil lamps and candles were employed to light the workings and transport underground was by barrow.

⁹. Turner, *Manufacturing*, pp 14-17.

¹⁰. J W Turner, *Coal Mining*, pp 13-21.

These mines were difficult to drain so convicts had to dam the water, bailing it by day and night into drifts, and John Busby found that water was still seriously impeding the miners in 1824. Pumps had been requisitioned but they had not been provided and buckets were still used to raise water from the shaft.

In the beginning, convicts had to struggle with heavy loads of coal over rocky and sandy terrain to the bay where vessels were loaded, and to assist them a slab path had been constructed (Map 3). A wharf came next, and the use of barrows or carts, possibly like those which appear in a painting of convicts at work in Newcastle in 1853. Then, in 1810, Commandant Purcell obtained two one-ton tip carts to facilitate carriage and unloading on to the pier, but the shortage of oxen to haul these carts continued to limit coal production.

Throughout the period of government mining coal was measured and placed on board ship in barrows. The first barrow load was weighed and the number required to load the vessel was counted. This labour was performed by the miners until the end of 1817, but it interfered with production and thereafter it fell to the town gang. Crews were expected to help with the loading and as far as possible it was completed in normal working hours because the convicts had to be paid for extra work. A fleet of small sailing vessels carried the coal and Hainsworth found evidence of at least 230 consignments to Sydney between 1803 and 1821 although the records are incomplete.

Primitive as the transport system was, it did not limit the rate of coal production as much as the scarcity of trained miners. That only three were employed in 1801 is understandable, but miners were always in short supply and there were times when the supply of coal depended upon two or three men. In 1811 Lieutenant Skottowe wrote to Sydney seeking a miner who was working as a stockman and another commandant pleaded for one more man, saying 'both my miners here are unwell'. Even when the convict population exceeded one thousand there were only eight miners.

The shortage of miners was accentuated by their occasional employment on other tasks and by lack of supplies. They were also used in the quarrying of stone for building purposes and for the southern breakwater which was begun in 1818 (Map 2). Further interruptions occurred because the settlement rarely had enough tools and Commandant Wallis had to take the miners' tools for the ship loaders: he had 260 male convicts without shovels or spades. Indeed the letters of the commandants are largely composed of requests for urgently needed skilled labour and supplies which were often slow to appear; food for the convicts, sheet lead for building, casks to hold lime, baskets for shells, mills for grinding wheat, copper to protect the boats from the worm, iron bolts for the wharf, a ram for the government flock, oil for the miners' lamps, medicines for the sick; the list is endless.

That scarce mine labour was squandered in other tasks and rendered unproductive for want of essential materials is a reflection of the low priority placed upon the industry by Governor King's successors. Some coal was necessary for ironworking, and the export trade made occasional demands upon the miners, but wood could be used in place of coal for most other purposes and the governors had many other more compelling needs for resources of labour and capital. That is why production in the penal settlement was so small.

2.3.4 Salt Making

Paterson had noticed the advantage of Newcastle for salt boiling, and there were to be many later efforts to capitalise upon the proximity of coal mines and salt water, but the first attempt was short lived.¹¹ In Sydney there had been attempts to make salt, in 1790 and 1795, before the Government decided to commence manufacture on its own account because of scarcities and trafficking in salt. Two pans arrived on the *Coromandel* in May, 1804 and Governor King sent one to Newcastle immediately.

The pan was sent from England in a dismantled state with each part numbered and marked so that it could be easily assembled, but a long delay occurred before production started. The Governor had been under the impression that a salt boiler was already in the settlement but this was not so and when an experienced man was sent to supervise the setting up of the pan he became ill.

When construction finally began the *Sydney gazette* enthusiastically reported that the salt pan took only two weeks to erect, although it was supported by masonry and of durable construction, on a harbour-

¹¹. Turner, *Manufacturing*, pp 17-21.

side site, near a source of inferior coal known as the New Discovery. The cost of the saltworks was probably similar to the estimate of £533.10s. for the Sydney installation. No description of the methods employed at Newcastle has survived, but the Blaxland's works at Parramatta involved the drainage of salt water into shallow ponds for solar evaporation followed by boiling in vats. contemporaneously the *Sydney gazette* reprinted a long article from the *Encyclopaedia Britannica* describing an English process and commented:

*It does not appear that there is any other thing requisite in the formation of bay salt than to evaporate the sea water with an exceeding gentle heat; and it is even very probably that our common sea salt, by a second solution and crystallisation, might attain the requisite degree of purity.*¹²

The first salt arrived in Sydney in February 1805 and another 20,000 lbs was received six months later. Output in that year amounted to 28,750 lbs, increased slightly in 1806 and again in the following year, but was sharply curtailed and then abandoned in 1808.

2.3.5 Limeburning

Systematic limeburning did not begin in Newcastle until 1808, although the potential of the massive deposits of shells had been remarked by the 1801 expedition and Paterson commented to King:

*the quantity of oyster shells on the beaches inland is beyond conception: they are in some places for miles. These are four feet deep, without either sand or earth. Vessels might lay within a few yards of where they are found.*¹³

It is probable that limeburning was begun in 1808 by Ensign Villiers who needed mortar for the settlement's first gaol, but production was not recorded until the following year when 8,659 bushels valued at £541 were shipped to Sydney.

The limeburners' base was at Newcome Pipers Beach about seven miles upstream from the settlement. The site has not been located, probably because it is covered in silt, but it appears to have been on the shores of Fullerton Cove which was first known as Limeburners Bay. Working from this base the convicts gathered shells on the Stockton Peninsula for transport by boat to Newcastle where they were burned in brick kilns yielding 120 bushels of lime every two days (Map 4).

After burning at 'white heat' the lime had to be screened to remove unburnt shell fragments and this caused considerable difficulty for the commandants. By April 1809 brick portions of the first screen had crumbled putting it out of action until additional bricks could come from the capital. Two new screens had to be provided in 1812, but there were still occasional complaints from Sydney that unburnt shells and dirt were spoiling the lime.

Lime presented serious handling and transport problems to the Newcastle commandants and their overseers of limeburners. As it was produced in the open and the settlement was deficient in storage facilities, rain frequently destroyed large quantities. Casks and bags were used to try to overcome this problem, but these were not always available in the numbers required and, as with coal, storage and transportation caused serious bottlenecks.

The production of lime continued throughout the convict period, being carried on in the vicinity of the wharf and the lumberyard where the kilns, sheds and screens were located.

2.3.6 Shipbuilding

In a settlement which depended entirely upon water transport, the repair and construction of boats and barges had always been important, but shipbuilding was not attempted until 1818.¹⁴ Then, without preliminaries, during a visit in which he also directed that the southern breakwater be commenced, Macquarie 'bespoke a vessel to be built of 60 or 70 tons'. Fortisco de Santos was to have her ready for launching in eight months, but it was not until October 1819 that the *Princess Charlotte* reached Sydney

¹². *Ibid*, p 17.

¹³. Turner, *Manufacturing*, p 18.

¹⁴. *Ibid*, p 21.

for final fitting out. Curiously Morisset's letters do not refer to this activity and it seems likely that Santos brought his shipbuilders to the Hunter where the timber he needed could be provided by the penal settlement and that may have been the limit of the commandant's responsibility.

At least one more vessel was built at the Coal River before the penal settlement closed: this was the *Newcastle*, a government barque of about thirty tons which was completed in October 1821. Closure of the penal settlement brought this branch of government industry to a stop, but small shipbuilding was to remain a feature of riverbank life in this valley.

2.3.7 The Lumber Yard

At the centre of the penal settlement's industrial activity was the Lumber Yard (Map 4) which was aptly described by J T Bigge:

*the labour at Newcastle consists of the common and coarser mechanical operations, that are conducted in a place called the lumber-yard, and in cutting and procuring logs of wood from a distance of 70 miles in the interior of the country.*¹⁵

Moreover, Bigge was supplied with a statement of work done in the Lumber Yard which shows that its smiths produced axes, hooks, hinges, hoes, sets of standards, axle trees, 'pairs of stocks with rivets and cued for wheels', shaft irons and pairs of haymes. Moreover, its nailers were making shingle or lath nails out of hoop iron or nail rod iron, three inch paling or batten nails, flooring brads and tacks.

These products were manufactured in what were known as 'fires' (forges being the modern equivalent) and they appear to have used charcoal as a fuel and bellows to bring the metal to the required temperatures. The iron was imported and the charcoal is most likely to have been made in the bush, that being the current practice in Sydney.

The transformation of Newcastle from a penal settlement to a free town between 1821 and 1823 did not mean the closure of the Lumber Yard. Although work on the breakwater eased, a small party of convicts was retained to work the mines and to carry out other duties from time to time. The Crown continued to work the collieries until 1831 and chain gangs working on the roads in the area also needed tool sharpening services throughout this period.

2.3.8 The Government Buildings

Begun in haste after the rebellion of 1804, the settlement was laid out in an irregular fashion around the axis of High Street/George Street (later Watt Street) which led from the wharf to the commandant's house overlooking the settlement (Map 2).¹⁶ Until its rapid expansion after 1815, Newcastle was appropriately referred to as 'the camp' and its building stock was unimpressive. Bricks were not made locally in this first decade, and most if not all buildings from the first decade were of timber construction.

During the commandancy of Captain James Wallis (1816-1818), bricks were made on the hill and stone began to be quarried from the base of Signal Hill (later Fort Scratchley). These materials were required for the more substantial structures needed for the growing population, in particular a new gaol, an enlarged commissariat store, a new hospital and the settlement's first church.

According to returns made in 1820 and 1821, the Government owned the following buildings in Newcastle: Church, Government House, Parsonage House, Subalterns' Quarters, Assistant Surgeon's Quarters, General Hospital, Gaol, Military Barracks, Main Guard House, Commissariat Stores, Superintendent's House and Store, Watch House, Convict Barracks, Carpenter's Shop, Smiths Shop, Signal House, Farm Cottage, Boat Shed, Lime Shed and 3 small cottages, New Subalterns Quarters, Military Hospital, Hut for the Commandant's boats crew fitted up with berths, Miller's cottage, with out houses for grinding with steel mills, Cookhouse at General Hospital and Gaol, a range of well-bricked saw pits, 285 feet long, and a weatherboarded shed with shingled roof.

Many of these buildings were poorly constructed and within one or two years of completion developed serious flaws. Though J T Bigge in 1820 criticised Governor Macquarie for these problems, there can be little doubt that the difficulty arose from the lack of a competent architect and builder in the

¹⁵. As quoted in Turner, *Convict Settlement*, p 284.

¹⁶. *Ibid*, p 282.

settlement. Nor were there any trained bricklayers and in these circumstances the brick buildings attempted were too ambitious. However, the many weatherboard buildings, mainly barracks, built between 1816 and 1820 were considered by the Commissioner to be more appropriate in style and he praised Major Morisset for the simplicity of their construction. Though Francis Greenway, as civil architect in Sydney was then erecting St Matthew's Church at Windsor, perhaps his greatest achievement, the buildings at Newcastle show no signs of his influence and were of such poor construction that none of them remains.

2.3.9 The Private Buildings

From 1804 until 1820 most of the convicts were expected to live in privately owned huts, constructed of timber and plaster with bark or shingle roofs.¹⁷ The property of trusted convicts whose tenure depended on the commandant's good opinion, these huts did not long endure the penal settlement. By 1820 there were 71 dwellings of this kind, but then policy changed and barracks were built to accommodate the majority of the convicts.

Both government and private buildings were threatened by the realignment of streets in 1822, for many of them were found to intrude onto the new streets and to cross the boundaries of the new allotments. The parsonage, for example, which was completed in 1820, intruded into Newcomen and Church Streets, and the superintendent's house and store intruded into Scott and Pacific Streets (Map 5).

2.3.10 Military and Maritime Activities

From the beginning of settlement, it was clear that the estuary of the Hunter River was not a satisfactory port, and by 1816 there had been at least four shipwrecks. (Map 5) A signals system for warning ships when it was unsafe to try to enter the river mouth was established on Signal Hill, and by about 1816 a crude lighthouse in the form of a coalburning beacon had also been established there with quarters for the signals staff.¹⁸ On this hill, too, the first fort was constructed in 1821 by Lt E C Close. It was a battery of cannon placed to defend the entrance to the port: the guns were still there in the 1850's.

2.3.11 Contact with Aborigines

As the settlement had been established in the middle of the territories of two Aboriginal tribes, Aborigines were to come into close contact with it.¹⁹ The Worimi, from the Port Stephens area, were frequent visitors and the Awabakal, the people who lived on the southern shore of the Hunter estuary, were affected even more. They had been living on the coast in the Newcastle Region for at least 14,000 years before Captain Cook sailed up the Australian east coast. Over that long period they had practised a cooperative, hunting-food gathering lifestyle which left them ill-equipped to deal with the acquisitive, individualistic whites.

During the convict period the Aborigines were not deprived of their tribal lands on the massive scale that occurred elsewhere but they were already falling victim to European diseases and to the brutality of the whites, who had been brutalised themselves by the transportation system. The Aboriginal women were exploited and men who attempted to defend them were beaten by the convicts. On the other hand, the blacks skilfully recaptured many escaped convicts in return for rewards of tobacco, corn and blankets. This would not have endeared them to the convicts and it added to the conflict between the races. However, the earliest settlers in the Maitland area claimed to be on 'very good' terms with the natives, despite the Aborigines reluctance to work on the farms and their appetite for the farmers' corn.

¹⁷. *Ibid.*

¹⁸. T Callen, *Bar Dangerous*, Newcastle 1986, p 185.

¹⁹. For Aboriginal contacts with settlers see Turner, *Convict Settlement*, passim, and N Gunson (ed), *Australian Reminiscences and Papers of L E Threlkeld*, Canberra, 1974, pp 1 - 41.

2.4 Newcastle as a Government Town, 1823-1853

2.4.1 The Town Stagnates

Governor Lachlan Macquarie's decision to open up the Hunter Valley to free settlers necessitated the closure of the penal settlement, and during 1822 most of Newcastle's convicts were moved away to Port Macquarie. As the town was expected to serve its hinterland as a port, a government surveyor, Henry Dangar, was directed in 1823 to prepare a town plan on the site of the convict settlement.²⁰

Dangar imposed a regular grid plan on the rather haphazardly arranged settlement of 1804-1823. Making provision for a town of 190 allotments with a church enclave and market place at its centre, Dangar established the layout of central Newcastle as we know it (Map 6). The existing streets were realigned and most of them were renamed. At this time much interest was being taken in the discovery of steam and six of the streets were named after engineers who had contributed in this field.

The official vision of Newcastle as the major town and port of the developing Hunter Valley was sadly defective as Maitland-Morpeth was destined to fulfil this role in the pre-railway age. Private interests did not enter the coal industry until the end of the decade, and the Crown was forced to continue its coal mines, keeping up to a hundred convicts retained for that purpose and to maintain roads. The gaol also remained in use, serving the northern districts of the colony, but the buildings erected before 1823 were not maintained and there were no new government buildings until the 1840's.

2.4.2 The Australian Agricultural Company Stimulates Coalmining

It was the development of steam navigation which began to carry Newcastle out of the doldrums in the 1830's.²¹ Firstly the AA Company (capital 1,000,000 pounds) which had been chartered by the British Parliament in 1824, entered the coal industry with intention of exporting coal to India for use by the steamers of the East India Company and then steamships began to appear on the coast of New South Wales, creating the first significant commercial demand for coal. To permit the Company to develop a new colliery and to provide it with adequate reserves, the British Government allowed it to select 2000 acres of coal land in any part of New South Wales. After searching unsuccessfully in the Sydney district, the Company made its selection on the western boundary of Newcastle using land set aside for the future expansion of the town. This could be regarded as the most important event in its Nineteenth Century history as it had profound effects on the future expansion of the town.

The entry of the AA Company into coalmining transformed the industry. Its first mine was equipped with two steam engines (the first to be used for mining purposes in the colony) for raising coal and pumping out water and its coal was delivered to the port by an inclined plane which, though it relied on gravity for its power, has been recognised as the first railway in Australia (Map 7). Moreover, the casting of certain metal parts for the steam engines may well have been the first occasion that such work was undertaken in this country.

2.4.3 Manufacturing's Slow Development

The manufactures of the penal settlement came to an end after 1822 and were slow to reappear because of the stagnant state of the town.²² First to try was Gregory Blaxland, who was well established in salt manufacture on his Newington Estate on the Parramatta River. He sought to improve his fuel supplies by opening a new works at Newcastle about 1826 on a one-acre site on the elevated sea coast close to the early government coal mines on Signal Hill. On this unlikely spot, claimed Blaxland, over £1500 was spent to establish a manufactory which was abandoned soon after it came into production.

²⁰. J W Turner, 'Newcastle's First Fifty Years' in L E Fredman (ed), *The History of Newcastle* (forthcoming), Cambridge Press, Newcastle.

²¹. Turner, *Coalmining*, chapter 3 and *Manufacturing*, chapter 4.

²². Turner, *Manufacturing*, p 23 and P A Pemberton, *Pure Merinos and Others, Shipping Lists of the A.A. Company*, Canberra, 1986, p 38.

Gregory Blaxland's loss did not deter the AA Company which began to prepare for the manufacture of salt at Newcastle in 1831 in order to utilise small coal which was considered unsaleable. The saltworks it erected was never very productive and the venture failed commercially.

Engineering also began in a small way when the AA Company established a workshop at the eastern end of its grant to service its collieries. There was a hiatus then, until the coming of the railways, first the privately-owned colliery lines and then the Great Northern Railway.

The only other significant development before the gold rushes was a product of the 1840's depression. The Dangar Brothers opened a meat canning factory at Honeysuckle Point in 1848 in order to improve the returns on their pastoral estates. Flourishing until about 1853, the factory produced canned beef and mutton for export to the United Kingdom where it was used on ships of the Royal Navy. This was possibly the first successful meat cannery in Australia.

2.4.4 The State of the Town to 1846

The AA Company brought stability and efficiency to the town's basic industry, but by the terms of its land grant the Company did not have the right to alienate any of its land and the town was restricted to the land east of Brown Street until the early 1850's. This was of no great significance at that time because there was very little construction going on. Several hotels were opened and the first stores were built around Watt Street, but overall growth was so slow that Charles Wilkes described the town in 1839 in these terms:

*The town of Newcastle is a small village of seventy or eighty houses, built on the side of a hill; it contains two taverns and several grog-shops, a jail, convict stockade, hospital, court-house, and a venerable old-looking church. On one of the neighbouring hills is a flagstaff, and on another a windmill. The business of a coal-mine and that of the building of a breakwater for the protection of the harbour, give the place an air of life and animation.*²³

2.5 Coalmining Booms and Newcastle Responds 1853-1880

2.5.1 The Expansion of Mines and Railways

In 1847 the AA Company agreed to abandon its protected position in the coal industry in return for the right to sell its estates. As a result new coal mines opened on the Burwood estate south of Newcastle and at Minmi, Wallsend, Tomago, Lambton and Waratah and villages appeared in each of these locations.

These mines began to ship coal through the Port of Newcastle, contributing to its development and fostering commerce in Newcastle, itself. Their miners also visited the town for shopping and entertainment, and as the coal industry expanded and more mines were opened up, this process was intensified. Coalmining also generated industries relating to shipping, railways or the mines themselves. Ships chandleries, ships butchers, ships biscuitmaking, sailmaking and shipyards are examples of these businesses. Engineering was also important and the smelting of metals, copper (from 1850), tin (from 1872), and silver-lead-zinc (from 1895), was a significant local industry²⁴ (but not situated in CBD for transport and environmental reasons).

2.5.2 Port Development

The shape of the Port of Newcastle today is very different from the estuary discovered by Lieutenant John Shortland in 1797 because of large-scale reclamation schemes.²⁵ Originally the shoreline

²³ C Wilkes, *Narrative of the U.S. Exploring Expedition 1838-1842*, London 1845, Vol II, p 245.

²⁴ Turner, *Coalmining*, chapter 3 and *Manufacturing*, chapter 4.

²⁵ For the development of the harbour see T Callen, *Bar Dangerous*, chapter 23, and J Armstrong (ed), *Shaping the Hunter*, Newcastle, 1983, p 88, R G Preston, *The Great Northern Railway*, Sydney, 1982, pp 18-19.

encroached on the southern side of the future Scott Street, covered part or all of the present Newcastle Railway Station site, cut across the site of the customs House and followed the line of Bond Street and Stephenson Place. This shoreline did not change significantly until the first foreshore reclamation began east of the Watt Street wharf in the 1840's and during that long period of four decades, the wharf built at the foot of Watt Street was the focus of the settlement's transport system (Map 2). It ceased to be used for coal loading when the AA Company opened its 'A' Pit in 1831. Using an inclined plane, perhaps the first railway in Australia (Map 7), the Company removed coal loading from the Watt Street area. The opening of the Burwood Estate mines in the 1850's created another set of coal loading staithes to the east of the AA Company's installation and coal loading returned to the Watt Street area after the Great Northern Railway was continued past Watt Street onto reclaimed land in 1858.

This reclamation from the estuary permitted the construction of extensive railway yards and the Queens Wharf (Map 8). After the development of the Carrington coal loading system in the 1870s, coal handling on the southern harbour foreshores was gradually phased out, but Queens Wharf continued to handle all general cargoes until the construction of the Merewether and Lee Wharves at the western end of the harbour early this century.

2.5.3 The Influence of the Railways

The prime influence on the development of Newcastle was the estuary of the Hunter River. Access to deep water loading for the ships that carried coal to intercolonial and international markets was the city's *raison d'être*. However, railways were also influential and their location helped to shape the CBD.²⁶ When the AA Company chose to locate its grant adjacent to the town, the Government was careful not to allow it to monopolise the Newcastle waterfront. Hence its 2000 acre grant included only enough harbour land for its coal loading plant and associated offices, workshops, etc (Map 7).

As it happened, this portion was crossed by the road to Maitland and it was inevitable that, when a railway was built to link that centre with the Port of Newcastle, it would also have to traverse the Company's land. Moreover, as the Company's grant cut off future colliery proprietors, establishing to the south and west of Newcastle from the deep water section of the Port, they, too, would have to cross its grant. The eventual result was a concentration of railways in one location with unfortunate consequences for the town, the Company and its rivals.

Although the AA Company resisted, the Government used its legislative powers to open up the Company's corridor to the Burwood coal producers in 1851 and in 1854 the Hunter River Railway Company acquired land for its intended Honeysuckle Point terminus. These lines and the AA Company's own railways from its D and F pits all crossed the Maitland Road near its junction with Lake Macquarie Road, causing a serious bottleneck.

With the port and railway conveniently linked, timber yards and joineries began to flourish on the waterfront (John Ash & Sons, 37 King Street and Steel Street and R Breckenridge at 31 Hunter Street West) and so did engineering works and foundries. Rodgers Foundry opened in the 1850's on the future town hall site and Gibsons was set up in Church Street West (later King Street) while E E Robbins worked at 103 King Street.

In the meanwhile the Great Northern Railway had necessitated the construction of maintenance facilities at Honeysuckle Point and they were in operation by 1862. Part of a large, complex railway yard (which included a mortuary station serving Sandgate Cemetery until 1933), these workshops were an important source of employment and hence business for Hunter Street shopkeepers.

So prolific a profession was engineering in Newcastle that the 1901 *Newcastle Federal Directory* listed more than 80 mechanical engineers, the great majority practising in the CBD.

In the nineteenth century large scale manufacture of food was almost absent from Newcastle with two notable exceptions, the biscuit factory of William Arnott and Wood's Castlemaine Brewery.²⁷ Arnott originally settled in West Maitland, but after four floods in quick succession he moved to Newcastle in 1865 and opened a bakery in Hunter Street. Expanding his business considerably during the next decade, he built a factory in Melville (now Union) Street in Cooks Hill in the 1870s. The factory was of

²⁶. Pemberton, *Pure Merinos*, 19.

²⁷. Turner, *Manufacturing*, chapter 3.

two storeys, had an area of 2,800 square feet, and provided for the manufacture of biscuits, bread and confectionery. Further extensions were made, and within three years the steam biscuit works employed between 40 and 50 people. The expansion of his market to Sydney saw the enterprise grow so much that by the 1890s 300 people were employed.

From a small wine and spirit merchant's business in the 1850's, the Wood Brothers, John and Joseph, prospered to the point where they were able to establish, in partnership with Melbourne interests, the Castlemaine Brewery on a Hunter Street West site bought from the AA Company. Assisted, as Arnott's had been, by the trade of the port as well as the opportunity to exploit the Great Northern Railway, the Woods built up a large business throughout the northern districts and, when a rival brewery was established in Wood Street, they closed it down.

Slender as this manufacturing base was, it was to be severely affected by the opening of the rail link to Sydney in 1889 and the 1890s depression. No longer were local manufacturers protected from Sydney competitors and the need for maintaining separate factories to serve the Great Northern Railway was much reduced. It was still necessary, however, to distribute goods via the railway and wholesaling continued to develop, leaving a rich legacy of warehouses in the CBD. Wholesalers, usually preferring the eastern end of the city for its proximity to the port, included Frederick Ash (1855), J Burke and Sons (1877), J Ireland (c 1877), R Hall and Son and David Cohen.

2.5.4 Development in the Central Business District

When the AA Company arranged its first land sales in 1853, they were very successful.²⁸ There were sales to miners and other AA Company employees on both sides of Darby Street but along Blane Street (later Hunter Street West) the lots were bought at higher prices (about 50%) by businessmen including butchers, shoemakers and publicans. This tended to become the pattern of future sales, but Darby Street was also favoured by hoteliers and Blane Street contained a high proportion of residences, albeit some were combined commercial-residential premises. By 1858 many substantial residences had been erected on the Hill, which was the most prestigious area.

2.6 Newcastle in the late Nineteenth Century, 1881 Onwards

2.6.1 The City Centre

By the 1880s Newcastle had taken on the appearance of a prosperous and busy port-city, proclaiming its importance in an annual almanac and its first detailed business directory.²⁹ (Plates 4, 5)

NEWCASTLE, the great emporium of the coal trade of the southern hemisphere and second city of the colony of New South Wales, is situated in Lat. 33°, 55'20" south, and 151°, 50'25" east long. The port of Newcastle, in a commercial point of view, is second only to Port Jackson; and in fact, its tonnage has repeatedly been in excess of that of Sydney itself. It is the inlet of the River Hunter, and is becoming the great port of import and export for the immense mineral, agricultural and pastoral area contained in the Hunter and New England districts.

Gray and Milton's *Business Directory Almanac Diary and Year Book* for 1885, substantiates the claims made by its competitor by providing a list of all businesses operating in the CBD. This reveals that the principal streets had a few private residences but that Hunter and King and their cross streets were largely given over to retailing and commercial offices. Although these businesses depended almost entirely on the coal industry and the transport systems which serviced them, several manufacturers were still operating in the inner city area, notably the Castlemaine Brewery, Arnotts Biscuit Factory, Rodger's Engineering, Moore's Cordial Works, Ash & Sons Timber Mill, Gibsons Foundry, Proctor's Coach Factory and the Railways' Honeysuckle Workshops.

²⁸. Pemberton, *Pure Merinos*, p 39.

²⁹. W H Shaw (ed), *The Newcastle Directory and Almanac for the year 1881*, Newcastle, 1881, reprinted Sydney, 1978.

After the terminus of the Great Railway was moved to Watt Street in 1858, the eastern section of the city was confirmed as its commercial centre, and the development of the Government Tramway network after 1887 strengthened it.

Opposite the Railway Station, which was impressively rebuilt in 1872, the main hotels, *Terminus*, *Metropolitan* and *Great Northern* flourished side by side, with the first of these advertising:

*Families, business men, visitors from the country and metropolis will find the establishment a desirable stopping place, being situated in the principal street of the City, in close proximity to the wharves and railway station, and at the same time commanding a magnificent view of the harbour.*³⁰

In Newcastle East, as well as the good quality residences of business people, there were many boarding houses for country people taking holidays by the sea, and on public holidays this end of the city was invaded by hundreds of day visitors using trains and trams to reach the seaside. The tram terminus was established on the old gaol site overlooking the beach.

2.6.2 The West End Develops

With the eastern end already built up and the railways occupying the northern side of Hunter Street, businesses were forced further and further west, producing a surprisingly long main street for a city of 69,000 people (Lake Macquarie Shire and the various Newcastle Municipalities in 1911).³¹

The largest retail stores, including Winn's (1878), Scott's (1890) and Mackie's (1896) as well as the principal professional firms such as bankers and lawyers prospered at the eastern end of Hunter Street. But Light's furniture store moved from Carrington to Hunter Street West in 1894 and Marcus Clark's of Sydney opened a branch at 711 Hunter Street. Then came the Co-operative Society which came to be known as The Store, an organisation that was founded in 1898 and grew rapidly between 1905 and 1914.³² From 1438 members in 1911, it expanded until by 1930 there were nearly 9000 members and the Co-operative had become a major force in Newcastle's retail sector.

Retailing development on this scale attracted other commercial activities, the branch of the Commercial Bank of Australia (later NSW) at the Bank Corner is an obvious example, and government services (police station and post office) also followed.

Despite all the varied uses of the CBD site for industrial, business, services and residential uses during the second half of the nineteenth century, it was the commercial element which proved dominant. The combination of growing population pressures in the Lower Hunter Valley and a communications system based on Hunter Street and Darby Street made the Hunter-King Street complex the retail centre of the region. Even the development of prosperous shopping centres in Hamilton and Mayfield early this century under the stimulus of the steel industry did not counter the attractions of the older business centre. (Plates 6, 7)

2.6.3 The Development of Public Utilities

The choice of Watt Street as the site of the first settlement was influenced by the springs of fresh water in its vicinity. Flowing from the high land to the south, this water replenished the wells the town depended on for many decades. One well, situated to the west of Signal Hill supplied both the gaol and the Stockade in the 1840's and others further to the west were responsible for the siting of the market square in the 1822 Town plan (Map 6).

Water reticulation began following the completion of the Walka Water Works in 1887 and water was reticulated from reservoirs in Tyrrell Street and near the Obelisk.³³ A piped sewerage system was introduced c.1900.

³⁰. Advertisement from *Newcastle Chronicle*, nd 1869.

³¹. J C Docherty, *Newcastle, the making of a city*, Sydney, 1983, p 4.

³². P Hampton, *The retail co-operative societies of the Lower Hunter Valley*, History Honours Thesis, University of Newcastle, 1981, pp 43-44.

³³. J Armstrong, *Pipelines and People, the history of the Hunter District Water Board*, Newcastle, 1967, p 221.

Electricity generation for lighting the city streets was pioneered by the Newcastle City Council in 1892 when it installed a small plant in Tyrrell Street, presumably in the area of Nesca Park.³⁴ The Government railways and tramways were also involved in electricity generation and one of the principal buildings still remains in Hunter Street.

Gas manufacturing began in the CBD area as the Newcastle Gas and Coke Company, formed in 1865, bought its large site in Parry Street from the A A Company in 1869.³⁵ The Railways Department also made gas in a small plant close to the Newcastle Railway Station.

The electric telegraph reached Newcastle in 1861, being administered from its specially constructed offices in Hunter Street. It played a vital role in the conduct of the intercolonial and foreign coal trade.³⁶ When telephones were introduced, about 1890, the switchboard was also located in the Electric Telegraph Office. By 1896 there were four switchboard operators and 88 subscribers.

2.6.4 Residents of the Newcastle CBD

The directories of the 1880s reveal the population of inner Newcastle in terms of occupation.³⁷ It is clear that by then the great majority of miners lived in the mining townships and not in the CBD. Consequently the residents of inner Newcastle should be seen as townsmen engaged mainly in the service industries of a large port city and their families. Few were rich by the standards of their day, but many were prosperous and the houses they built on The Hill, in Cooks Hill and in Newcastle East confirm their status. There were also many who were relatively poor and they rented accommodation in the inner city in order to be close to their work as shop assistants, railway workers, labourers, etc.

2.6.5 Newcastle as an Administration Centre

Maitland overtook Newcastle in the 1830's, and administration functions tended to be concentrated in the Maitland for about 30 years from that time, eg. courts, lands department, police headquarters, gaol etc. When this trend was reversed there was no government land west of Brown Street for use for administrative centres, hence their predominance at the eastern end of the town. When the government needed more land for post office, police station, trades hall, technical education, etc, it was forced to use the narrow strip of railways land on the north side of Hunter Street or buy back lots it had once granted to the AA Company, eg Hunter District Water Board headquarters, Town Hall and Nesca House.

2.6.6 Entertainment and the CBD

Entertainment has always played an important part in the commercial life of the city. The first centres were the hotels, some of them equipped with long rooms which were used for balls, banquets, public meetings and even religious services. The first plays were performed in the 1850's in the hotels or such public buildings as the Court House, now the site of the Newcastle Post Office. Fortunately the Victoria Theatre building in Perkins Street still survives and as one of the city's earlier theatres could be revived. Roller skating was an important entertainment late last century and several rinks were in use: Steel's Garage and the Palais site are two examples. Boxing was also a favourite sporting attraction and the Water Board's site in Hunter Street was an open air boxing arena. The Newcastle Stadium, now the Markettown Shopping Centre was also a very significant boxing centre.

As a busy port Newcastle's commercial centre benefited from the custom of tens of thousands of sailors each year. When the foreign coal trade was at its peak (1860-1914) large sailing ships were always present in the harbour awaiting their turn to load. These ships often had to wait for several months and, though they did not retain their crews all this time, there was always a large 'floating' population in the city. These sailors patronised the hotels and brothels that were a feature of the inner city area. They also utilised the hostels, missions, etc established by various churches in proximity to the port and one of these survives at 88 Scott Street.

³⁴. Newcastle City Council, *Newcastle Town Hall Souvenir*, Newcastle, 1929, p. .

³⁵. Register of land alienated in Newcastle, AA Company Archives, Noel Bullin Archives, Australian National University, Canberra.

³⁶. J W Turner, 'Australia's first great coal export trade' in *The BHP Journal*, Winter 1971, and K H Burley, 'The organisation of the overseas trade in N.S.W. coal', *The Economic Record*.

³⁷. Shaw, *Newcastle Directory*, *op cit*.

2.6.7 The Development of the Open Space Network

In the eastern end of the CBD, the original Government town, certain open spaces (eg the Market square) were allowed for, and there was a good deal of uncommitted Crown land to the east (the sandhills), the south (the Shepherds Hill area) and the west (the land later granted to the AA Company). However, most of the eastern area was granted away to individuals in the 1820's or leased to the Scottish Australian Investment Company about 1850. Although the Company eventually stabilised the shifting dunes and developed the east end from the 1870s, the city did manage to create Pacific Park (one and a half acres), Fletcher Park and Parnell Place.

King Edward Park (originally known as the Reserve) was seen as a park in the convict settlement when Commandant J T Morisset had the first walks and a baths constructed there. When, only a few years later, the AA Company selected its grant, the reserve was not included, possibly because it was already recognised as a recreational area or because it did not conform to the Brown Street-The Terrace boundary line of the grant. In 1865, this area of 38 acres, already reserved for recreational purposes, was vested in the Borough council which began to plant lawns and trees there shortly afterwards.

From the area granted to the AA Company, the city also fared quite well in the creation of open spaces. The Company dedicated seven areas for public purposes from its grant of slightly less than 2000 acres: some of these impinge on the study area. They are West End Park (later Birdwood Park) (1890, 3 acres) and Centennial Park (1890, 5 acres).

2.6.8 Religious and Educational Themes

After the end of the penal colony the government had encouraged the Church of England, the Catholic Church, the Presbyterians and the Methodists by granting sites in the original township, and the first two of these had acquired large sites of potentially great value. In the second half of the century the Salvation Army, which began its work in Newcastle in 1883, built its first citadel in Auckland Street. By 1922 there was a new citadel and young people's hall on the corner of Hunter Street and Jubilee Lane, but a few years later the Army relocated once more, this time to the corner of King and Gibson Streets. Its five storey hostel (later known as the People's Palace) was erected before 1929 at the rear of its King Street Citadel.

Finding their St Andrews Church in Watt Street too small, the Presbyterians sold part of its large site and bought the Laman Street property where St Andrews now stands. They also opened the Chinese Presbyterian Church in Devonshire Lane, a location chosen to suit the Chinese whose businesses centred around Steel Street.

After using the Oddfellows' Hall on the corner of Laman and Darby Streets for many years, the Newcastle Baptists bought their Laman Street site in 1885 and the Tabernacle was in use by 1890. The Congregationalists also used hired premises before building in Brown Street in 1853.

The Methodists progressed through two other churches before building the Central Methodist Mission, complete with Seamen's Mission and Social Hall in King Street in 1902. At the western end of the CBD following the establishment of the Sisters of Mercy in 1889, the Catholic Church built its St Aloysius Church and school complex in 1916.

For the same reason that the early churches began in the original government town, their schools also tended to be established there. Later, when government schools began to appear, they were usually not situated in the western portion of the CBD. The land there was in private hands and as it was a commercial area, the high cost of acquiring a site acted as a deterrent. Nevertheless, a public school was opened in Union Street, Cooks Hill in 1885 and the pioneering technical college, which began as a school of mines, had its start in Hunter Street in 1896 on land obtained from the Railways Department.

2.7 Historic Precincts

The Newcastle Central Business may be divided conveniently for the study of its archaeology into three historic precincts or zones. As there was only one farm west of Church Hill in the penal settlement period, the land between that hill and the coast is the only area of interest for the convict era (1804-1822). The location of the farm (Map 5) established in the vicinity of Cottage Creek, cannot be determined precisely; there is no evidence of any substantial buildings there (one cottage built as a summerhouse for the commandant was later demolished) and the area has been extensively built over and reclaimed. That portion of the CBD east of Church Hill, therefore, has a particular archaeological significance for the early period as well as importance for its later commercial, residential and industrial developments.

The AA Company grant, the south western portion of the CBD bounded by Brown Street, Hunter Street (south side) and Gordon Avenue has prime industrial significance for the Company's own mine and railway developments and for the railway linking the collieries of the Burwood Estate to the port. As the Company alienated this section of its grant, post 1853, it began to be used for a variety of industrial, commercial and, to a lesser extent, residential developments of archaeological interest.

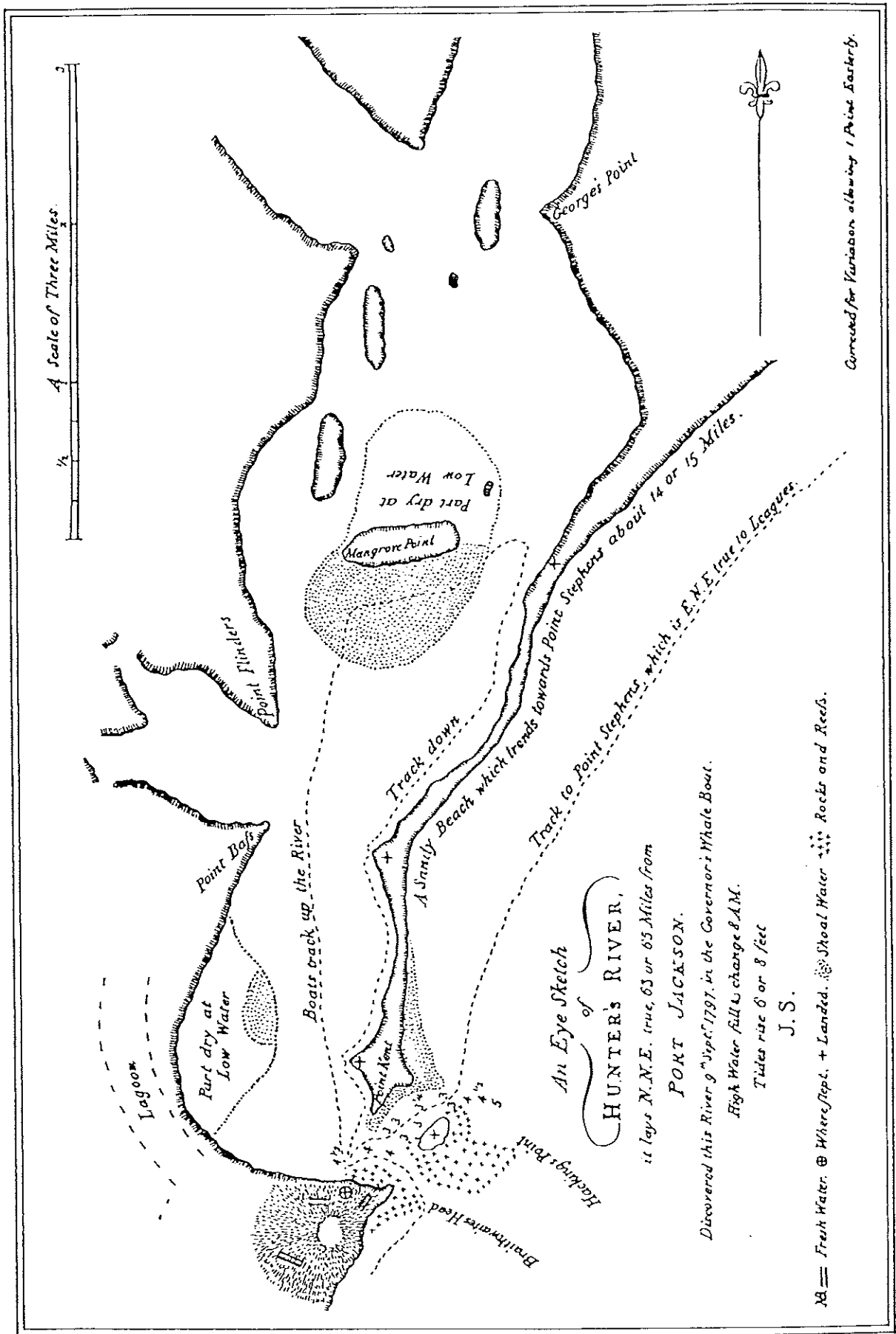
The third area, the harbourside strip from the western side of Watt Street to Hannell Street remained in Government ownership (with the exception of the small AA Company enclave) and this, plus its location on the edge of the port, moulded its development as an industrial, commercial district with a government services element.

2.8 Conclusion

The Newcastle CBD has a long and varied history as a commercial, industrial and residential centre. It shares with several other large Australian cities a seaport heritage, but it is distinctive and even unique in other ways. Its close link with coalmining and steelmaking differentiates it from all other cities, with the possible exception of Wollongong although it did not experience the foreign coal trade which was centred on the Hunter.

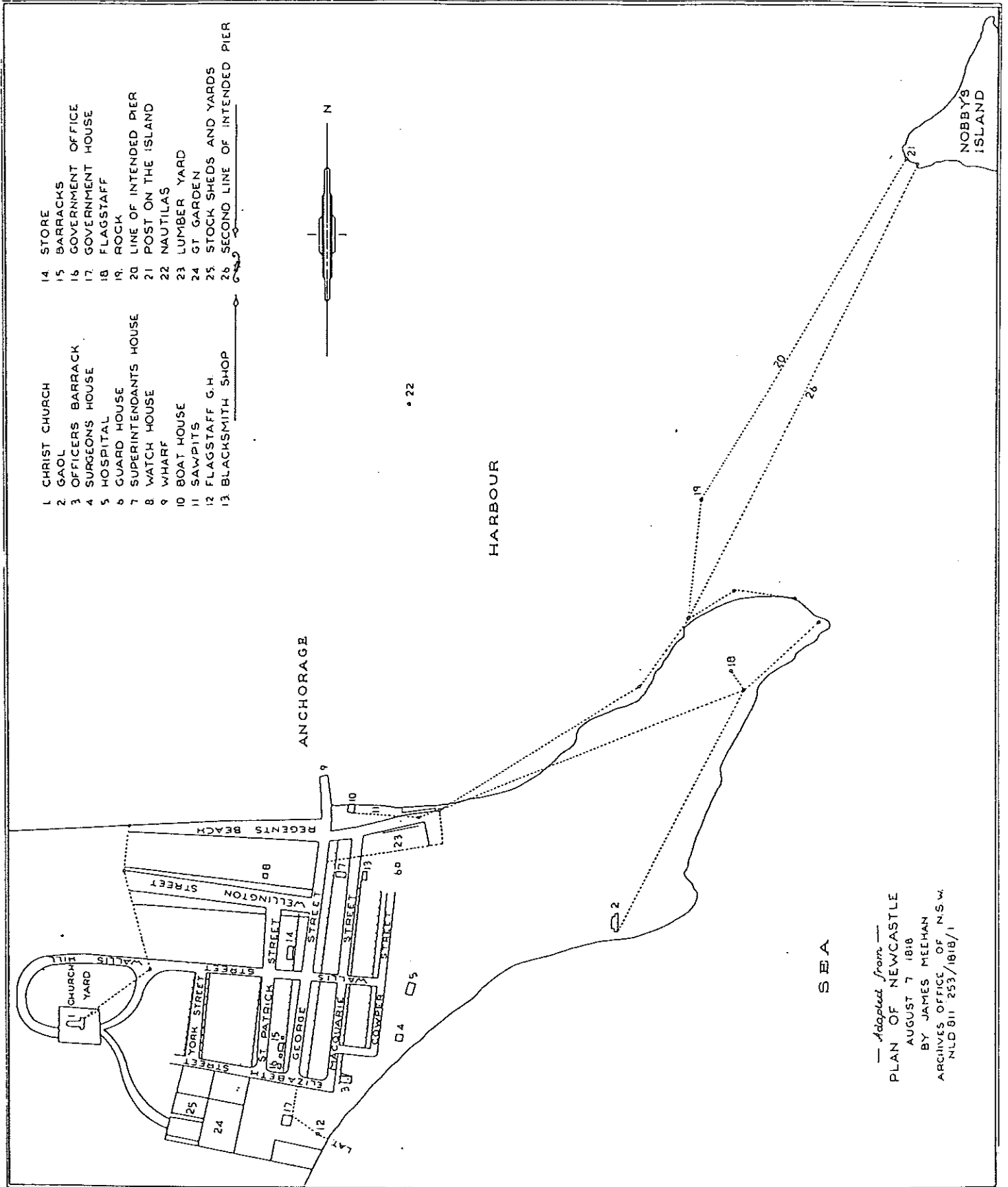
As a non-capital city, Newcastle is also distinctive and its working class nature sets it apart even further from other large Australian cities. It would also be difficult to cite another CBD of the size of Newcastle which was owned in large part by a single company which continued to play a significant role in the development of the city for over a century. The impact on it's development of geographical, technological and political forces also contribute to Newcastle being one of Australia's most intensely developed and historically intact cities.

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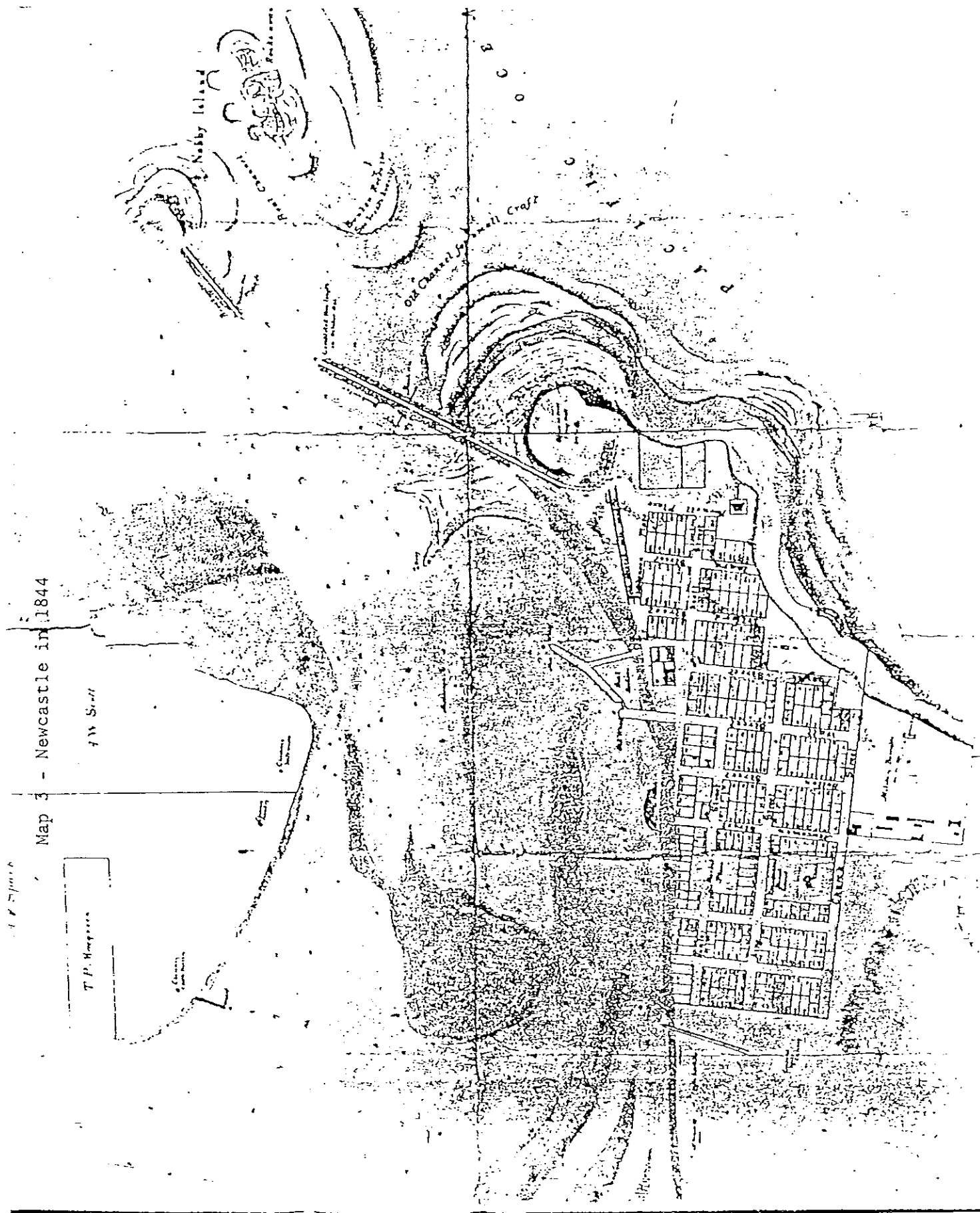


Lt. John Shortland discovers Hunters River, 1797.

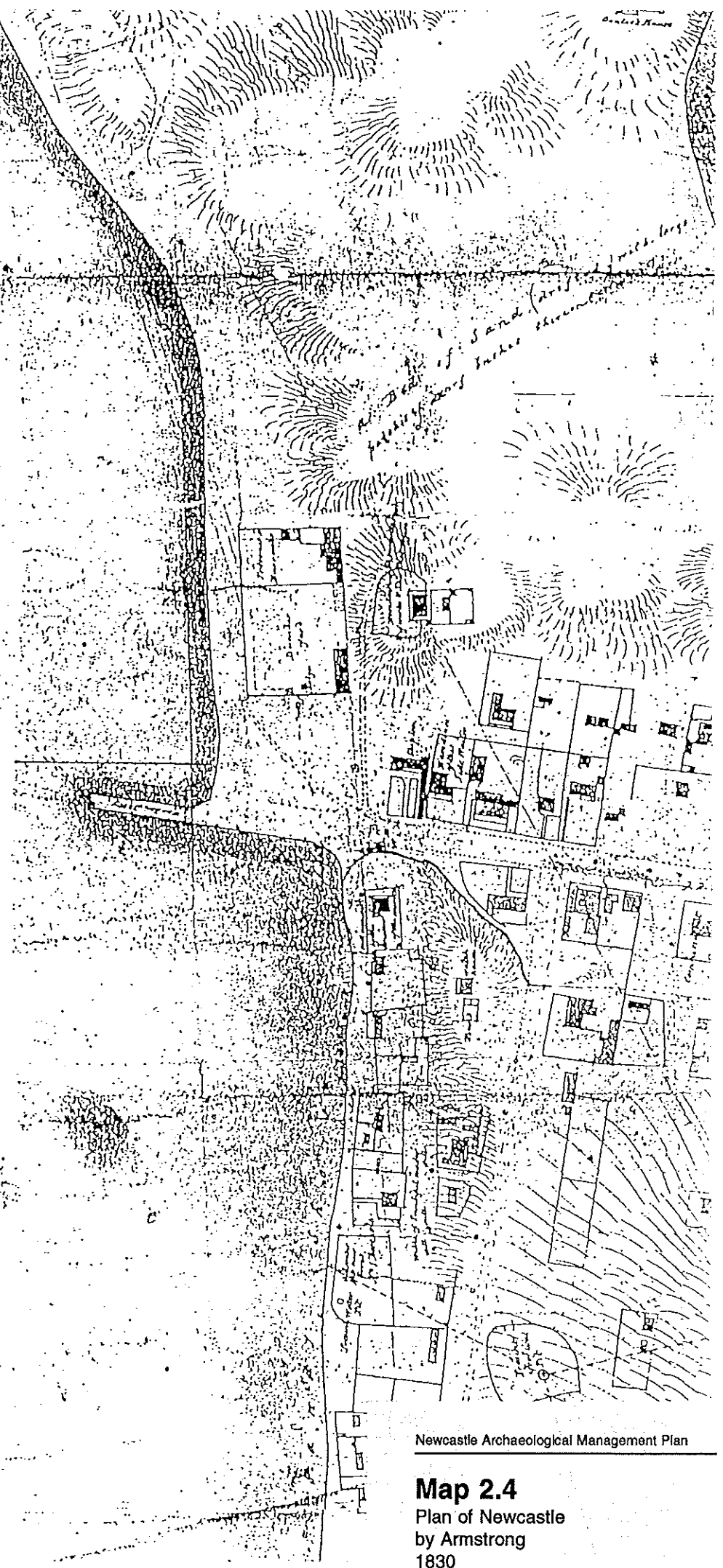
Map 2.1
 Sketch of Hunter's River
 1797



Map 3 - Newcastle in 1844

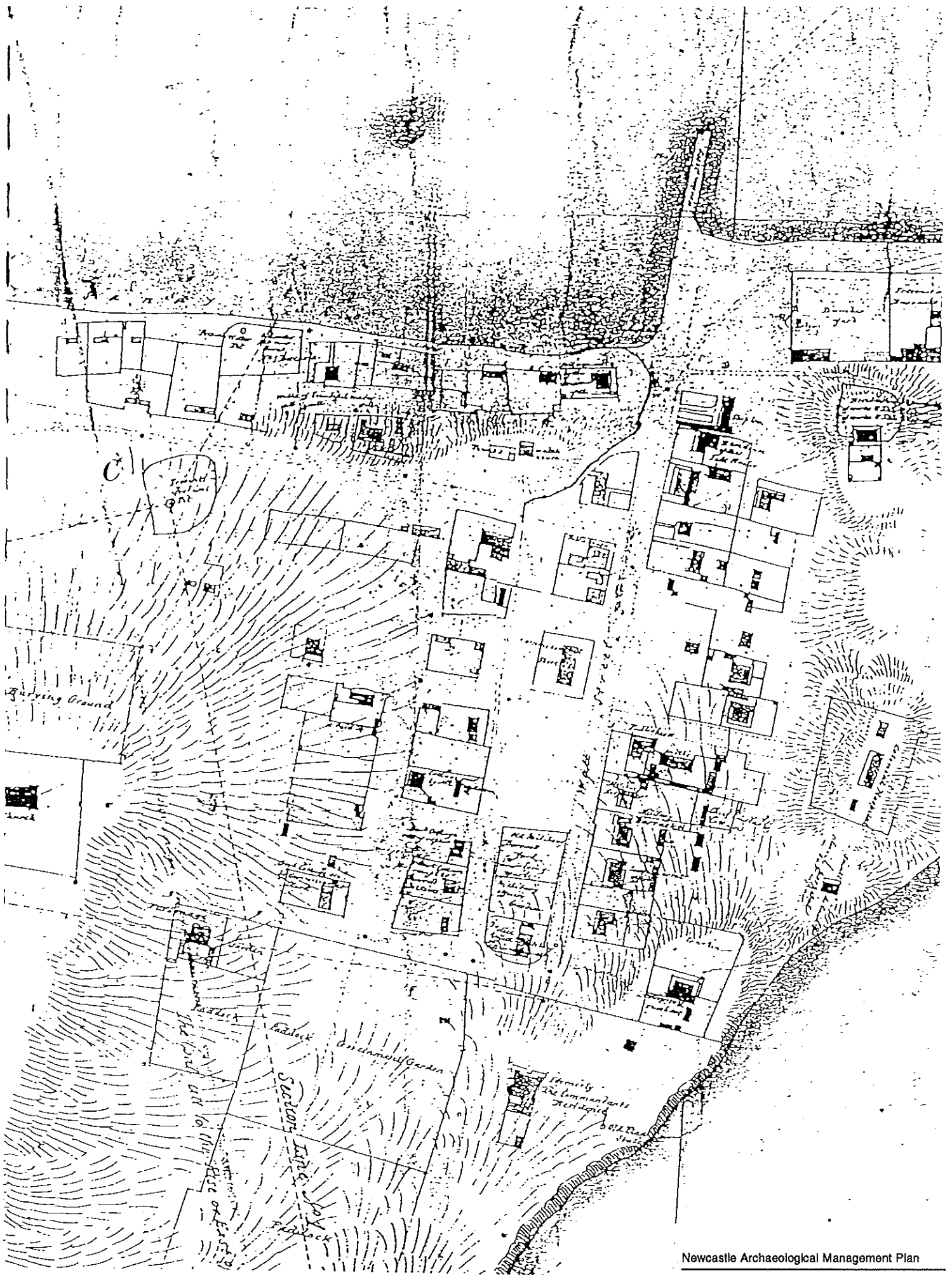


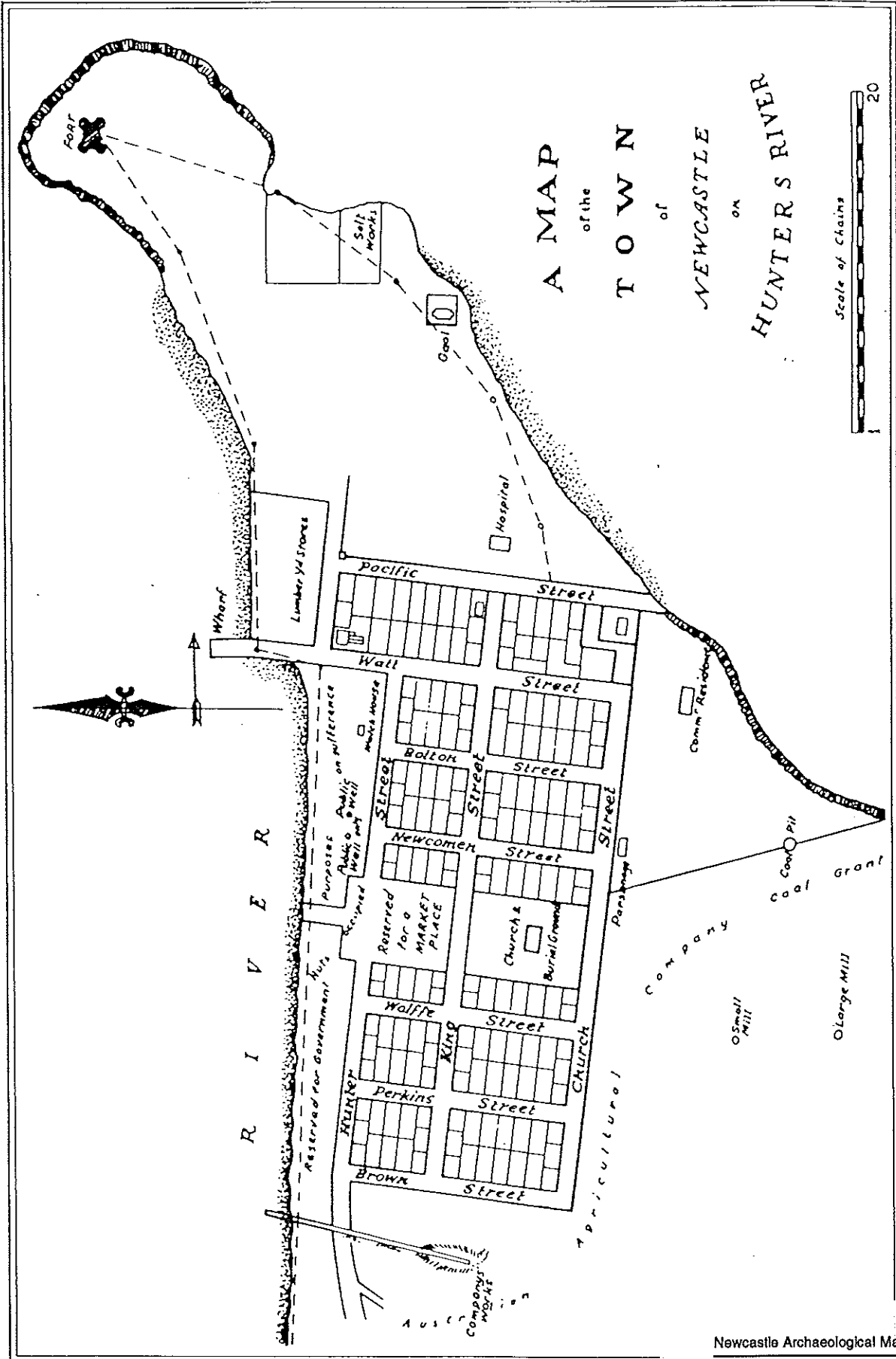
*Plan of The Town of Newcastle in New South Wales, showing its present actual state
 with part of the adjoining Country, and The Coal Works, of The Australian Agricultural Company,
 from a Careful Survey in 1830, by Mr. Armstrong.*



Newcastle Archaeological Management Plan

Map 2.4
 Plan of Newcastle
 by Armstrong
 1830





Map 2.6
Plan of Newcastle
c. 1830

Newcastle about 1830, note the present street names were already in use.

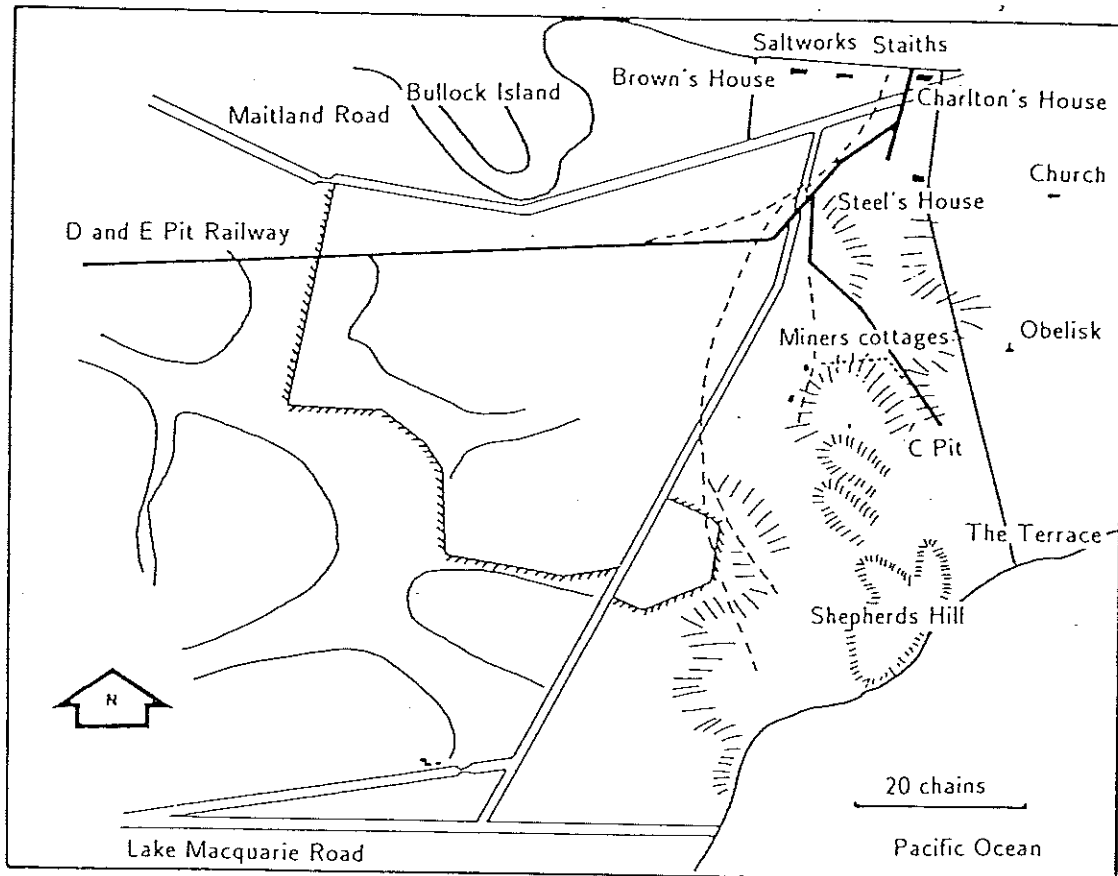
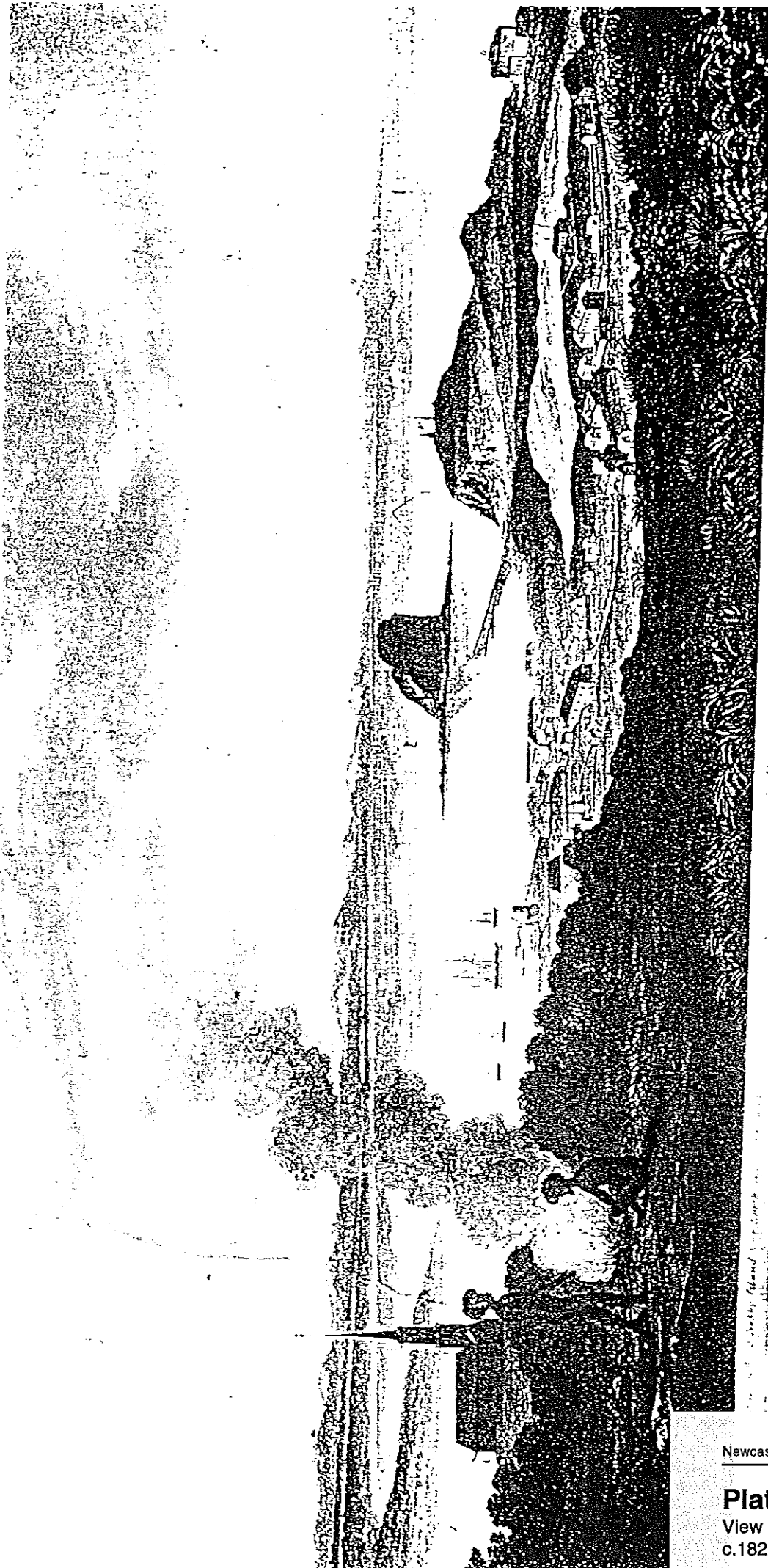


Figure 6-2: (East) Newcastle in 1853

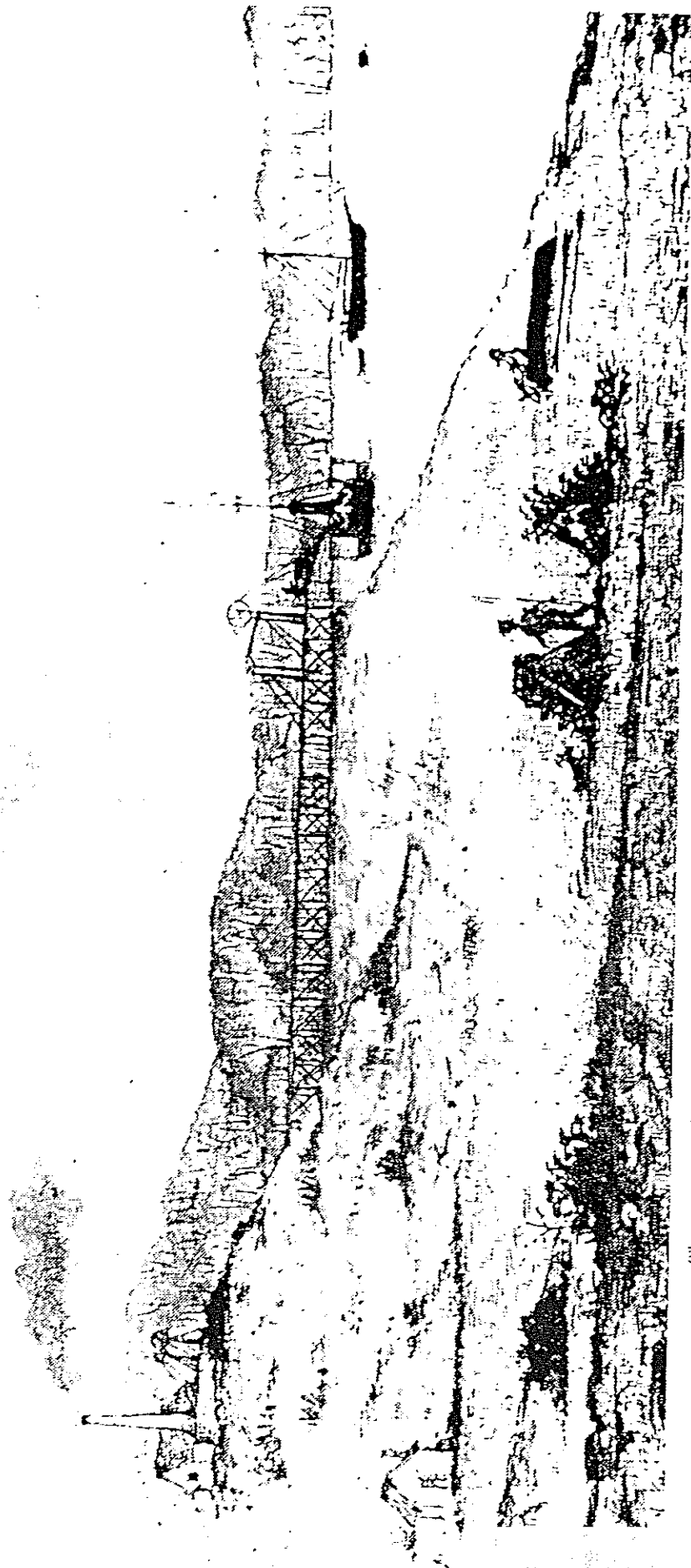
Map 7



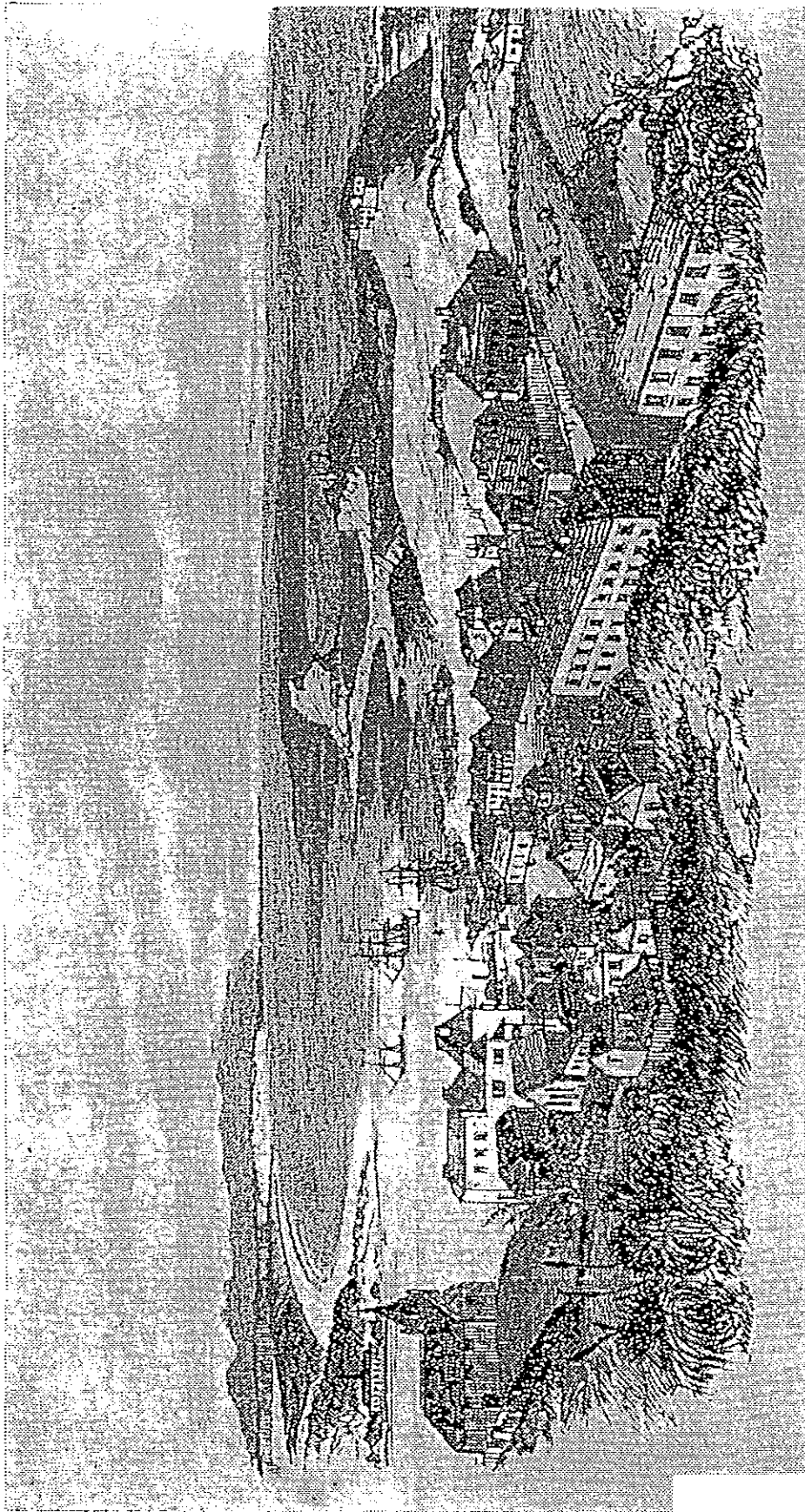
A VIEW OF KING'S TOWN,
State Newcastle.

*A View of King's Town, (Late Newcastle), c1820, artist unknown
Rex Nan Kivell Collection, National Library of Australia*

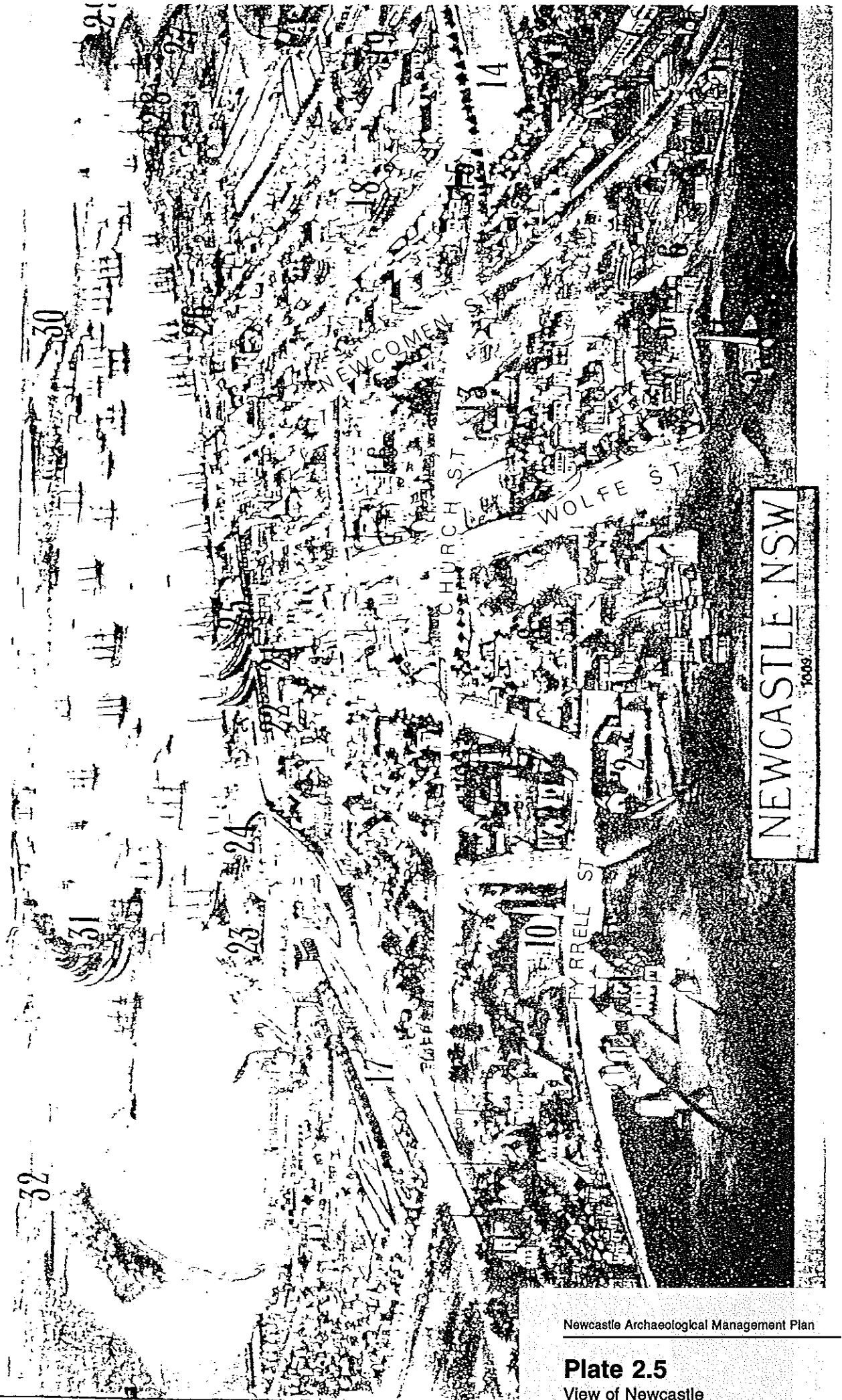
Plate 2.1
View of King's Town
c.1820



The great coal staiths of the Australian Agricultural Company, Newcastle, in 1833. The *Sophia Jane* is taking on coal and the Company's cutter, *Lambton*, is moored nearby. From a sketch taken on the spot by J. C. White. National Library of Australia.

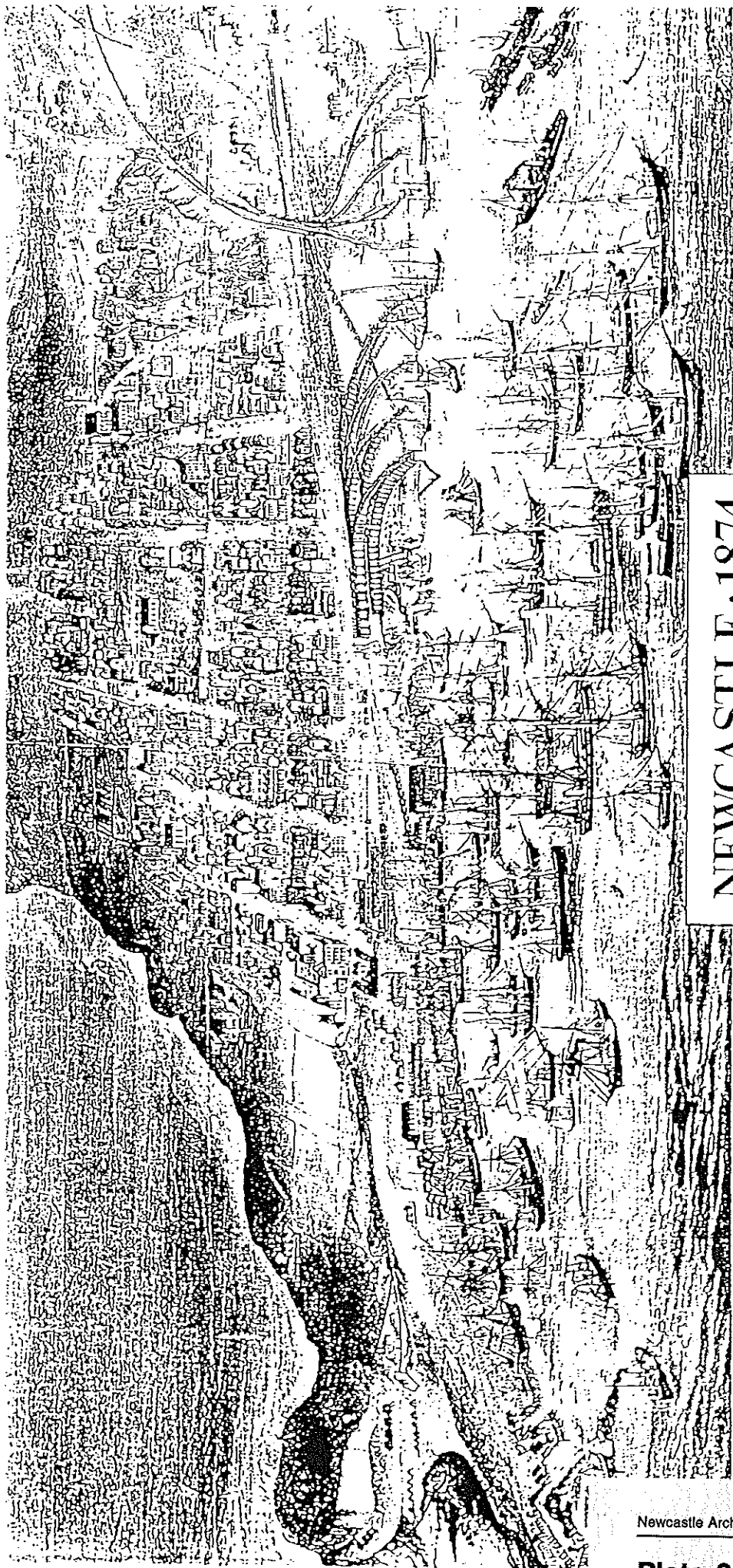


Newcastle in 1853. [Illus. Syd. News, 26 November, 1853. From the copy in the Mitchell Library]



Newcastle Archaeological Management Plan

Plate 2.5
View of Newcastle
1889



NEWCASTLE · 1874

BY SAMUEL CALVERT

Newcastle Archaeological Management Plan

Plate 2.4
View of Newcastle
1874

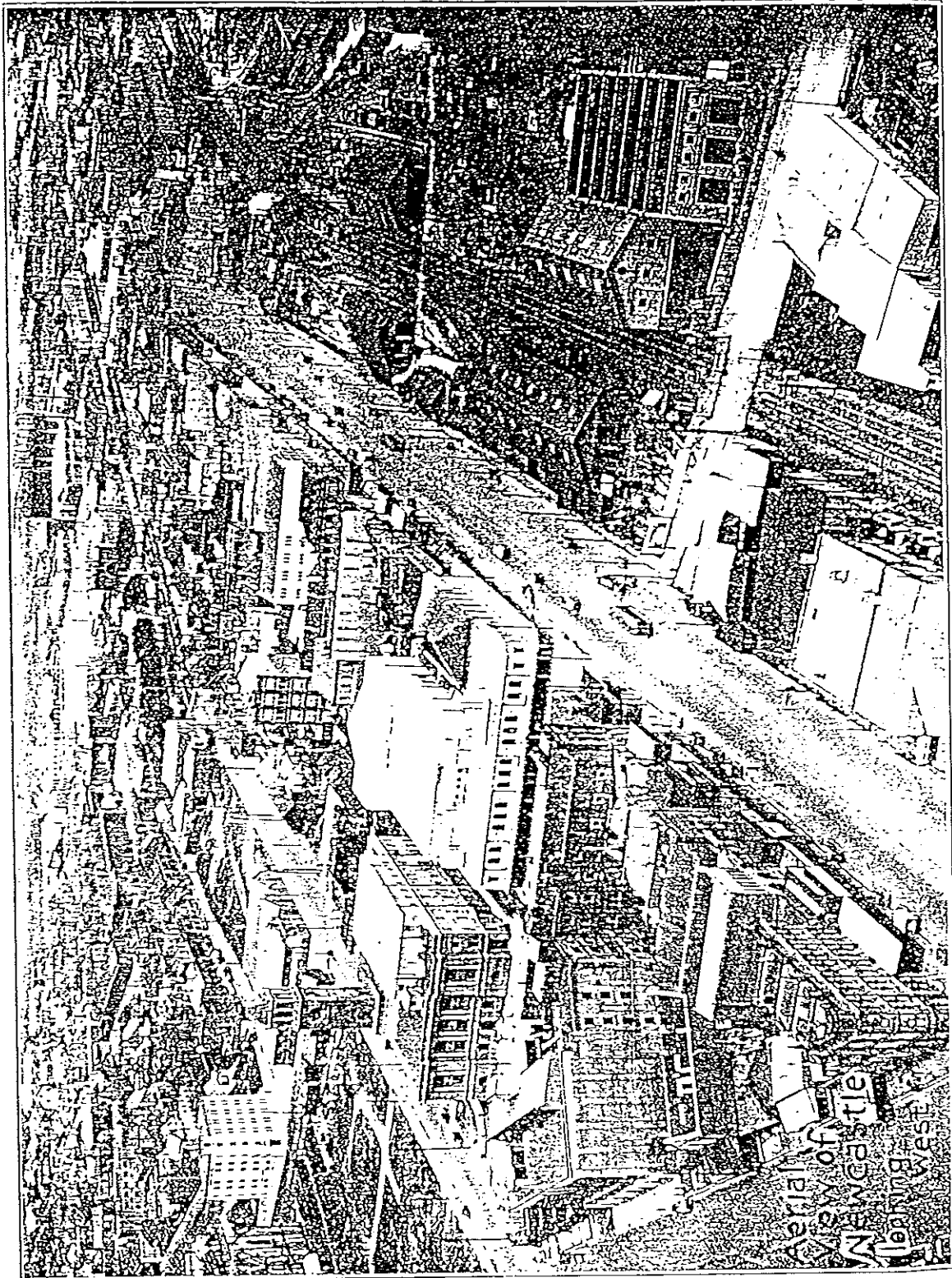
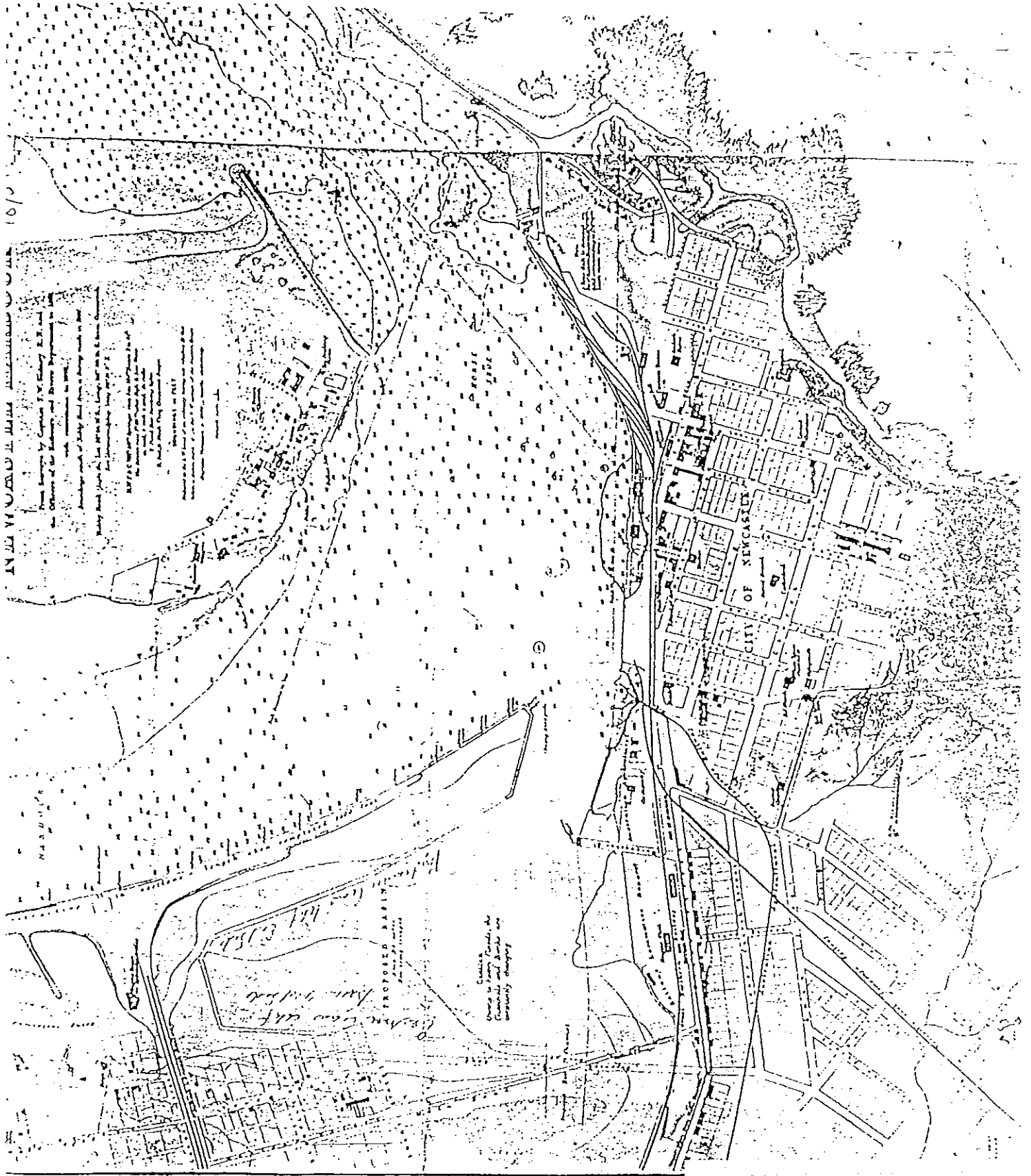


Plate 6

Plate 2.6

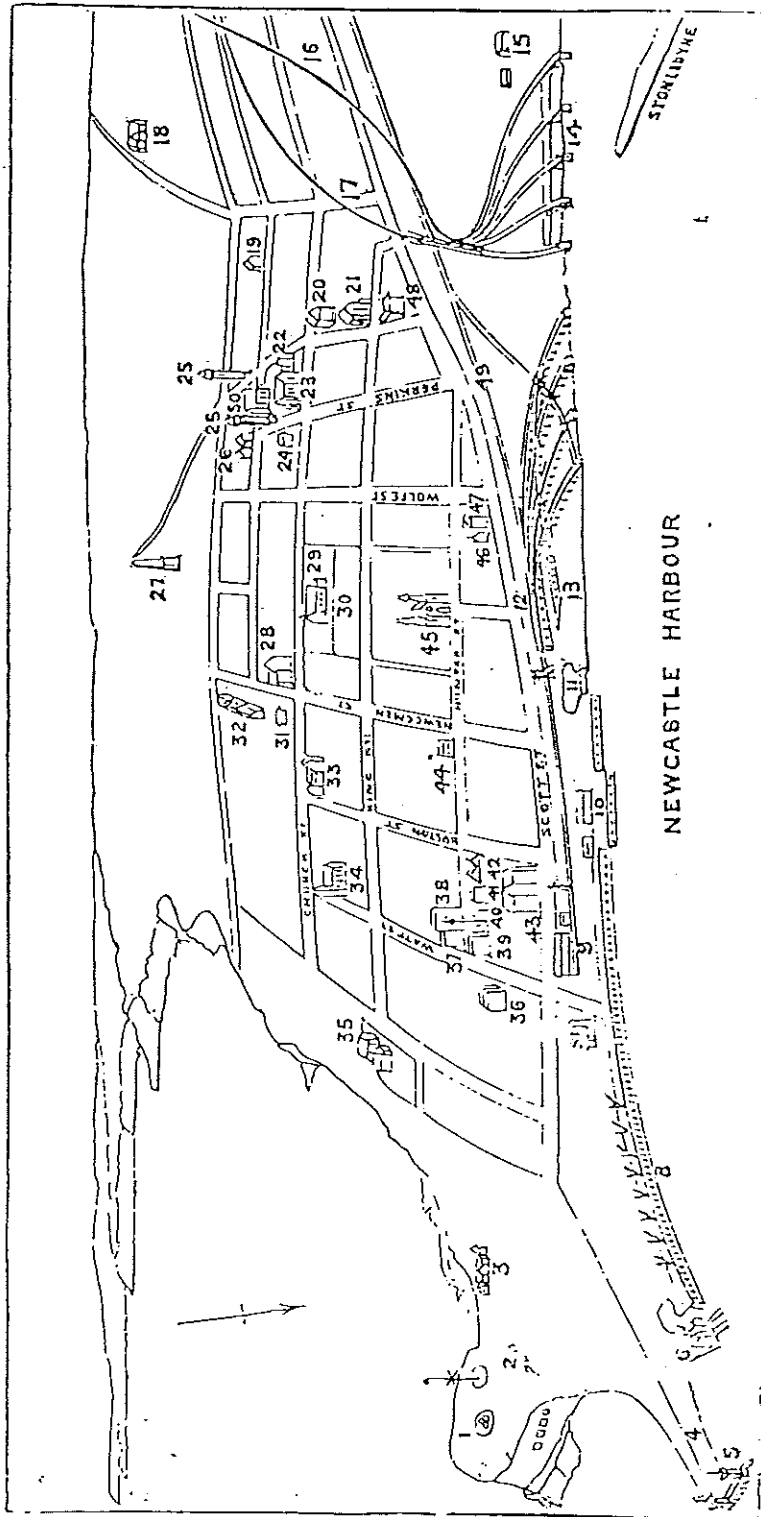
Aerial view of Civic area looking west





KEY TO THE VIEW OF NEWCASTLE.

FROM "THE ILLUSTRATED SYDNEY NEWS", 1875



Newcastle Archaeological Management Plan

Map 2.9

Perspective plan of Newcastle
1875

- 1. Harbor-master's House.
- 2. Police Quarters.
- 3. Old Gaol.
- 4. Fresh water and Road to Nobbys
- 5. Leasons.
- 6. Life-boat House.
- 7. Government Wharf and Steam Cranes.
- 8. Great Northern Railway Terminus.
- 9. Leasons' Wharf.
- 10. Boat Harbor.
- 11. High-level Coal Sliths, G. N. Railway.
- 12. Low-level Coal Sliths, G. N. Railway.

- 13. Australian Agricultural Company's Coal Sliths.
- 14. Glebe Railway.
- 15. Australian Agricultural Company's Office.
- 16. Glebe Railway.
- 17. Australian Agricultural Co.'s Railway to Mines.
- 18. Church of England (St. John's).
- 19. Baptist Chapel.
- 20. Congregational Church.
- 21. Primitive Methodist Chapel.
- 22. Nursery.
- 23. Roman Catholic Church (St. Mary's).
- 24. Presbyterian Church.
- 25. Leaning Light Towers.
- 26. Public School.

- 27. Obelisk.
- 28. Grammar School.
- 29. Church of England Cathedral, (Christ Church).
- 30. Church of England Burial Ground.
- 31. Church of England Parsonage.
- 32. Lunatic Asylum.
- 33. Church of England School.
- 34. Presbyterian Church.
- 35. Hospital.
- 36. Bank of New South Wales.
- 37. Joint Stock Bank.
- 38. Commercial Bank.
- 39. Post Office.

- 40. Telegraph Office.
- 41. Police Station.
- 42. County Court.
- 43. Harbor-master's Offices (Temporary).
- 44. Fire Brigade Station.
- 45. Market, &c.
- 46. Presbyterian Church.
- 47. Schools of Art.
- 48. Bank of Australasia.
- 49. Great Northern Railway.
- 50. Wesleyan Church.
- 51. New Custom House.

3. Field Survey

3.0.1 Introduction

Every allotment or feature within the study area was subject to a brief visual inspection during a foot survey undertaken as part of Stage 1 of this study. The initial survey was undertaken by Siobhan Lavelle and Dana Mider in June/July 1993 with final mapping in September.

The intention of the survey was to determine the likelihood that archaeological resources exist. It assessed whether the current buildings, excavations or other works on the site would have destroyed the archaeological remains of earlier periods, expressed in terms of their level of disturbance.

Some sites were subject to a second inspection by either Siobhan Lavelle or Carl Doring during preparation of the inventory datasheets for Stage 1 and 2 respectively. In some instances it was considered that archaeological evidence may remain, even though the site had a high level of disturbance, due to the nature of the resource, such as coal shafts which might be well below the surface. This assessment is recorded on individual datasheets, though the base fieldwork mapping was not altered.

3.0.2 Comparative Criteria

The assessment criteria used during the Field Survey in determining the Level of Disturbance was the same as for the earlier Sydney and Melbourne Archaeological management Plans, also undertaken by Lavelle and Mider, and so the relative archaeological potential of these different cities can be accurately compared with that for Newcastle.

3.1 Field Survey Methodology

The assessments produced by the field survey are largely based on the most recent development of that allotment - building, paving, landscaping or otherwise. In general terms, if this development was a small scale building, without substantial footings or a basement, and is relatively old itself, the site would be considered to have a low level of disturbance, and hence is likely to retain archaeological evidence from earlier periods. If on the other hand the site has a substantial modern building, including perhaps a basement carpark, the allotment has an obviously high level of disturbance and there is little chance that it retains any archaeological evidence from earlier occupations.

The assessment process was sometimes supplemented by general historical knowledge of the allotment. For example, a vacant block used only as a car park, while seemingly of no historical significance, actually has high potential to retain an archaeological resource, at least from the most recent building to have occupied the allotment if not earlier ones. Also, sometimes what was visible from the street did not reflect the nature of the whole site, such as "Toll Cottage" on Bolton Street, said to be the oldest house in Newcastle, which is concealed behind recent high-rise developments.

Note that these categories do not identify the likelihood of any particular allotment or feature to actually contain an archaeological resource, but only their potential to retain any such resource in an undisturbed state. Other sections of this report discuss the history of the study area, and identify allotments or areas where items are known to have once stood. At a simplistic level, comparison of this historical evidence with an allotment's level of disturbance indicates which allotments or areas are likely to retain archaeological features at this time. These sites are further identified in the inventory.

This does not however provide an assessment of the archaeological significance of that site. This is determined by its research potential, and requires assessment of that site within the context of other sites throughout the city and state. Significance is dealt with elsewhere in this report.

Note that the streets and roads themselves are also included in the assessment, and generally are assessed as having a low level of disturbance.

Where an allotment is redeveloped, any change in the assessed level of disturbance, based on the assessment criteria above, should be amended on the maps and noted for future reference.

3.1.1 Level of Disturbance

All allotments or features were assigned to one of three levels of disturbance as defined below. The assessed category of each allotment is noted on the series of maps that form part of this report. Note that the field survey provided a preliminary appraisal only, and it provides no guarantee that a site does or does not contain archaeological relics. Under current legislation, this responsibility rests firmly with the owner of a site, and only becomes of concern when a site is redeveloped.

The three levels of disturbance identified are:

L. Low Level of Disturbance

An allotment or feature where relatively little subsurface disturbance has been caused by recent developments. Hence it is considered likely to retain an archaeological resource from earlier developments intact.

(Note that these areas are left uncoloured on the maps, and include most of the streets and open spaces.)

M. Moderate Level of Disturbance

An allotment or feature where some subsurface disturbance has been caused by recent developments. While an archaeological resource from earlier developments may remain, it is considered likely to be at least in part destroyed or disturbed.

(Note that these areas are coloured grey on the maps.)

H. High Level of Disturbance

An allotment or feature where there has been considerable subsurface disturbance caused by recent developments. Hence any archaeological resource from earlier developments is considered unlikely to survive, and for the purpose of this study the allotment is assumed to have no archaeological potential.

(Note that these areas are coloured orange on the maps.)

The way these categories were indicated by colouring on the maps was deliberately designed to emphasise the fact that all parts of the city have the potential to retain archaeological evidence, unless it is clear that more recent development will have disturbed or destroyed that resource. That is, that the majority of sites have a low level of disturbance, including the roads, parks and other public spaces, and these have been left uncoloured in contrast to the relatively small areas of moderate or high disturbance.

3.2 Results of the Field Survey

Preliminary analysis of the Field Survey results for study area indicated a potential survival rate of approximately 75-80% of total land area, that is perhaps some 5,000 separate allotments. This was considerably higher than anticipated, and far greater than given by similar fieldwork in Sydney of 5-10%, or Melbourne of 20-25%. This suggests that Newcastle is likely to retain a considerable archaeological resource.

Note however that this high potential survival rate is not in itself significant, nor does it imply that those sites that do survive will all be highly significant. Rather it is because of the nature of the resource,

dating back to early convict occupation as it does, and the relative rarity of such archaeological sites in Australia, that makes the archaeological resource of the area significant.

The field survey work also suggested that much of the land in the Newcastle CBD has been filled above original ground levels. This probably reflects land reclamation and other events that are historically documented, such as the constant advance of frontal sand dunes across parts of the study area. Topography has had a strong impact on the nature and shape of the development of the Newcastle CBD. For example, in the pre-1853 period development was largely dictated by the need for deep water access (the Watt Street Wharf) and the presence of very steep and high land south of King Street, which effectively enclosed the historical nucleus of the Newcastle CBD. Other factors including a high water table and a large mine subsidence district have also limited the impact of later development phases on archaeological evidence which may survive from earlier periods. Much of the subsequent and more recent development is limited in area, and is relatively small-scale in character. There are few skyscrapers or tower blocks, and most buildings do not have large basements or underground car parks.

Newcastle is thus a substantially intact nineteenth century city both above and below ground. This is also clear from the surviving subdivision pattern and the street grid, which essentially still reflects the layout imposed by surveyor Henry Dangar in 1823.

Of equal importance for this study, however, is the fact that in the earliest period (1804-1823) the settlement was more haphazard. As shown on the Meehan plan, additional streets such as St. Patrick Street (between present Bolton and Watt Streets) existed in the earlier period and were removed by the later more formal grid.¹ The presence of the earlier St. Patrick Street would appear to be directly reflected in the location of Toll Cottage [Inventory Item 058] which exists at the rear of an allotment fronting Bolton Street. Also of importance for this study is the later extension of Hunter Street to the east over earlier allotments.

In considering the results of the field survey, it should be noted that the inventory was prepared by comparing the field survey plans which noted the degree of disturbance, against the historic map series for the study area. However the information provided by the historic maps may in itself be selective, especially earlier ones. This occurs as the maps tend to only note some types of items and functions, for example Government buildings and churches but do not necessarily identify commercial buildings, inns or private residences. It is also the case that the Meehan and Dangar maps show only a handful of buildings although the historic records indicate that in 1820-21 the government owned about 30 buildings in Newcastle and there were an additional 71 private buildings also distributed amongst the available streets.

This is an important issue because additional archaeological sites which are not shown on the maps, particular convict-era remains, may also survive. In addition to huts and less substantial dwellings, ancillary items such as wells and cisterns or cess pits/privies may also be predicted to occur in association with early occupation.

3.2.1 Use of the Field Survey Results

While the primary use of the field survey results was in compiling the inventory items, they also provide general overview as to which allotments may contain archaeological features. This information may be useful when assessing a development application for a site as to whether archaeology needs to be considered. Recommendations for use of the field survey results are set out in the management section of this report (see Sections 8.3.3 & 8.3.4).

¹. In 1820, 10 buildings are listed in Patrick Street, Turner, "Newcastle as a Convict Settlement", 1973, p.222.

4. The Inventory

4.0.1 Introduction

The next part of the assessment process involved comparison of the historic evidence provided by Historic Overview (Section 2) and further detailed research, with the level of disturbance assessed through the Field Survey (Section 3), to identify which allotments or other features are likely to retain a significant archaeological resource at this point in time. These sites are identified in the Inventory. Note however that there are various limitations on the accuracy and completeness of the inventory.

The precise location of past activities cannot always be determined with certainty. They may for example have been identified by text references only, and there was often a lack of precise survey information when historic maps were compiled in any case. Thus sometimes only the general area in which the activity occurred can be identified.

There is also uncertainty about the extent to which a site survives, as in most cases no actual excavation of the site has been undertaken. As such, many sites are noted not as Archaeological Sites but as Potential Sites.

Note also that the Inventory does not purport to include all archaeological sites within the study area, but only those identifiable with the information available. There may be other places that are not known about, and also other activities surrounding known structures which have not been individually identified. Thus any allotment has the potential to retain archaeological evidence.

This process of comparison has also however provided additional information about the sequence of development of particular areas and allotments within the study area, and this has led to the identification of the various Archaeological Precincts as noted below (Section 4.3).

4.0.2 Staging of the Inventory

The Inventory was prepared in two separate stages. Stage 1 covered the period pre-1853 only and was prepared by Siobhan Lavelle. Stage 2 included post-1853 sites up until approximately 1945, and was prepared by Carl Doring. Both have now however been combined as one.

Due to the cut-off date of 1853, almost all of the Stage 1 items are located to the east of Brown Street, and most are within the area of the convict settlement and early government town. This was basically due to the history of development of the city - the AA Company controlled the land to the west of Brown Street, and did not open it for development until the 1850's. Thus the few stage 1 items in that area relate specifically to the AA Company. As such, the focus of the Stage 1 inventory was on historical archaeological sites associated predominantly with the convict settlement and the early government town.

Stage 2 in comparison, while still having a concentration of items within the town centre, had items spread across the whole study area, and had a greater emphasis on industrial archaeological sites. It spans the introduction of the government railway and the consequent development of Newcastle as the focus of the northern NSW railway network, as a major coal shipping port, and as the region's major commercial city. The nominal cut-off date was chosen to include WWII defence works, which are now more than 50 years old.

4.1 The Inventory of Archaeological Sites

All known or potential archaeological sites have been included in the inventory. It is intended that the more significant of these be specifically protected by as heritage items under appropriate controls, in addition to the general protection provided to all sites by the relics provisions of the Heritage Act 1977. The Inventory has been prepared by comparing the level of disturbance with the historic record, principally the available historic map series for the study area.

The process may be compared to an initial (or baseline) assessment.² That is, the brief appraisal of the physical condition and history of a place to determine whether any archaeological evidence is likely to remain, without analysing in great detail the potential significance of any such evidence. In this study the broader context of related themes and sites throughout the city have also been considered. This process of comparison has enabled the identification of known or probable archaeological sites, as well as many sites with lesser archaeological potential, and has provided information about the sequence of development of particular areas and allotments within the Newcastle CBD.

Inventory items have been identified in terms of the occupation or development to which the resource relates, rather than to the contemporary use. There are several reasons for this.

- Items may include a group of allotments and/or other adjacent areas such as roads.
- Items may have been constructed before the current street grid was established, or within areas where the street grid has changed.
- Historic maps are not always accurate enough to locate items precisely.
- It avoids confusion between the intended protection of the archaeological resource, and not of the site itself and/or any buildings that may now stand on it.

Inventory items therefore are not identified as specific modern allotments as is the case with an "above ground" heritage study, although the allotments to which they relate have been noted in the Inventory database as these details will be required for any legislation where protection is based on a schedule of specific items.

4.1.1 The Inventory Computer Database

All identified archaeological sites or potential sites have been entered on a computer database, and this forms the basis of the Inventory. Stage 1 was prepared by Siobhan Lavelle using Filemaker Pro running on Apple Macintosh hardware (this was consistent with Council's computer programme at the time). Stage 2 was prepared by Carl Doring using Paradox running on IBM compatible hardware. Both databases have now been converted to Access for Windows (consistent with the computer programme Council has adopted in the interim), and combined into a single database file. The differentiation of items between the two stages is noted in the database.

Note that the Stage 2 database did include some additional fields, and some of the fields were also slightly differently formatted, to allow for example, longer descriptions or multiple entries. This was done in response to the different research requirements of the stage 2 study, particularly due to the vast quantity of historic maps and other documentary evidence that was available for review, in comparison to the 5 or 6 available maps that were the basis for most of the Stage 1 research. Thus the final database will contain various fields without information entered for Stage 1 items.

A wide range of information is retrievable through the fields included in the inventory database. Two categories in particular, "Character of Occupation" and "Historic Themes", are most for providing information on comparative values such as the 'rarity' or 'representativeness' of individual inventory items within the broader context of the city as a whole.

² This terminology derives from the *Heritage Inventory for Central Sydney* prepared in 1989 by Thorp, Green and Associates for the Sydney City Council.

4.1.2 Format of the Datasheets

Datasheet printouts of all the items in the database have been included as an appendix to this report. The datasheets have been designed to resemble and function in a similar manner to the standard Heritage Study forms, resulting in a type of "underground heritage study" of the Newcastle CBD.

A typical datasheet is attached. Each identified site or area of archaeological potential was assigned an individual inventory number and appears on a separate form. The locations of the inventory items have also been plotted on base plans of the CBD.

4.1.3 Data Fields

The Inventory database and datasheets contain the following data fields:

Item Details:

These fields include the basic identification details for a site.

- **Inventory Reference Number:** Each identified site/area of potential was assigned a four digit reference number. Stage 1 items commence with a "0" while Stage 2 items commence with a "1".
- **Coincident Items:** Reference to other associated items from both stage 1 and 2 inventories.
- **Scheduled:** a quick reference as to whether the item is recommended for scheduling (see Management below).
- **Name:** A precise name can not always be given, however it may assist in identifying the item. Names may be the historic name or the present building name, and in some instances will simply be a generic term eg. Residence. Other names may also be given relating to different periods of occupation.
- **Address:** Location information for items includes the street name and number, suburb, and the Real Property Description. It may also include reference to cross streets or other boundaries, such as the harbour or railway. (Map references are also noted elsewhere.)
- **Authorship:** Whether the item was prepared in Stage 1 or 2 of the study is noted, as well as the initials of the associated author (SL = Siobhan Lavelle, C&MJD = C & MJ Doring Pty Ltd).

Archaeological Resource:

These fields describe the nature of the resource, its level of disturbance and what is likely to remain.

- **Description:** Description of the extent of the historic site, nature of the resource and any other relevant matters. A brief outline of archaeological features which may be expected to survive is given under Archaeological Resource.
- **Disturbance:** Refers to the levels of disturbance as noted on the field survey plans. The High category was developed for this study with the view that it equated with an area so disturbed that no archaeological potential remained. In fact, a few items in this category have been inventoried because of their particular individual circumstances (eg. cut very deeply, possibly newer development not precisely impinging on the older site, etc).
- **Precinct:** Precincts are areas which have common patterns of development (eg. chronologically; because of strategic location; ownership; etc) and may be expected to contain a series of associated and or complimentary items. The field exists on the inventory sheet in order that inventory items may be cross-referenced to their precinct where relevant.
- **Below Ground Resource:** This study considered principally only below ground items, and all identified features were assigned to one of the following categories:
 - **Site:** An allotment of land that has been identified in the field survey and subsequent historical assessment as being an area of high archaeological sensitivity due to limited physical disturbance and well documented site history. This category includes both above and below ground archaeological features such as remanent structures, the fabric of extant buildings, as well as below ground sites.
 - **Potential:** An allotment of land that has been identified in the field survey and subsequent historical assessment as being an area of high archaeological potential due to limited physical disturbance, but due to a paucity of available documentation, the precise nature of the occupation, and hence the archaeological resource (especially for the era of the study, was not possible to explicitly determine.
 - **Potential/Disturbed:** An allotment of land that has been identified by the field survey and subsequent historical assessment, as being an area of some archaeological potential, but due to the degree of physical disturbance (usually due to the most recent building development), may be partially disturbed or even in part destroyed. It should be noted that it is also possible that the

Newcastle Archaeological Management Plan

Inventory Datasheet

ITEM DETAILS:

NAME:

Nobbys Head

OTHER NAMES:

ITEM REF. NO.

0001

SCHEDULED

CONCOMITANT ITEMS:

1001, 1113

STREET NO. TO:

STREET NAME:

Nobbys Road

SUBURB:

Newcastle East

REAL PROPERTY DESCRIPTION:

Por 2613 N57842111 Pt R
8872, Newcastle East

STREET NOTE:

CROSS STREET (N/E):

CROSS STREET (S/W):

FAR BOUNDARY:

STAGE OF PLAN:

Stage 1

PREPARED BY:

SL

ARCHAEOLOGICAL RESOURCE

DESCRIPTION:

Original island progressively reduced by quarrying. Earlier features including tunnel (powder gallery) may be expected to survive. Also 1850's cottage sites.

ARCHAEOLOGICAL PRECINCT:

Coastline

DISTURBANCE:

Low Disturbance

MAPS: AND:

GRID (N):

GRID (E):

ARCHAEOLOGICAL RESOURCE:

BELOW GROUND RESOURCE:

Site

ABOVE GROUND RESOURCE:

Extant Building

SIGNIFICANCE:

STATEMENT OF SIGNIFICANCE:

Nobbys Head is associated with the genesis of Newcastle, its changing occupation and uses strongly linked to phases in the development of the city and port.

SIGNIFICANCE:

Historic, Aesthetic,
Technical, Archaeological

HISTORY OF OCCUPATION

HISTORY:

Convicts stationed on the Island as place of punishment, and during construction of the Macquarie Pier which linked the Island to the mainland in 1846. Island progressively modified by quarrying, which reduced its height and altered its form. During the 1850s proposals existed to remove the island by blasting, a tunnel or powder gallery was excavated for this purpose but not used. 1858 - Lighthouse, cottages and signal station built.

DATE FROM: TO:

HISTORIC THEMES:

Discovery
Early Military & Maritime
Port Development

MAP REFS:

1851-B
1851-A

COMMENTS:

TEXT REFS:

COMMENTS:

CHARACTER OF OCCUPATION:

Government

Maritime

MANAGEMENT:

INVESTIGATIONS REFERENCES:

Suters Architects Snell, Conservation Plan for Nobbys Head and Macquarie Pier, in preparation June 1994

RECOMMENDATION:

 Schedule for Listing

ASSOCIATED HERITAGE ITEM LISTINGS:

NLEP- S, N/E

PRESENT CONDITION:

INVESTIGATIONS COMPLETED:

Conservation Plan

COMMENTS:

Extant building complex constructed in stages from 1858 onwards.

INVESTIGATIONS REQUIRED:

Monitoring

Suters, Lavelle, Doring, Turner - 3867

Final Draft Report - February 1997

current building/development in its own right, may also have archaeological potential due to significant fabric, or be generating its own below ground and/or underfloor archaeological deposits, and is likely for later nineteenth century buildings.

- **Above Ground Resource:** some above ground features were also identified, including particularly:
 - **Extant Fabric:** A building or structure which has been identified as containing significant fabric, on the grounds of the significance criteria, or an above ground structure or built feature which has survived in part by being modified and incorporated into subsequent buildings, or has been partially but not totally demolished. Examples include the walls at 52 Newcomen Street [Inventory No. 84].

Significance:

These fields provide the assessment of significance of the site.

- **Significance:** The assessment of significance is based on the accepted generic criteria, that is historic, social, aesthetic or scientific value etc. All sites proposed for scheduling are noted as having "Archaeological" significance, even though the full extent and survival of the archaeological evidence may not be known. For Potential Sites it is not possible to make a more precise assessment of their significance as this information is not known, though as further information becomes available, due to research or excavation, this assessment can be upgraded.
- **Statement of Significance:** It is important to note that the level and nature of the significance assessment is contingent on the available information for each site. Thus there exists a large variation in the detail of significance assessment which is possible between individual inventory items. Sites that possess a more detailed site history have the potential for greater analysis and assessment, than sites with less or none. When possible an item-specific statement of significance has been formulated, based on the archaeological potential of the site and the known history.

History Of Occupation:

These fields describe the history of the site, and includes the reference sources used to identify the site and its nature of occupation.

- **History:** A summary of the land use history and character of occupation of the site. Includes the specific use and occupants of the site identified where available from the historic plans or other references.
- **Date:** Date of the first documented occupation (where known) or a range of dates.
- **References:** A list of map and text references used to identify the site and its nature of occupation. References are identified to by a year date, with a suffix where more than one source from that year exists. A full list of these map and text references is included as an appendix to this report.
- **Character of Occupation:** A list of possible categories to describe the nature of the activity that occurred on the site, if this could be established. Note that the character of occupation may have changed over time, and so sites may fit more than one category. Note also that in several cases the initial occupation was intended to be multi-functioned, an obvious example being the various government establishments. Categories include:
 - Administration
 - Cemetery
 - Commercial
 - Education
 - Government
 - Industrial
 - Manufacturing
 - Maritime
 - Military
 - Mining
 - Navigation
 - Railways
 - Recreation
 - Religious
 - Residential
 - Road Transport
 - Services
 - Tramways

- **Historic Themes:** Identifies historic themes relevant to the site, as defined in the historic overview. Themes include:
 - AA Company
 - Agriculture
 - Cemeteries
 - Coal Mining
 - Commerce & the CBD
 - Domestic, after 1853
 - Early Government Buildings
 - Early Military & Maritime
 - Early Private Dwellings
 - Early Public Utilities
 - Education
 - Electricity
 - Gas
 - Government Town, 1823-1853
 - Government & Administration
 - Hotels
 - Limeburning
 - Lumber Yard
 - Manufacturing/Engineering
 - Maritime
 - Medical
 - Military
 - Penal Colony, 1801-1822
 - Police/Courts/Gaols
 - Railways
 - Recreation/Arts/Sport
 - Religion
 - Road Transport
 - Salt Making
 - Timber Getting
 - Tramways
 - Water/Sewerage/Drainage

Management:

This field contained a list of desirable management actions for the identified archaeological resource. It also includes whether such actions have already been undertaken (very few) or are still required (the vast majority).

- **Recommended for Schedules:** This indicates whether the item is proposed for scheduling as a heritage item in a planning document, thus granting it specific protection. All Stage 1 items are proposed for scheduling, however only some of the Stage 2 items are included. This field is repeated at the top of the datasheet as a quick reference guide.
- **Investigations Completed & Required:** A brief note as to what investigations have been previously completed, such as an archaeological assessment, an excavation or preparation of a site history, and what investigations are proposed based on the findings of this study. These include:
 - Conservation Plan
 - Assessment Report
 - Monitoring
 - Excavation
 (Note, excavation should not normally proceed without a prior archaeological assessment or conservation plan)
- **Investigations References:** Brief comments from any existing reports relevant to the management of the resource.
- **Associated Heritage Item Listings:** Where an allotment contains a building identified as a heritage item and/or subject to some form of heritage control, independent of any archaeological site it may contain. The archaeological site is in a sense 'tied' to the heritage item, and in these cases the resource is often unlikely to become available for excavation. Where the heritage item is being otherwise refurbished, conserved, etc., the archaeological potential within or beneath the building should be addressed under the existing statutory controls, by amending their listing to also

consider the identified archaeological resource. Listings include:

- NLEP: Newcastle Local Environmental Plan, S: State, R: Regional or L: Local significance
- PCO: Permanent Conservation Order, NSW Heritage Council
- HREP: Hunter Regional Environmental Plan
- NE: National Estate, Australian Heritage Commission
- NT: National Trust

- **Present Condition:** brief note as to the condition of any known resource or whether it is under imminent threat.
- **Comments:** Any other relevant information pertaining to the allotment of land was contained in this field, including any further actions considered appropriate.

4.1.4 Map and Text References

The inventory items have been identified from various documentary sources, and primarily from a study of old maps that show works or buildings that existed in the study area. The datasheet for each inventory item includes a short summary of the maps known to show that item, and is cross referenced to the detailed list of the map references which gives their title, author and repository.

There are hundreds of archival maps of the Newcastle held by Newcastle Library, State Archives Office, Hunter District Water Board, Department of Lands (etc). For the Stage 1 inventory, only a few maps were relevant to the pre-1853 period, and these were all researched in detail. In contrast, a huge number were identified as being relevant to the Stage 2 inventory, but within the time and budget constraints of this project it was not possible to study them all. The research for Stage 2 did cover about 100 separate map sheets, and reached the situation where each additional map studied tended to verify archaeological sites already identified, rarely yielding additional sites. Nevertheless, it is likely that some additional archaeological sites would be found from study of those other maps, and these should be added to the inventory database.

The text references, although less numerous than the maps, are treated in a similar fashion, with a cross reference within the individual datasheets. Lists of the map references sorted by code/date and by author, and of the text references sorted by code, are included as an appendix to Volume 2 of this report (ie. at the back of the inventory datasheets).

Further detailed information about each of the map and text references can be extracted from the computer database, including catalogue identification number, publisher etc where appropriate.

4.2 Inventory Summary

A list summarising the inventory items is included as an appendix to this report, indicating the item name, reference number, street address and whether it is recommended for scheduling. Also included is a summary of the items relevant to each of the historic themes identified.

4.2.1 Stage 1 Inventory Items

A total of 193 items were identified during Stage 1 of the inventory. Given the chronologically and geographically confined scope of the Stage 1 study, it is not surprising that 177 of these have been identified within the Convict Settlement precinct. All Stage 1 items are recommended for scheduling.

Other break-ups of the data, however, indicate that only 13 of the items are thought to relate to private buildings, and only 12 items are currently thought to relate to industrial activities or occupations. These figures are interesting in comparison with the large number of historically known private buildings and with the strong industrial theme in the history of Newcastle. In fact, given the current level of knowledge, it is difficult to determine whether this is an accurate picture of these categories. Further assessment and testing through archaeological fieldworks will be required to verify or falsify these initial results.

It is also interesting to note that 70 items are linked to existing (above ground) listed heritage items. As such items are highly unlikely to be demolished for redevelopment, these archaeological sites are unlikely to be available for major archaeological excavations, although more minor investigations may be appropriate.

4.2.2 Stage 2 Inventory Items

A total of 232 items were identified in the Stage 2 study, of which 108 are recommended for scheduling. These items are spread over a much broader area than the Stage 1 items, but still with a predominance within the central city area covered by the Convict Settlement and Government Town precincts.

Some of the major categories covered by the stage 2 items include the following.

Hotels

Almost a quarter of the Stage 2 inventory items relate to hotels. Hotels are interesting archaeologically as they usually had basement cellars which often survive even high site disturbance due to their depth, and because the hotel use tends to continue through time so that an early basement cellar may form part of a more modern hotel building.

Houses

Houses listed in Stage 1 will be significant because of their association with the convict era or the early government town. However the maps consulted during Stage 2 showed hundreds or even thousands of individual houses, many of which may have left in-ground footings. However, most of the houses shown in late 19th or early 20th century maps were not included in the Stage 2 inventory because they were generally considered not to be of much archaeological significance, and because the nature of their footings (if found) would be obvious. The few houses that are listed in the Stage 2 inventory were chosen because they had some particular historical significance, (eg. belonged to some notable person), or because they were set skew to the normal street alignment and so were probably built before the streets were formally aligned (ie. they may belong to the Stage 1 pre-1853 era).

Mines

Four government (convict) coal mines and three AA Company mines within the CBD are listed in the Stage 2 inventory. Some are also listed in Stage 1, but are repeated in Stage 2 because additional data was found during Stage 2 research. These mines have left little or no obvious surface evidence, but all would have left underground workings, some of which are documented in maps held by the Mines Subsidence Board.

Railways

Government and private (colliery) railways have been a major factor in the development of Newcastle, and have left a large legacy of archaeological evidence. This includes items affecting one specific location, such as the Honeysuckle Point turntable pit (one of the oldest railway relics in Australia), but also includes the routes of the permanent way, which can affect whole streets and/or dozens of individual private properties.

Tramways

Like railways, the tramways have left archaeological relics in depot sites, and in routes of the tram tracks. However, trams were introduced long after the streets were established, and so tram routes ran almost exclusively along present roads rather than through private property.

Utilities

In-ground relics of utility services are likely to be found throughout Newcastle CBD. These include footings of demolished above-ground facilities such as power stations and gasworks, as well as remnants of essentially in-ground facilities such as drains, sewers, cable ducts, water mains, etc. The sites of discrete above-ground facilities have been included in the inventory, but the in-ground network of drains etc, were generally considered too extensive to try to itemise here.

Wells, Cisterns and Cess Pits

Prior to the introduction of reticulated water supply and sewerage, the city relied on a vast number of private water cisterns and wells, and on backyard privies and cess pits. Many are likely to survive in-

ground as disused masonry-lined pits, probably filled with now-interesting domestic rubbish. Wells, cisterns and cess pits that existed in the 1890s, just prior to the reticulated system, are well documented in c1896 PWD survey maps, but it was not feasible to list them individually in the inventory. Those from the convict era or early town era, are not very well documented. If wells and cess pits are found they should be checked against the c1896 maps. Those not shown on the c1896 maps, or those shown on the c1896 maps as associated with 'very old' or skew buildings, may belong to the Stage 1 era and warrant close study.

4.2.3 Coincident Items

While most Stage 2 inventory items are additional to those in Stage 1, there is some overlap. Items may be coincident because:

- many Stage 1 items would have survived in some form into the Stage 2 period post-1853, and consequently some of the Stage 2 items represent developments of earlier structures beyond 1853, either in the same or a modified form; or
- some Stage 2 items may be later unrelated developments which have been located on the same site as earlier Stage 1 items.

Comparison of the sites reveals the layering of development through history, with archaeological sites that may overlap various allotments or with changes of use through time. Where sites do overlap or are otherwise related, the reference number of coincident inventory items is indicated on the datasheet.

Of the 193 Stage 1 items a total of 48 are coincident with Stage 2 items, and conversely out of the 232 Stage 2 items a total of 51 are coincident with Stage 1 items. A further 59 Stage 2 items are also interrelated in some way though not necessarily exactly coincident. (see Inventory Report in Appendix)

4.2.4 Associated Heritage Item Listings

Many of the inventory items are located beneath standing buildings or other structures, and in some instances these are listed heritage items (see Inventory Report in Appendix). Of the 425 inventory items a total of 88 items, or about 20%, are associated with heritage listed items. (For Stage 1 a total of 70 inventory items are associated with listed heritage items, and a further 18 inventory items in Stage 2.)

Approval will generally not be given for demolition of listed heritage items to allow redevelopment of a site, and as such these linked archaeological sites are unlikely to become available for major archaeological excavations. (It should also be noted that the whole study area is within one of the various Heritage Conservation Areas defined around the city.)

These heritage items may be linked to the archaeological site in two basic ways, either:

- the heritage item may be directly related to the archaeological site, being a later development of the earlier structure, and may include remnant fabric from that structure. It may be considered as part of the archaeological evidence in its own right; or
- the heritage item may have been imposed over the top of the earlier archaeological site and with no direct relationship to it. As such it will provide no information about the archaeological site, and will prevent access to it.

In either case, items of recognised heritage significance will be protected under various pieces of legislation, the Newcastle LEP in particular, and some form of heritage assessment will be required prior to any redevelopment. Any excavation of the archaeological resource must be considered in relationship to the standing heritage item. Similarly, any conservation plan prepared for a heritage item should also consider the archaeological site, and if necessary a full archaeological assessment should form part of the conservation plan.

4.2.5 Scheduled Items

Of the 425 inventory items a total of 301 items, or about 70%, are recommended for inclusion on the schedule of items to be given specific protection. (That is all of the 193 Stage 1 items, and a total of 108 out of the 232 Stage 2 items.) The full list of item recommended for scheduling is included as an appendix to this report.

As previously noted however, many of the inventory items are coincident upon the same site. Datasheets were prepared for each item rather than combining the information into a single entry, in order to allow identification of the nature of each separate historic development, and to make clear the layering of activities through time.

Because of this overlap of sites, it is not possible to give a finite number of actual or physical sites within the study area. However, of the 108 Stage 2 items scheduled, approximately 46 are coincident with Stage 1 items, and a further 20 are interrelated with other Stage 2 items. Thus the 301 scheduled sites are located within roughly 235 physical sites.

As noted elsewhere, the number of sites which may become available for archaeological excavation will be further reduced due to associated heritage item listings. Approximately 78 of the physical sites are affected in this way, suggesting that only 157 physical sites are likely to become available for further research.

Having noted this, it should be clearly stated that the coverage of the scheduled inventory items includes a substantial proportion of the study area, particularly within the Convict Settlement and Government Town precincts where almost the entire land area is included, and to a lesser extent the Sandhills precinct.

4.3 Other Archaeological Features

4.3.1 Remnant Structures

During the course of the study a number of features were noted that survive as remnant structures or features from earlier developments now gone, and are important components of the urban fabric. These include:

- "building shadows" left on the facades of adjacent structures, indicating rooflines and building setbacks.
- similarly specific components of buildings that have left their mark on adjacent structures, such as the position of quoin stones or cornices marked in the render of the adjacent building, or the location of a fireplace or window on its wall.
- sections of a building's boundary wall that originates from earlier adjacent structures that are now gone, rather than the building it now forms part of.
- parts of the building fabric from earlier developments that has been completely subsumed within later developments.

Apart from the obvious information such remnant structures may provide about particular design features of those items to which they relate, they may also indicate broader issues such as:

- the precise alignment of streets and lanes that were known to have existed but have been subsumed within later developments.
- the associated intactness of subdivision patterns.

The use of such information and the protection of the actual features has no straightforward solution, as the information relates to a structure, street or other feature that is no longer present and so can not be "protected", while actually forming part of the fabric of what is usually a completely separate though adjacent development which may or may not be worthy of protection in its own right.

It is recommended that such items be recorded, either as a separate study exercise or on an item by item basis when redevelopment of a particular site is proposed. They may be included as part of a heritage study, and controlled by the same process that covers heritage items generally.

4.4 Archaeological Precincts

An Archaeological Precinct has been defined as an area in which a common pattern of development has occurred, and may be expected to contain an archaeological resource of some cohesive characteristic. In particular, they give an indication of the possible earliest date of resources in that area. As such, they were seen as a useful tool in understanding the history of development and occupation of the City, and hence are important for their research and educational potential.

It was not originally intended that any form of statutory framework be restricted to protection of items within particular precincts. However, during the course of the study it was determined that the precincts should be used to define those areas of greatest archaeological sensitivity, and so provide guidance to Council on Management of the resource during the interim period between the two stages, and until formal protection of the items is achieved.

A total of seven precincts were identified during stage 1, increased to nine for stage 2. Note that some of these cover periods that cross either side of the 1853 cut-off date, and their boundaries may not be evident in the current layout of the city, particularly that of Honeysuckle Point.

Not all of the Inventory items are associated with any one particular precinct. Others may be associated with a particular precinct due to its development phase but not actually stand within that precinct, and may be rather described as "outliers", which have then been subsumed by later developments.

The precincts have been identified on the attached map and are listed in chronological order as follows:

1. Coastline 1804

Generally that land to the east of Shortland Esplanade and Nobbys Road, including Fort Scratchley, Macquarie Pier and Nobbys Head. Used predominantly for defence, maritime and navigational related uses.

2. Convict Settlement 1804

This is the area of the original convict settlement. It covers all the land between Wolfe and Pacific Streets, and running from Church Street down to the original harbour foreshore, approximately Scott Street.

3. Government Town 1822

This includes the area of the convict settlement, expanded westwards to Brown Street. Note that the street grid was altered to the current layout after 1822.

4. AA Company 1824

That land west of Brown Street and south of Hunter Street, but also including the narrow strip of land north of Hunter Street that was held by the company for access to the harbour.

5. Honeysuckle Point 1840

That area within the existing harbour foreshore and north of Hunter Street where the piece of land known as Honeysuckle Point stood, prior to the extensive reclamation works that were undertaken.

6. Bishop's Reserve 1840

The Tyrrell Street area, east of Brown Street, which was set aside for the use of the Anglican Bishop.

7. Sandhills 1840

That area east of Pacific Street, originally developed by the Scottish Amicable Company.

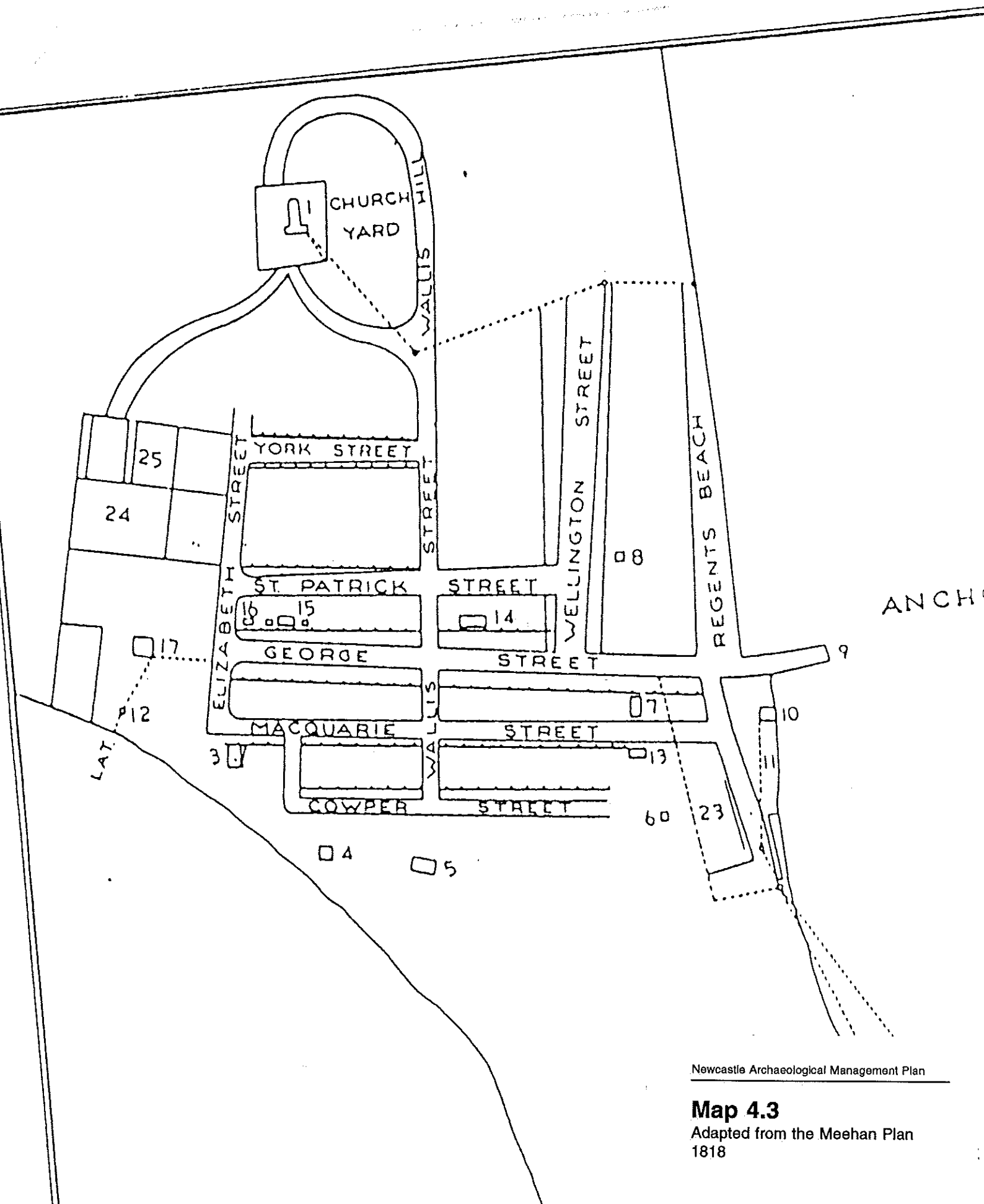
8. Harbour Foreshore 1860

That land north of Hunter Street being the original Harbour Foreshore. This includes the previously identified Honeysuckle Point, and that narrow strip of land controlled by the AA Company. Associated with the development of the railways, coal loading, wharfage and industry.

9. Expanded Town Centre 1880

Broadly including the east-west strip of land that forms the main commercial area of the city today.

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CHURCH
YARD

WALLIS HILL
STREET

YORK STREET

25

24

ELIZABETH STREET

WALLIS STREET

WELLINGTON STREET

REGENTS BEACH

ST. PATRICK STREET

16

15

14

08

GEORGE STREET

17

12

9

MACQUARIE STREET

07

LAT.

3

WALLIS STREET

13

10

COWPER STREET

60

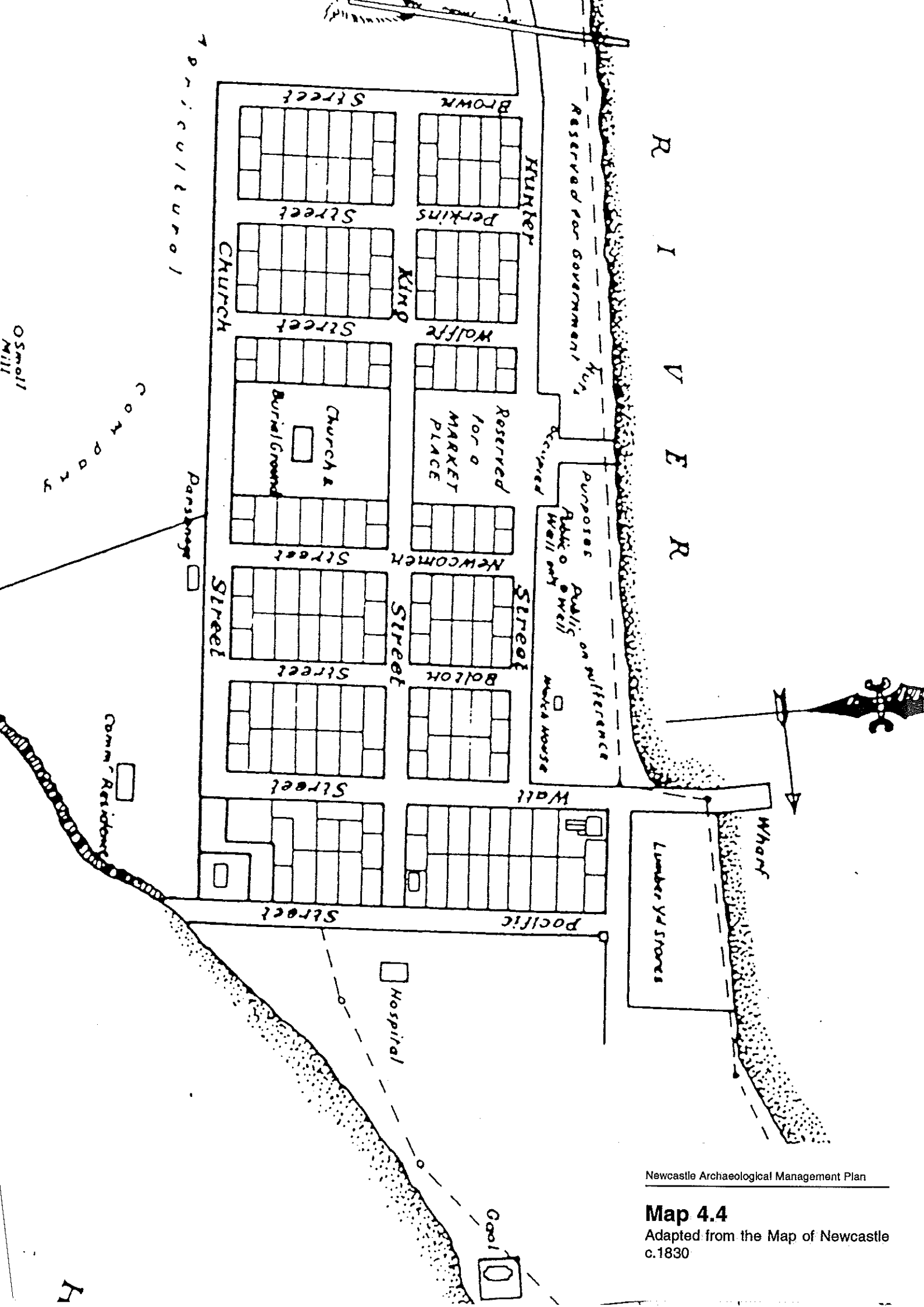
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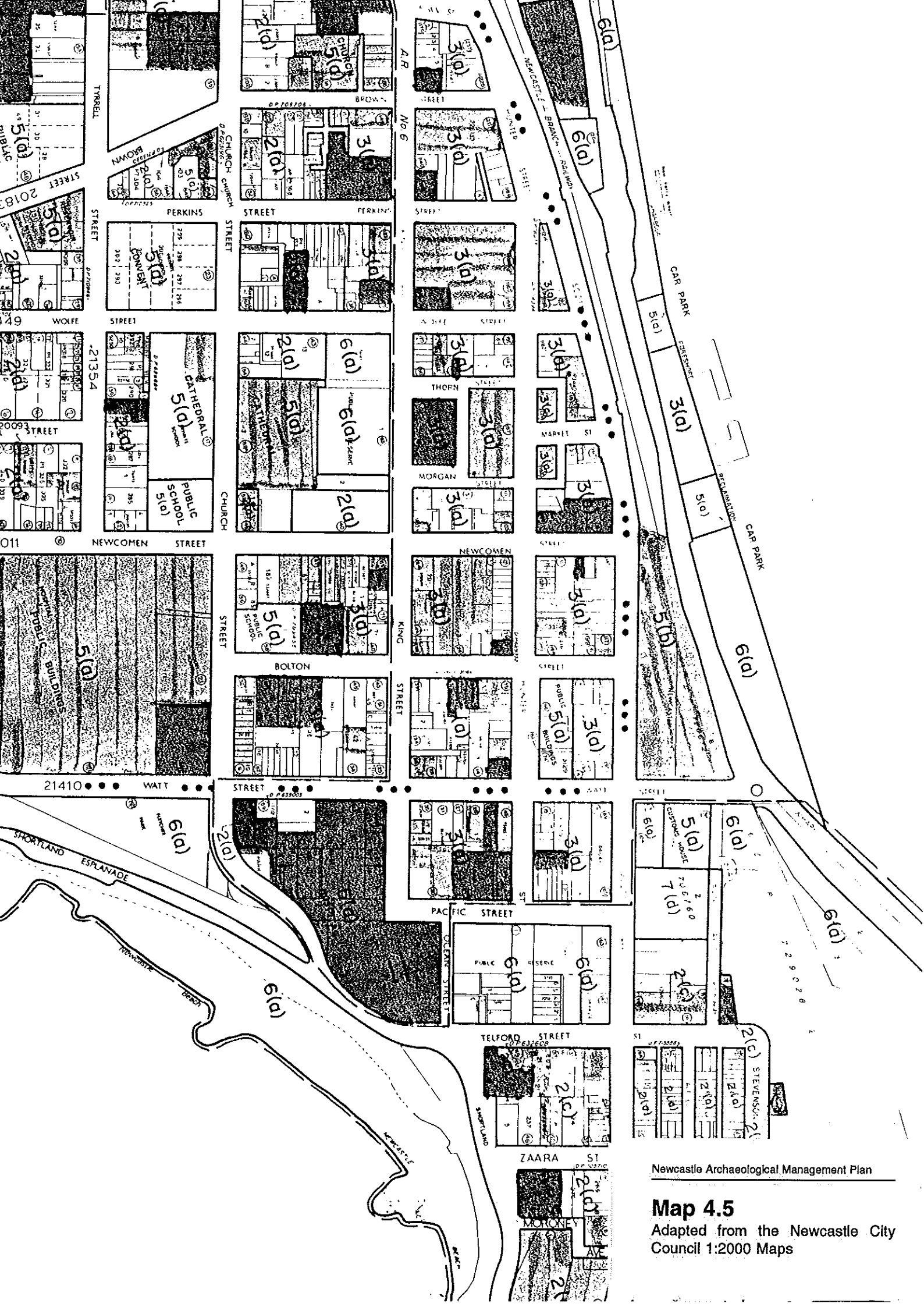
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Map 4.3
Adapted from the Meehan Plan
1818



Map 4.4

Adapted from the Map of Newcastle
c.1830



5. Statement of Significance

5.0.1 Introduction

The NSW Heritage Act 1977 notes that places may have *aesthetic, historic, scientific, social, architectural or archaeological significance*. In "The Conservation Plan", Kerr goes on to refine this when he states that a place may hold such significance by its:

- *ability to demonstrate* a significant issue, such as a philosophy, technique, custom, usage, material or other condition;
- *associational links* with significant people or events for which there is no surviving physical evidence;
- *formal or aesthetic qualities* in terms of design, context, appearance and relationship to other buildings or features.

Standard criteria for assessing significance have been developed by the NSW Heritage Office (formerly the Heritage Branch of the Department of Urban Affairs and Planning) as published in the State Heritage Inventory Manual. This includes identification of some 34 historic themes, of which the most relevant to the study area include:

- *convict*
- *land tenure*
- *mining*
- *transport*
- *industry*

5.1 The Concept of Cultural Significance

The concept of cultural significance or heritage value attempts to define the aspects of a place or item which make it of value to the community. Cultural significance is defined in the Australia ICOMOS Charter (The Burra Charter) as encompassing buildings, works, relics or places of "*aesthetic, historic, scientific or social value for past, present or future generations.*"³ The term "*cultural significance*" is also essentially interchangeable with the term "*environmental heritage*", as defined by the NSW Heritage Act 1977 where it means "*those buildings, works, relics or places of historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance.*"⁴ Of these listed adjectives, "*cultural*" significance has become the generic term, with the other adjectives attempting to provide more detailed categories.

The following examination and discussion does not encompass all of the aspects of cultural significance listed above, as not all values are of equal relevance in considering the nature and significance of the archaeological resources within the study area. The following discussion concentrates on the categories of significance most relevant to the historical archaeological assessment of the sites and areas identified.

The methodology and guidelines used to assess cultural significance have been further standardised in recent years and there now exists a wide range of material on this subject published and disseminated by a number of heritage authorities and groups⁵.

³The Australia ICOMOS Charter for the Conservation of Cultural Significance (The Burra Charter), Articles 1 and 2.

⁴ Heritage Act, 1977, no.136, s.4(1).

⁵ Reference information includes:

Australia ICOMOS, *The Australia ICOMOS Charter for the Conservation of Cultural Significance (The Burra Charter)*, 1981;

5.1.1 Criteria for Assessment

Specific evaluation criteria for the assessment of the heritage values of individual items across the state has been developed over recent years by the Heritage Office and the Department of Urban Affairs and Planning. These criteria may be divided into two major categories which are the *nature* of significance and the *degree* of significance. These are dealt with in the "Heritage Assessment" guidelines issued by the Heritage Office, and also the earlier "Draft Manual for the use of Historical Themes and Evaluation Criteria".

The *nature* of significance includes four main criterion:

- *1: Historic significance (evolution and association)*
An item having this value is significant because of the importance of its association with, or position in, the evolving pattern of cultural history.
- *2: Aesthetic significance (scenic/architectural qualities, creative/accomplishment)*
An item having this value is significant because it demonstrates positive visual or sensory appeal, landmark qualities and/or creative or technical excellence.
- *3: Technical/Research significance (archaeological, industrial, educational research potential and scientific values)*
Items having this value are significant because of their contribution or potential contribution to an understanding of our cultural history or environment.
- *4: Social significance (contemporary community esteem)*
Items having this value are significant through their social, spiritual or cultural association with a recognisable community.

The comparative *degree* of significance values are defined as follows:

- *A: Representativeness*
Items having this value are significant because they are fine representative examples of an important class of significant items or environments.
- *B: Rarity*
An item having this value is significant because it reflects a rare, endangered or unusual aspect of the our history or cultural environment.

The item must also retain the integrity of its key attributes of significance. This means that "*it must not be altered or compromised to such an extent that the assessment values cannot be applied and its links to the thematic context are not clear*"⁷.

The "Archaeological Assessment Guidelines" issued by the Heritage Office also make specific comment regarding "Research Potential" as part of Technical/Research significance, as this is usually the most relevant value in the assessment of archaeological sites. Once it has been determined that a site may retain archaeological evidence, relevant historic activities and logical research themes to which such deposits may contribute information should be established, usually done by means of a formal "Research Design". The issue of Research Design and specific objectives for Newcastle is considered in a subsequent section of this report (see Section 7).

It should be noted however that archaeological sites can also have significance deriving from the other values, that is historic, aesthetic or social, and they should not be assessed for their research potential alone.

Australia ICOMOS, *Guidelines to the Burra Charter: Cultural Significance*, 1984;

Department of Planning / Heritage Council of NSW, *Heritage Assessment Guidelines*, 1990;

J Domicelj, *State Heritage Inventory Status and Scope Evaluation Criteria and Application Guidelines*, report prepared for the Department of Planning, 1990;

J Kerr, *The Conservation Plan*, The National Trust of Australia (NSW), 3rd edition, 1990.

⁶ The following discussion is based on:

Draft Manual for the Use of Historical Themes and Evaluation Criteria, unpublished draft report, Department of Planning / Heritage Council of NSW, October, 1994.

Archaeological Assessment Guidelines, unpublished draft report, NSW Department of Urban Affairs and Planning, June 1995, "Section 5 - Assessing Significance" p 31 ff.

⁷ *Archaeological Assessment Guidelines*, 1995, p 32.

The Archaeological Assessment Guidelines note that it is possible during the archaeological assessment process to use the following questions, developed in an influential paper by Bickford and Sullivan, to assess the archaeological research potential of a site⁸.

- can the site contribute knowledge that no other resource can?
- can the site contribute knowledge that no other site can?
- is this knowledge relevant to:
 - general questions about human history?
 - other substantive questions relating to Australian history?
 - other major research questions?

Archaeological evidence can also verify (or disprove) information already available from other sources, and can indicate the reliability of these sources when studying other sites. This in itself can be useful knowledge, and can contribute greatly to the understanding of the archaeological resource of a much greater area than just the site in question.

5.2 Significance of the Resource

5.2.1 General Statement of Significance

The archaeological resource of the Newcastle CBD dates from the earliest period of European settlement in Australia, with Newcastle being the third oldest urban settlement in NSW. The city's archaeological resource may be expected to yield information not only about Newcastle itself, but also documenting the early colonial period and convict-era way of life from the initial European settlement of Australia.

While the eastern capital cities were also founded as penal colonies, that is Sydney, Hobart and Brisbane, as well as other smaller centres like Port Macquarie, few are likely to achieve the level of archaeological survival which has been predicted by the Field Survey for Newcastle. As such, the archaeological resource of the study area is of National importance.

Archaeological sites, relics etc. within the Newcastle CBD constitute the primary physical evidence of this early occupation, and of the evolution and alteration of the city through various historic phases of development, particularly its industrialisation and urbanisation. Archaeological remains may be expected to record and reflect this process of change from the early nineteenth century to the present.

Further investigation of the archaeological resource may be expected to yield valuable evidence about the history of the city, and provides a unique educational resource. It is however significant not only for its archaeological value, but also for its potential historic, aesthetic and social value.

5.2.2 Significance of the Stage 1 Pre-1853 Resource

For the period prior to 1853, completion of the Stage 1 study indicated that Newcastle retains an extensive and substantial sub-surface archaeological resource. As identified by the field survey and recorded in the Stage 1 Inventory, this resource includes above ground items such as extant buildings and remnant structures, and below ground sites and areas of archaeological potential. Much of the early penal settlement has been assessed as likely to survive sub-surface. By comparison with the extent of remains which appear to survive in historical archaeological contexts in other early urban centres, such as Sydney (which has undergone redevelopment on a massive scale) or Parramatta, the archaeological resources identified within the city of Newcastle also assume importance because of their substantial nature, extent, and rarity.

⁸A Bickford and S Sullivan, "Assessing the research significance of historic sites", in Sullivan, S, Bowdler, S. *Site survey and significance assessment in Australian archaeology*, (Proceedings of the 1981 Springwood Conference on Australian Prehistory), Department of Prehistory, Research School of Pacific Studies, The Australian National University, Canberra, 1984, pp 19-26.

Much of the basic form of the earlier city of Newcastle is also able to be interpreted from the surviving physical evidence. (Subdivision patterns/allotments; streets and buildings such as Toll Cottage). The appearance of the city over time is well-documented by graphic, pictorial and written sources. An historical archaeological approach to these resources which synthesises the documentary and physical evidence may provide new insight into Newcastle's history and historical processes.

The archaeological remains, and in some specific cases known historic sites or places such as "Claremont", have important historical associations and links with notable colonial and pioneer figures such as William Croasdill, manager of the Australian Agricultural Company and with the recognised historic themes.

The additional physical and archaeological evidence likely to be contained within the city of Newcastle has important scientific research value. Although the development of research aims and future directions for individual site investigations lies beyond the scope of the current work, the current project has provided an overview of the resource as a whole, allowing individual site comparisons. As with all such studies, the present investigation has been constrained by available time and budgetary restrictions and it is obvious that further work and assessment of the archaeological resource of the Newcastle CBD (which has been subject to very limited archaeological investigation to date) will increase knowledge and understanding of those sites and areas identified in this study as having archaeological potential.

5.2.3 Significance of the Stage 2 Post-1853 Resource

From 1853 onwards several major historic developments occurred which have strongly influenced the subsequent pattern of the City. In addition to the above-ground structures and works many major developments also have the potential to be reflected through substantial physical and archaeological evidence. Of major importance were the coming of the railway, with associated land reclamation and subsequent port development, and the rise of warehousing, retailing and commercial activities which created the early business centre (CBD) based in the East end of the city around Hunter, King, Bolton and Watt Streets.

The alienation of the AA Co's grant (west of Brown Street) after 1853 led to its use for a variety of industrial, commercial and residential developments. Later developments extended the commercial area further west along the Hunter-King Streets axis. Government activities at all levels, municipal services and the provision of public utilities have also exerted a strong influence which is reflected in some standing buildings and several sites such as that of the former Gasworks. There is a substantial surviving building stock (generally post-1860s in date) which is linked to the emergence of the City as a regional capital. Extant buildings include many associated with commerce and retailing (eg. banks, insurance and commercial chambers) and public buildings (eg. Police Station, Courthouse, Customs House, Post office).

Newcastle remains a substantially intact 19th century city, with important and well preserved examples of Victorian and Edwardian industrial and commercial buildings. This standing building stock demonstrates changes to the city and its community, while the number of standing heritage items means that the archaeological resources which relate to prior occupations are not likely to be made available for investigation. This also means, however, that above and below ground archaeological evidence has been preserved. The above ground evidence associated with present heritage items may also contribute information about the occupation and use of the present structures.

The Newcastle CBD is expected to contain surviving physical evidence from a wide variety of earlier and more mixed land uses. It is usually the case that sites first redeveloped in either the nineteenth or early twentieth century also retain evidence from older periods. Such evidence may be recovered when sites are redeveloped or disturbed by modern developments.

Several of the precincts identified in this Archaeological Management Plan also reflect the broader influences which have shaped the current City of Newcastle and are important for their 'ability to demonstrate'. For example, the city's important maritime role from the beginning of European activity is represented by the Ocean precinct, which includes extant structures (eg. Macquarie Pier) and archaeological sites (eg. the Watt St Wharf) associated with this sphere of activity. The City and Port of Newcastle still has a prominent maritime role. The Ocean precinct and the associated surviving

dock and port areas (Queens Wharf and further west) may also be considered to present a microcosm of an industrial-archaeological landscape, that contains both above and below ground physical evidence.

The City of Newcastle features a long continuity of occupation which reflects the foundation of the third oldest urban centre in NSW. This long duration of occupation is reflected in a living community with links to pioneering settlers and families.

6. The Heritage Planning Framework

6.0.1 Introduction

Historical archaeological sites, relics and other items identified as being of heritage value may be subject to a number of differing levels of recognition and/or control. These range from National to State and Local level, and may include statutory and non-statutory requirements for the identification and protection of such items.

The general intention of existing heritage planning legislation, and of other professional guidelines, is the protection of historical archaeological resources from inadvertent demolition, removal, excavation or other disturbance without proper assessment based on accepted procedures. In much of the legislation archaeological sites are considered as "heritage items", a term more typically associated with buildings and other standing structures, although the way of dealing with the conservation or archaeological resources will obviously differ markedly from these.

6.1 National Strategies, Controls and Registers

6.1.1 Australian Heritage Commission Act 1975

The Australian Heritage Commission is a federal statutory body established under the Australian Heritage Commission Act, 1975 (Commonwealth). The Commission is responsible for the identification and maintenance of the Register of the National Estate. The Act prevents any Commonwealth department or instrumentality, or any organisation using Commonwealth funds from taking action which might adversely affect a place in the Register, except where there is no 'feasible and prudent alternative', or unless all action is taken to minimise damage when there is no such alternative. Thus, the inclusion of a place on the AHC Register imposes some constraints on the actions of Commonwealth Government Authorities but generally not on State or Local Government or private owners.

6.1.2 The Burra Charter

This charter has been adopted by ICOMOS Australia as a basis for conservation in Australia (ICOMOS is the International Council on Monuments and Sites, a UNESCO affiliated association of professional conservation practitioners world wide).

The Burra Charter embodies the principles and practices adopted as proper by professionals working in the conservation field in Australia. These principles are for use in planning the management, care and conservation of places or items identified as being of cultural significance. The Charter specifically defines (see Article 1) the different types of action which may be taken to alter or enhance places of cultural significance. The most appropriate actions for the archaeological resource are *preservation or conservation*.

6.1.3 The National Trust

Although exercising no statutory control over conservation the National Trust has significant leverage, being amongst other things a strong lobby group for the heritage conservation movement in Australia. It provides advice to Governments, developers and individual property owners on all aspects of conservation. Through its committees, the Trust is able to investigate and assess specific types of items including archaeological sites.

The Trust, through its register, has identified what it believes to be some of the more significant components of our heritage. Listing in the Trust register has no legal force but is widely regarded as an authoritative statement of the heritage significance of a place or item. National Trust listings in the area of the Newcastle CBD are principally concerned with buildings or other above ground structures. However in exceptional cases known archaeological sites may be listed by the Trust, and in Newcastle these include some early sites such as the Commandant's Bath/Bogey Hole.

6.1.4 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The purposes of this act is to preserve, and protect from injury or desecration, areas and objects in Australia and in Australian waters, that are of particular significance to Aborigines in accordance with Aboriginal tradition. It can only be called into operation when the Minister for Aboriginal Affairs has been applied to by or on behalf of Aborigines or Torres Strait Islander people. While sacred or traditional sites are most commonly affected by this Act, it has come into play concerning historical archaeological sites in Western Australia and Victoria. *(Extract from DOP Guidelines p.45.)*

6.1.5 Historic Shipwrecks Act 1976

This act, under amendments incorporated in April 1993, provides protection for all shipwrecks and other relics located in Australian Territorial waters which are over 75 years old. The area covers all items from the low water mark to the continental shelf. Items above low water mark or within inland waters may be covered instead by general heritage legislation.

A register of historic shipwrecks is maintained under the terms of the act, similarly to the National Estate.

6.2 State Legislation and Authorities

6.2.1 The Heritage Act 1977

The Heritage Act, 1977 was enacted to ensure that the environmental heritage of New South Wales would be adequately identified and conserved. The Act established the Heritage Council of New South Wales, an independent advisory body of 15 members, which makes recommendations to the Minister for Local Government and Minister for Planning on matters affecting the environmental heritage and on the implementation of the Heritage Act.

The Heritage Act is concerned with all aspects of conservation ranging from basic protection against indiscriminate demolition or damage, to restoration and education. It contains provisions to facilitate conservation varying from the issue of Interim (ICO) and Permanent (PCO) Conservation Orders, through to orders preventing unauthorised demolition or alteration under relevant sections of the Act.

The provisions of the Heritage Act related to the management and conservation of archaeological sites are those which relate to "relics" (Sections 138-145), and in some cases the provisions for the making of conservation instruments or orders although relatively few archaeological sites in NSW are subject to such orders. In the case of sites with Conservation Orders the provisions of Section 60 apply.

The term "relic" is defined in the Heritage Act, 1977 as:

...any deposit, object or material evidence -

- (a) which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and*
- (b) which is 50 or more years old.*

The Heritage Act provides automatic statutory protection for relics in sections 139 - 145 which prevent the excavation or disturbance of land for the purposes of discovering, exposing, or moving a relic not subject to a conservation instrument, except in accordance with a excavation permit.

Section 139 of the Heritage Act, 1977, states that:

"A person shall not disturb or excavate any land for the purpose of discovering, exposing, or moving a relic, not being a relic subject to a conservation instrument, except in accordance with an excavation permit".

Thus, the disturbance or excavation of land containing or likely to contain relics may only take place after an excavation permit has been granted by the Heritage Council or its delegate.

Section 146 of the Act also requires that if a relic is discovered (or located) the Heritage Council must be notified of its existence as soon as possible. It should be noted that this report and its associated documentation provides recording and basic assessment of a number of potential archaeological sites and/or potential archaeological sites which may be expected to contain archaeological deposits and "relics".

The NSW Heritage Office is the bureaucratic arm of the Heritage Council, and is responsible for providing advice and assistance on heritage matters, including archaeological issues, and for the processing of applications etc.

6.2.2 The Environmental Planning and Assessment Act 1979

In NSW, land use planning is controlled by the Environmental Planning & Assessment Act, 1979. (EPA Act). This Act, and the "standard provisions" developed by the Department of Planning for implementation in local planning instruments, confirm the relationship between planning and heritage conservation. The standard provisions aim to ensure that places identified in heritage studies (or other documents, such as this report) are protected and that development is compatible with the importance, character and appearance of significant buildings or places. The planning system established by the Act includes Regional Environmental Plans (REP's), Local Environmental Plans (LEP's) and provisions relating to development control.

6.2.3 Local Government Act 1993 and Associated Controls

The Local Government Act 1993 was introduced in July 1993 and largely supersedes the 1919 Act. There is currently insufficient experience with the Act to determine its precise implications for heritage conservation, however some important issues can be identified.

Clause 8 of the Act specifically notes several points of a council's charter, including the need to *"exercise community leadership"* and to *"properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible"*. Both of these are particularly relevant to a Council's approach to its Heritage.

It also addresses specific Heritage issues, including:

- Clause 89 (3): In determining an application for development Council must consider *"any items of cultural and heritage significance which might be affected"* by that development;
- Clause 142: Similarly when issuing an Order, Council must consider *"its impact on the heritage significance of the item... give notice to the Heritage Council of the Order and consider any submission made to it by the Heritage Council"*.

A further point noted in a council's charter is the need *"to bear in mind that it is the custodian and trustee of public assets and to effectively account for and manage the assets for which it is responsible"*. This is elaborated on in various clauses including:

- Clause 403 (2): The requirement for councils to prepare draft management plans on an annual basis is identified elsewhere. This clause specifically notes that the Statement of Principal Activities in such plans must include, amongst other things, a statement with respect to: *"activities to protect environmentally sensitive areas and to promote the ecological sustainability of the area..."*
- Clause 428 (2): A council must also prepare an annual report detailing its achievements in relation to such management plans, including statements on, amongst other things *"areas of environmental"*

sensitivity; development proposals affecting, or likely to affect, community land or environmentally sensitive land".

While neither of these specifically note archaeological sites as areas of concern, these should be included in any such documents. Archaeological sites should be seen as an essential record of our culture, and hence a part of the "public assets" for which council is the "custodian and trustee".

6.2.4 National Parks and Wildlife Act 1974

The protection of Aboriginal heritage, and its care and management, are the responsibility of the director of the National Parks and Wildlife Service under the NPWS Act. The Act covers all Aboriginal relics and Places in NSW, and prohibits the knowing destruction, defacement or damage of any Aboriginal relic or place without the written consent of the Director.

Due to the possibility of vandalism, the service is reluctant to widely publicise the location and nature of Aboriginal relics and places. Council should ensure its officers are aware of the Aboriginal heritage of the City, to enable potential conflicts to be anticipated, and for conservation to be incorporated into planning strategies or plans of management. Council currently has all listed sites noted on its computer based property system, and close liaison with the NPWS should be maintained over development on all such sites.

An assessment of Aboriginal heritage was not included as part of this study.

6.2.5 Hunter Regional Environmental Plan 1989

This plan applies to the Hunter Region, and in particular, in relation to commercial development, Clause 20 (1) states that the Newcastle CBD should be "promoted as the major commercial, retail and service centre in the region, comprising a wide range of office and entertainment facilities and establishments providing high quality goods and services".

6.3 Local Planning Controls and Policies

6.3.1 Newcastle Local Environmental Plan 1987

The study area has a diverse range of zonings dominated by commercial, residential and open space. It also consists of three conservation areas as identified in Amendment No. 52. The conservation areas are Newcastle CBD, The Hill and Newcastle East and any alterations to a building within the conservation areas require the consent of Council.

Within the study area there are 200 listed heritage items with varying levels of significance (local, regional or state) as defined in Part 4 of Newcastle LEP 1987. Alterations to items of State significance require concurrence of the Minister. Whilst advice is sought from the Heritage Council for items of regional significance, if it is not received within 28 days, the Council may determine the application. Council is fully responsible for items of local significance.

Note that the standard Heritage Provisions include Conservation Incentives, such as rate reductions and transfer of floor space ratios. Such incentives may be applied to identified archaeological sites.

Council provides a free Heritage Advisory Service. The Heritage Adviser assists developers, the public and Council in making appropriate decisions about heritage issues and items.

6.3.2 Inner City Conservation Area Study 1984

This document provides historical information in relationship to The Hill and Newcastle East Conservation Areas, and identifies buildings and areas of heritage significance.

6.3.3 Newcastle Central Area Strategy 1992

The Strategy has been prepared by Council to establish a vision for the future of the city centre. It has drawn on a number of studies completed by Council to provide a context for the future redevelopment of the City. The focus of the strategy is on the City's major commercial area and inner suburbs that have been most affected by "*diminishing commercial activities and chronic population loss*".

6.3.4 CBD Urban Design Guidelines - DCP 30

Based on the CBD Urban Design Study prepared for Council, Council has adopted a Development Control Plan No. 30 - Urban Design Guidelines for the CBD.

The main aim of the guidelines is to promote a "*coherent and attractive environment within the Newcastle CBD by providing the designer of individual projects within the area with a common framework, derived from the characteristic features of the City Centre and of its architectural heritage*".

This DCP assist developers, architects, planners, the general public when proposing new development or alterations within the CBD.

6.3.5 Honeysuckle Concept Master Plan 1993

This Plan has been prepared to guide development of over 50 hectares of surplus government land lying between Newcastle Harbour and the CBD. The concept plan for the area envisages up to 5000 additional residents and up to 8000 additional employees on site. The potential mix of uses include commercial office space, entertainment and cultural areas, markets, speciality retailing, marina, medium density housing, open space, etc.

6.3.6 Urban Design Study for Convict Lumberyard Precinct 1994

This study was prepared to develop urban design guidelines for an area within 150 metres radius from the convict lumberyard site. The study was to assist in ensuring development within the area was compatible with the use and protection of the significant archaeological remains.

6.4 Previous Archaeological Studies

6.4.1 Archaeological Studies

Archaeological Assessments and other related studies that have been previously undertaken provide an important resource, and a guide to future development on individual sites. Reports have been prepared for the following sites within the study area:

- George Hotel Site
- Top of Town Motor Inn, Newcastle Beach
- Honeysuckle Precinct
- 52 Newcomen Street, Newcastle
- Civic Site

6.4.2 Conservation Plans

Conservation Plans have been prepared for the following sites within the study area. These may have included an assessment of archaeological potential and recommendations for management of any archaeological resource, though not necessarily in any detail.

- Customs House
- North Wing, Royal Newcastle Hospital

- Convict Lumberyard Site
- Claremont, Newcomen Street
- Civic Site
- Hunter Institute of Technology, Hunter Street

7.0 Research Design

7.0.1 Introduction

As previously noted, the intention of this study is not to promote the preservation of any archaeological sites at all costs, nor to establish legislative controls that place an undue financial burden on developers to research archaeological sites. Such actions would hinder the continued development of the CBD, and are inconsistent with current heritage conservation practices. Rather, it's aim is to identify significant archaeological sites, and then make recommendations for their ongoing management and conservation.

7.1 The Basis of Archaeological Research Design

An archaeological research design aims to ensure that when archaeological sites are excavated the maximum information is recovered, and that this information can be used to contribute to current and relevant knowledge about the past. The concept of archaeological research design is specifically connected with the idea that historical archaeology should be more than just a method which observes, records and describes the evidence found within any given site or area. An archaeological approach should also inform the analysis and interpretation of the evidence recovered, and link it to broader areas of research interest. It should also attempt to provide explanations of the meaning of any patterns evident in the recovered and recorded information. The argument here is that an archaeological perspective is vital both in the recovery and interpretation of the evidence. The archaeological record is not only an independent source, it contains evidence of equal status and importance to any written historical document or other existing evidence. For the most productive archaeology and interpretation it therefore becomes necessary to have two things:

- 1) a clearly stated conceptual framework (ie. the theories, models or hypotheses) which will permit the recovery of meaning from the archaeological data; and
- 2) specific methods and procedures which will enable the analysis of the identified areas of research.

For several years professional historical archaeologists have discussed the possible development of 'regional research frameworks' or 'standing research designs'. These are terms and concepts which derive from the field of public archaeology in America, and are seen as the means for incorporating numerous small scale single projects into larger research frameworks¹. It has also been suggested that archaeological zoning plans tied to research themes should be used to coordinate research².

A direct result of this type of philosophical position has been that, since the 1980s, the approval of any Excavation Permit under the Heritage Act has included the standard requirement that an appropriate "research design" will be submitted as part of the application (Heritage Council, 1989)³. In most cases the submitted research design then consists of two main parts, which mirror the two components already noted above. That is:

- a) the actual excavation methods and strategies which will be used to recover, record and analyse the evidence present at the site being investigated; and
- b) A list of questions which the archaeological excavation of the site might reasonably be expected to answer.

¹ For example: H Temple, "Issues Procedures and Problems in Urban Archaeology in NSW" p 5 - 13 in *Urban Digs Historical Archaeology Guidelines Seminar Papers*, NSW Department of Planning, Sydney, 1989.

² T Ireland, "Archaeological Zoning Plans for Urban Areas" p 33 - 39 in *Urban Digs Historical Archaeology Guidelines Seminar Papers*, NSW Department of Planning, Sydney, 1989.

³ *Procedures for the Evaluation of Excavation Permits under the NSW Heritage Act, 1977*, Heritage Council, 1989

A structured approach, elaborated in a clearly stated research design, is undoubtedly more likely to lead to the obtaining of useful information and results. The only alternative remains an unsystematic and unstructured approach to the getting and interpreting of the mass of information which is usually recovered from the average archaeological site.

To other professions, archaeologists may seem unduly pre-occupied with the topic of research design but it is a fundamental issue. Research design is also linked to the appropriate allocation of scarce resources. Due to the time and costs involved in archaeological work, the results of such work should provide additional and worthwhile evidence which will contribute to the development of new insights into history and historical processes. In this way it should be possible to add to existing knowledge rather than merely confirming it. If archaeology is carried out as only a descriptive process, it becomes a very expensive way to go about confirming or recording information. It is for this reason that the Heritage Council's *Code of Practice* for historical archaeological investigations notes that all parties: Archaeologist; State Heritage Agency; Councils and Developers, should recognise and promote the value of archaeological research design.

7.2 Australian and Overseas Precedents

During the course of the study, research design was identified as an important component, and considerable research was undertaken by the study team of:

- the current general state of research design as developed and practiced by historical archaeologists overseas, particularly in America; and
- recent attempts at dealing with research design in Australia through Archaeological Management Plans and other similar studies.

The findings of this research have been compiled as a background paper, and this paper has been included as an appendix to this report. A very brief summary is provided below, and the background paper should be referred to for further detail.

7.2.1 Levels Of Investigation

In recent years there has been considerable discussion by historical archaeologists about the merits of different levels of investigation in urban environments. These levels are linked to the issue of scale and may be categorised as follows:

- **Household:** The household level of investigation essentially equates with that of the single separate site or allotment, with a defined occupation. This remains by far the most common level of urban archaeological project.
- **Neighbourhood:** In the Neighbourhood level approach archaeological artefacts and features, instead of having to be assigned to specific individuals or occupations, may be used to consider broader range historical archaeological questions.
- **City:** An approach which views the entire city as the archaeological site being investigated. The approach was derived from the concept of the city as a dynamic system containing interconnected cultural and physical components.

7.2.2 Analytical Models and Frameworks

There are also various different conceptual frameworks within which archaeological sites can be investigated, as follows:

- **The Core-Periphery Model:** an economic, political and social central core (ie. the town/city or the CBD), surrounded by peripheral support areas. As any city expands the relationship and the actual physical distance between the core and the periphery will alter through time. This fact may be particularly relevant to the observation of patterns within urban archaeological sites which themselves will be sensitive to space and time parameters.

- **Concentric Zone Model:** a series of concentric circles which may represent, for example in New York, an innermost business district; a surrounding zone of light manufacturing and slum housing; a working class residential area; a middle class residential area; and on the outer edge an elite residential area.
- **The Sector Model:** suggests that over time high status residents will move along established lines of travel outward from the centre of the city. The lines of travel will be largely determined by the nature of the physical landscape.
- **The Multinucleated Model:** a refinement of both the 'concentric zone' and the sector model. The model contends that different land uses will attract, and be attracted to, various surrounding activities. Other land uses may be detrimental to surrounding activities. The ambivalence of the push-and-pull factor will result in the emergence of separate urban nuclei around which particular urban growth patterns occur.

Other models developed for urban centres operate at a different scale of inquiry from the overall city development/spatial structure models previously discussed, including.

- **Urban Subsistence Patterns - the "Pan-city" Model:** suggests that understanding of the parameters of the overall (and world-wide) "pan-city" phenomenon might be assisted by identifying the patterns which are characteristic of particular aspects of the urban lifestyle, or "urban subsistence pattern".
- **Consumer-Choice:** The framework sees strong relationships between economic roles, social stratification and the types of material culture owned by households. Thus the consumer-choice framework is also strongly linked to the 'household' level of enquiry discussed earlier.

7.2.3 Archaeological Management Plans in Australia

A review was undertaken of various other archaeological management plans either previously completed or currently being prepared for the larger urban centres comparable to Newcastle

The earlier group of archaeological management plans comprised:

- Sydney (1989 and 1992);
- Pyrmont/Ultimo (1990);
- Parramatta (draft 1987 published version 1991);
- The Rocks (draft 1990, final 1991); and
- Melbourne (1992).

The primary focus of most of these early plans was generally limited to the prediction of probable archaeological sites based on the completion of historic overviews in combination with a field survey, but not the identification of individual archaeological sites or potential sites. It was generally recognised at the time as being only the first basic step in the overall management process.

The more recent group of studies (undertaken during the same time period as the Newcastle Archaeological Management Plan) comprised:

- Port Macquarie (1994); and
- Millers Point in Sydney (1994).

The Port Macquarie Archaeological Management Plan does not specifically include "Research Design" as a topic or subject heading. The potential research value of archaeological sites is, however, implied throughout the discussion of Significance and Identification of eight 'research themes'. It does also include an inventory of sites.

The 'excavation master strategy' for Millers Point has synthesised the research questions postulated for a number of separate archaeological sites in Sydney into a single list of 'research themes', then making them specific to the Millers Point study area.

7.2.4 Summary

The outline of overseas precedents and analytical frameworks provided in the overview indicates the variety of approaches which have been adopted for dealing with the historical archaeology of urban areas in the eighteenth, nineteenth and twentieth centuries.

The essential reason for the development and application of all of these models is that while the distribution pattern of populations, sub-groups and archaeological sites is relatively easy to establish, any actual pattern identified through archaeological excavations (or inadvertently by other ground disturbance), will not necessarily be self-explanatory. The outline also indicates that there exists considerable comparative information, and that once the particular pattern of development has been identified for an urban area there is a range of theoretical models which may be applied.

Urban archaeological sites provide a significant resource for the study of the processes of "urbanisation", a world-wide phenomenon that has dominated many of the developed western nations. For this reason, the application of a range of analytical models through development of comprehensive research designs and excavation strategies is a valid aim.

An overview of the archaeological management plans and other work to date appears to show emphasis on the listing of "research themes" as a unifying factor between disparate sites and projects. However even the most comprehensive list of research themes will need to be re-examined for their applicability to individual sites once a greater amount of historic information has been obtained.

7.3 Working with the Newcastle Resource

7.3.1 Current Status of Knowledge

This Archaeological Management Plan may be considered the first step in gaining greater knowledge and understanding of the archaeological resources of the Newcastle CBD. The plan provides an overview which identifies and characterises the surviving resource. In principle, archaeological management plans provide a useful basis for promoting coordinated research because of the initial comparison they provide across the resource (such as whether any given site is 'representative' or 'rare'); the identification of historic themes for the city; and which of the identified sites or areas are relevant to these themes and the research questions which may derive from them. Future assessment and analysis will be required for those sites or areas of archaeological sensitivity and/or archaeological potential on a case by case basis. This assessment will determine the appropriate level of any future archaeological involvement at individual sites.

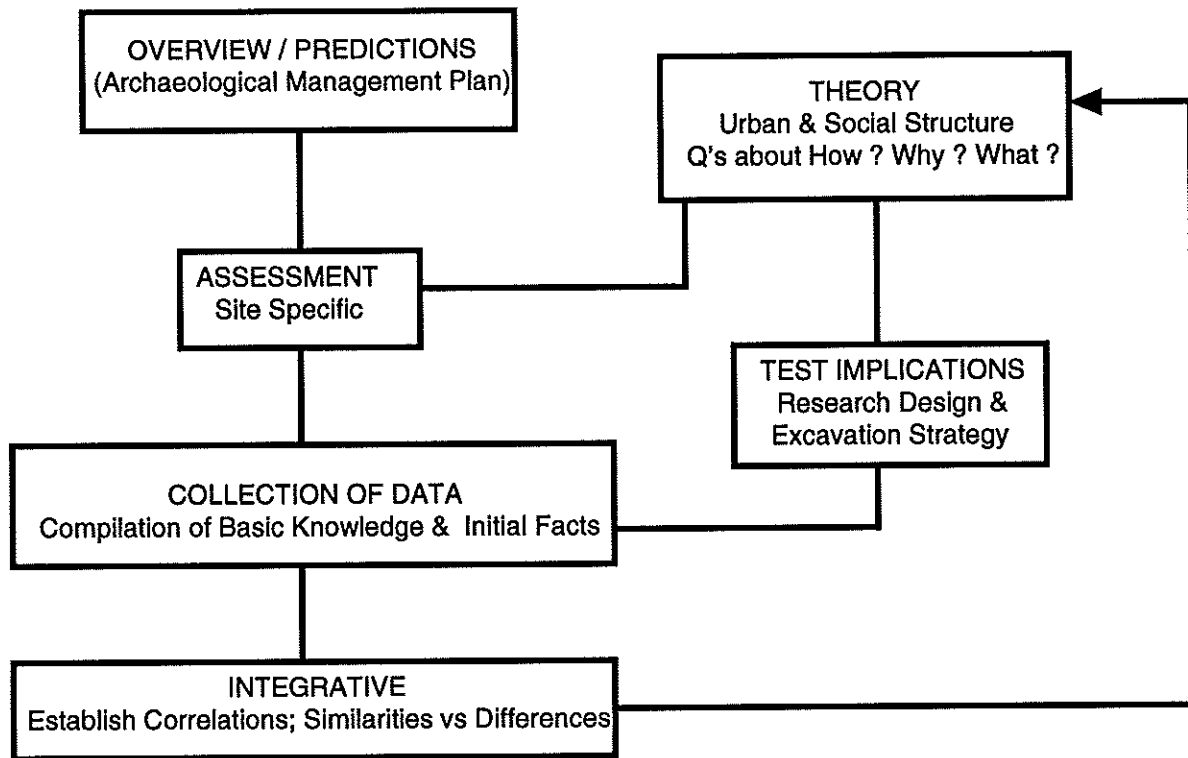
At the present time very little archaeological work has occurred within Newcastle. Only about 4% to 5% of the sites or areas identified in the Inventory database have been subject to some form of assessment (including conservation plans). Very few archaeological investigations have been undertaken on archaeological sites. Basic level information about survival, patterning or other matters has not yet been established for Newcastle.

The present situation in Newcastle may be compared with that of Sydney in the early 1980s. By that stage a handful of excavations had been completed. Most were essentially 'salvage' projects or training exercises, although in a few cases excavations addressed fact-finding questions about history or architectural reconstruction details. No comprehensive knowledge of the resource was available and no theoretical orientation was evident.

Although this Management Plan has predicted a very high survival rate for archaeological resources, this has yet to be tested through the completion of archaeological fieldwork. Newcastle is thus at a stage where basic information and initial facts are urgently required in order to verify the overview and predictions suggested in this plan.

A desirable progression from this stage is then to gain archaeological data from a range of sites and establish the correlations between individual sites and overall patterns in order that similarities and differences can be determined. It is also desirable that a theoretical orientation which includes research areas relating to social and urban structure be applied.

This overall process can be summarised by the following diagram:



7.3.2 Future Directions

It has been noted above (see Section 7.2) that various levels of investigation may be adopted by archaeologists when dealing with specific site projects. In practice most archaeologists are usually working on the single allotment level, although in some instances archaeological projects in urban centres have been planned on a total city-block basis. Nevertheless, most of research frameworks applied so far in Australia have been at the household or neighbourhood type of level. In the discussion of the city-site concept however, it was also noted that if the Newcastle CBD proves to have a high survival rate, a coherent, agreed and overall "sampling strategy" could potentially be developed for the city as a longer term management tool. This decision, and any possible city-sampling strategy, will need to await the outcome of further fieldwork within the Newcastle CBD.

More information about the historical development, spatial patterning and socio-economic groups within the City which could then be related to the historical archaeology of Newcastle, might also be expected to prove useful in providing a more detailed overview than has been achieved by the present study. Such information is likely to be found both in the review of additional historic documentation, and also in the literature and models derived from other disciplines and professionals interested in Newcastle as a study area.

Given the outline of the various analytical approaches noted above, Newcastle may be viewed at two basic levels. The first is as one of a number of larger Australian cities all of which were founded after the commencement of the industrial revolution and during the competitive phase of capitalism.⁴ Three of the present eastern seaboard capital cities were also founded as penal colonies (Sydney, Hobart, Brisbane) as were some other smaller centres (Port Macquarie). Most of these cities will retain some vestiges of this phase, but few are likely to achieve the level of archaeological survival which has been predicted for Newcastle. All of the larger cities may be seen as increasingly organised constructions over time and all should be viewed both as an integrated whole and as broad study areas able to illuminate the historic/social and physical/spatial processes of urbanisation.

The second level at which Newcastle may be viewed is as its own area subject to topographical constraints and with specific phases and themes in its development. With this in mind the following broad research areas have been identified for the City of Newcastle.

⁴ See M T Daly "Capital Cities" in D Jeans (Ed), *Space and Society*, Sydney, 1977.

7.3.3 Research Themes for Newcastle

The inventory database for the Newcastle Archaeological Management Plan has included a field which indicates the 'historic themes' which are considered relevant to each inventoried item. This provides an overview of the archaeological resource at one level, and the purpose of the 'research themes' is not to simply reiterate these.

Rather, it is possible to set the following subject areas or 'research themes' for the archaeology of Newcastle, with the aim of having future investigations collecting data relevant to these areas whenever it is available. It should be noted, however, that the specificity of any suggested research design will increase as knowledge of the data becomes more precise. Much more detailed research questions can be suggested when site-specific information is available, such as that which results from the completion of individual archaeological site assessments. As such the following should be seen only as a guide to items to be considered, while the importance and level of detail for each will differ depending on the site in question.

It must also be recognised that research areas should not be rigidly imposed or administered, as even the most comprehensive list of research themes will need to be re-examined for their applicability to individual sites once a greater amount of historic information has been obtained. This is also the case with the range of potential theoretical models and the various levels of investigation which have been outlined. And site-specific research designs still need to be adaptable, as the nature of archaeological sites often means that their preservation, form and content cannot be accurately determined until excavation commences.

The bold type headings indicate the overall research area, the plain text indicates the type of related topics and/or evidence around which site-specific research questions might be framed. It should be noted that the research areas are not mutually exclusive but are overlapping and complementary. For example; the topic of mining may be relevant to Environmental Modification & Disturbance, Penal Settlement, Australian Agricultural Company, and Industry and Manufacturing; and wharves may be relevant to Environmental Modification & Disturbance, Military & Maritime, Urbanisation & the 19th Century City, and Industry & Manufacturing.

a) Natural Environment

Landform/Topography and Vegetation/Habitat. Location of original 'natural' ground levels; Topography; Landscape features; Water table/catchment, creek lines & drainage; Harbour and Estuary, Beaches and Shorelines; Plants/Pollens (native species); native food species and resources; other resource locations (timber, building materials, coal); Fossils; Geology.

b) Environmental Modification & Disturbance

Land Reclamation and Fill; Harbour/Port/Wharf Construction & Reconstruction; Fill levels and extent of altered ground; Other landscape changes (eg. movement of frontal sand dunes over East Newcastle); Water Supplies (public wells/private wells/cisterns/reticulated supply); Vegetation - disturbance/loss and introductions (plant pollens); Quarrying.

c) Aboriginal Occupation/Contact

Location/Extent; Pre-contact environment; Resources; Material Culture; Continuity & Change. Acculturation.

d) Penal Settlement

Physical/Spatial layout (including Street pattern); Sites/Buildings; Construction/Technology; Occupants/Lifeways; Early industries

e) Military & Maritime

Precincts/Areas; Roles & Functions; wharves; defence installations

f) Government Town

Continuity and change; Physical/Spatial layout (including Street pattern and subdivision, town allotments); Sites/Buildings (including building materials & technology); Occupants/Lifeways (including residential/domestic sites); Land Uses; Public Utilities and Services.

g) Australian Agricultural Company

Influence on settlement pattern & development; mines & railways (sites)

h) Urbanisation and the 19th Century City

Development of the CBD and specialised land uses; Land value; Population (increase/demographics); Occupations and residents of the CBD; Town Services / Urban Amenity; Health/Welfare; Transport; Civic administration; nature of development/expansion of the city (increased structural/spatial/functional complexity); social repercussions; consumerism & access to imported goods.

i) Industry and Manufacturing

Industry locations & industrial production; Labour relations / class struggle (working class neighbourhoods); Economic organisation & control of production vs. social differentiation; labour requirements and the composition of families. Major industries and sites (eg those related to Mining, Steelmaking, Transport, Commerce and other important industrial/historic activities for Newcastle.

j) Cultural Life

Religious/Educational; Social / Entertainment.

k) Gender and Ethnicity

Roles/Status (Social & Economic) including occupations. Historic, Social, Spatial & Physical environment. Locations and or concentration of specific groups. Lifestyle.

l) Archaeological Management Issues

Site preservation; Integration and comparison of results. Assessment of management plan predictions both overall and in relation to specific (inventoried/scheduled) sites. Feedback into the process of future management.

8. Management Strategy

8.0.1 Introduction

The purpose of the Management Strategy is to put in place conservation objectives for the archaeological resource. This covers:

- the development of codes, policies and guidelines for the management of the resource;
- recommendations on implementing these in day-to-day activities at Council; and
- interpretation of the resource to demonstrate its importance to the community.

8.1 Context of the Study

The primary aim of this Archaeological Management Plan was to identify below ground archaeological sites within the Newcastle CBD to a basic but consistent level. This process will make most of the city's archaeological sites fairly predictable, enabling an increased certainty for property owners, developers and Council about the location and nature of such sites. The identification of the archaeological resource even at this basic level enables more effective management as it identifies allotments or areas within the CBD where further site specific and detailed research is required. Thus it will be possible to take archaeological issues into account in the early stages of planning for redevelopment, rather than having them as an unexpected factor later in the planning or construction process.

The Archaeological Management Plan also provides Newcastle City Council with a framework for the assessment and conservation of the city's archaeological resource, and presents guidelines for its management, on both an overall and case-by-case basis, given the current understanding of its nature. However the study has no legal status in its own right. It is an advisory and educational document, which seeks to provide a basic resource overview, make recommendations for appropriate planning mechanisms, and identify ways to promote recognition and conservation of the resource.

By identifying the archaeological resource as a whole, the relative importance of individual archaeological sites can be compared and the real impact of development proposals can be further assessed, in order that each site receives a degree of investigation based upon its significance. In this way redevelopment will not proceed at the expense of the archaeological resource, and by the same token archaeological investigations will not be required unnecessarily.

It should be noted that the New South Wales Heritage Act 1977 provides blanket protection of all archaeological 'relics' (that is in general terms any item more than 50 years old). In addition, the initial identification of areas of archaeological potential is consistent with the protection of relics as provided for by the Act, where the 'potential' presence of relics is the only prerequisite for requiring an archaeological assessment. Thus all areas which might contain relics or archaeological deposits are awarded the same degree of legislative protection, irrespective of their individual significance which at this stage is largely unknown.

8.1.1 The Need for Further Research

Although the study has broadly identified the archaeological resource of the Newcastle CBD, it does not remove the need for further assessment and analysis in the future. The intended function of this report is that of an 'early warning system' indicating areas which will require further site specific assessment to determine the need for, and appropriate level of, any future archaeological

investigation. This is particularly important where there is little or no above ground evidence to make obvious the presence of below ground relics.

The study does not assess specific archaeological remains and sites in any detail, but only identifies them. Detailed research of the history of each allotment, or the assessment of significance of individual sites, was outside the scope and resources of this study and so was not undertaken. However the study does describe the general archaeological resources of the CBD and gives recommendations relating to these areas or items.

Those inventory items considered to be of moderate or high archaeological potential are proposed for inclusion in a schedule of archaeological sites for individual protection, and an archaeological assessment of such sites should be required preceding any redevelopment. Other inventory items are considered to be of lower significance, but are included in the inventory as a reference should relics be unearthed in that vicinity, and it may be prudent to undertake archaeological assessments of such sites preceding redevelopment. Similarly, the archaeological potential of allotments with a low level of disturbance should be considered preceding redevelopment.

It should be noted however that the whole study area has high archaeological potential due to the nature of the historic development and the relative lack of later disturbance. The archaeological resource is also considered to be highly significant, as it dates back to the early days of European settlement in Australia, and is one of the oldest settlements outside the capital cities. As such further detailed research is warranted.

Such research may be the result of either:

- research-driven investigations, that is where further research is undertaken specifically to gain knowledge from the archaeological evidence; or
- threat-driven investigations, that is where redevelopment proposals threaten the survival of the resource.

There will be some sites which are of such significance that research-driven investigations will be warranted, with a notable example being the convict lumberyard site which has already been the subject of several archaeological projects. However it must be recognised that the funding opportunities for such research-driven projects are limited, and hence most sites will be subject instead to threat-driven investigations.

The field survey maps indicate areas of little or no archaeological potential, and no specific archaeological research of these sites is considered necessary at this stage.

8.2 General Policy for the Archaeological Resource

The following policy statement summarises the value of the archaeological resources of the Newcastle CBD. It is recommended that this policy statement be adopted by Newcastle City Council as the basis for the recognition and future management of the archaeological resource.

1. It is recognised that the city's archaeological resource forms a finite and irreplaceable part of its heritage. Every effort should be made to ensure the historical foundations, cultural, physical and archaeological evidence of the city will be preserved to provide a direct link and continuity with the past as an essential part of the environmental heritage of the wider community. Newcastle City Council will therefore seek to identify, record and protect the archaeological resources of the city whenever possible.
2. Archaeology should be a fundamental planning consideration for any development proposal, of equal importance to any issue identified under Section 90 of the EP&A Act 1979, and archaeological assessments should be undertaken prior to any redevelopment of archaeological sites or potential sites being granted planning approval.

3. The purpose of this plan is not to preclude redevelopment, but to identify areas where archaeological evidence is likely to occur, and so ensure that archaeological investigations are undertaken when, and only when, appropriate.
4. In the case of roads and other public spaces, the potential impact on the archaeological resource due to public infrastructure works by government authorities and private utilities is also recognised. Impacts may include disturbance of archaeological sites by ground works, as well as the updating or removal of a utilities' own earlier and potentially significant infrastructure.
5. The information obtained from any investigations is to be collated and made publicly available to allow greater understanding of the city's history, and assist in the accurate identification of other archaeological sites.
6. It is open to the owners or developers of potential archaeological sites to commission archaeological assessments to either confirm or disprove the site's archaeological potential at any time.
7. Archaeological sites assessed to be of considerable significance should be conserved in-situ wherever possible. Consideration should be given to on-site interpretation.
8. Promotion of the importance of the archaeological resource to property owners and developers as well as the broader community should be undertaken as appropriate given financial resources and opportunities..

8.2.2 Responsibility for Research and Conservation

Conservation of an archaeological resource usually rests with the property owner, or with the developer in the case of proposed redevelopment of a site. Where archaeological relics are inadvertently unearthed, the owner and/or developer are responsible for ensuring the protection of such items until all necessary assessments and investigations have been completed. Any relics that are removed during archaeological excavations generally remain the property of the site's owners.

The completion and funding of any archaeological research rests with the proponent of such research, which in the case of redevelopment will again usually be the property owner or developer. Sites of exceptionally high significance, particularly if accessible to the public, may be eligible for some grant funding of research-driven investigations through the established heritage assistance schemes, though this would be subject to the merits of each case, and would not generally be available for threat-driven investigations associated with commercial developments.

Technical assistance in completion of the investigations is usually provided by a professional consultant archaeologist, and/or by other suitably qualified professionals such as historians. The Heritage Office maintains a list of suitably qualified and experienced consultants for reference. Any site investigations which may disturb archaeological relics should be supervised by a suitably qualified archaeologist, and in the case of archaeological monitoring of excavations it is the archaeologist who is responsible for stopping and/or directing work should relics be discovered.

The Heritage Office is responsible for administering the provisions of the Heritage Act, in association with the NSW Heritage Council and the Minister for Planning. This includes the processing of Excavation Permits, granting consent to proposals for sites protected by permanent or interim conservation orders applied under the Act, and for providing direction when they have been notified of the inadvertent disturbance of 'relics'. Development Applications may be referred to them by a local council for consent. The Heritage Office is also responsible for processing grant applications under the NSW Heritage Assistance Programme, which may include works related to archaeological sites.

Newcastle Council is responsible for the protection of heritage items listed in the Newcastle Local Environmental Plan or other planning instruments, which includes some archaeological sites. They must ensure that the impact of any development proposal upon such sites, or any other potential archaeological site, is taken into account when issuing development or building consent, and they may require the proponent to submit an archaeological assessment in order to assess this.

It should be noted that an archaeological site may not cover the whole of an allotment, and where the extent of the archaeological site is known a development may be designed to avoid any impact upon it. This may remove the need for a detailed archaeological assessment. Similarly the design or construction techniques of a development may be redesigned once the extent of the archaeological site is known to mitigate or avoid impact, thereby reducing the need for subsequent stages of

archaeological investigations. Unless disturbance of the archaeological resource is proposed, property owners are not required to research the resource, but only to conserve it.

8.3 Action Required for Development Applications

The management strategy for archaeological resources is laid out in table 8.1. The appropriate action required for a particular allotment pending redevelopment relates primarily to:

- whether a known or potential archaeological site is present within the development site; and
- whether that archaeological site will be disturbed by the development.

If an allotment contains a known or potential archaeological site, the appropriate action will relate to:

- primarily, whether an scheduled inventory item is located within that allotment; and then...
- whether any other inventory item is located within that allotment;
- the level of disturbance identified in the field survey;
- whether the allotment stands within an precinct of archaeological sensitivity;
- whether it is linked to a standing heritage item.

In any case, the nature and extent of any ground disturbance associated with the proposed development should be reviewed, and if it can be shown that any sub-surface remains will not be disturbed by the development, then no further action will be required. This may be the case where the proposed development comprises basically minor alterations to an existing building, or is limited to paving or landscaping works without ground disturbance. Trenching for service lines and pipes is often overlooked, but it does constitute ground disturbance and its impact should be assessed. Note that a preliminary archaeological assessment, which at a minimum accurately locates the archaeological site within the allotment, may be required to allow this review.

Notwithstanding the above, if unpredicted archaeological "relics" are uncovered during the course of the development, these will still be subject to the "relics" provisions of the NSW Heritage Act 1977 and associated requirements.

If the preliminary review indicates that a significant archaeological resource may be present on the site and will be disturbed by the proposed development, then a formal archaeological assessment should be undertaken. This assessment should be completed in the manner and form indicated in the "Archaeological Assessment Guidelines" issued by the NSW Heritage Office. Any specific recommendations for that site made on the inventory datasheets should also be followed.

The archaeological assessment and any consequent recommendations should be lodged as part of the Development Application with Newcastle City Council, who in turn may forward the assessment to the NSW Heritage Office for review. Once the assessment and development application have been approved, the developer should implement any recommendations of the archaeological assessment, which may include making application for an Excavation Permit under the NSW Heritage Act, prior to the lodgement or approval of a Building Application.

8.3.1 Scheduled Inventory Items

All inventory items scheduled for protection are considered to be significant archaeological sites or potential sites. As such, archaeology must be assessed as part of a Development Application for any allotment within which a scheduled inventory item is located. The archaeological assessment must be lodged with the Development Application, and not subsequent to development approval being granted.

The procedure for such assessments is given in:

- the “Archaeological Assessment Guidelines” issued by the NSW Heritage Office, which sets out the general methodology;
- Section 8.6 of this report, which sets out specific requirements for archaeological assessments in Newcastle;
- Table 8.2 of this report, which sets out the procedure as a graphic checklist; and
- The Inventory datasheets for the particular archaeological site, which should be consulted for any specific recommendations regarding that item.

8.3.2 Other Inventory Items

Not all of the inventory items are scheduled for listing. (Note: all Stage 1 items are scheduled, but only some Stage 2 items.) Never the less, the remaining items still have the potential to reveal information through archaeological investigations, and any redevelopment that would cause their destruction should not be approved without some further assessment.

At a basic level, such investigations can confirm or disprove information about the archaeological resource of the city as a whole. They can for example, reveal whether the location of the historic development is accurately located on contemporary maps and hence give greater certainty about the location of surrounding archaeological sites; whether the source of the documentary evidence about the site is accurate; or provide information relevant to the identified research themes.

The developer and/or owner of the site should be made aware of the site’s archaeological potential as early in the development process as possible, and their obligations under the “relics” provisions of the Heritage Act.

Further, if the nature and extent of ground disturbance associated with the proposed development is considerable (see Section 8.3), then further actions may be recommended in order to more clearly define what archaeological resource may be present on the site, and so avoid delays during the construction process should relics be unearthed, including:

- The preparation of a preliminary archaeological assessment as support material for a Development Application. This assessment should determine an archaeological strategy, for example:
 - Test excavations: to clarify the nature and extent of any archaeological evidence on the site.
 - Archaeological monitoring: to ensure that any archaeological relics discovered on the site during construction are assessed and recorded.
 - No further action: as relics are highly unlikely to be present.
- If the preliminary archaeological assessment reveals archaeological evidence of greater significance than was anticipated, a more detailed archaeological assessment and research design may be required, to enable the progression to controlled archaeological investigations.

8.3.3 Field Survey and Level of Disturbance

8.3.3.1 Allotments with a Low or Moderate Level of Disturbance

If an allotment is not associated with an inventory item, scheduled or otherwise, the Field Survey maps should be consulted to determine the likelihood of any other archaeological evidence to survive. Allotments indicated as having a low or moderate level of disturbance must be considered to have the potential to retain an archaeological resource of some kind, relating to previous occupations and land uses.

Further, if the allotment is within an archaeological precinct identified as having archaeological sensitivity, any such resource has the potential to be highly significant. Archaeological Precincts have been identified in Section 4.4 of this report, however not all of these are considered to be of archaeological sensitivity as referred to above. The areas of greatest archaeological sensitivity may be defined as Precinct 2, the Convict settlement, and Precinct 2, the Government Town. Other important early precincts are Precinct 5, the Bishops Reserve, and Precinct 6, the Sandhills.

Such sites have the potential to reveal information through archaeological investigations that can confirm or disprove information about the archaeological resource of the city as a whole, similar to the non-scheduled inventory items described above.

Thus if an allotment is:

- identified as having a low or moderate level of disturbance; and particularly if...
- it is within an archaeological precinct identified as being of archaeological sensitivity;

then the developer and/or owner of the site should be made aware of the site's archaeological potential as early in the development process as possible, and their obligations under the "relics" provisions of the Heritage Act.

Further, if the nature and extent of ground disturbance associated with the proposed development is considerable (see Section 8.3), then further actions may be recommended in order to more clearly define what archaeological resource may be present on the site, and so avoid delays during the construction process should relics be unearthed, including:

- The preparation of a preliminary archaeological assessment as support material for a Development Application. This assessment should determine an archaeological strategy, for example:
 - Test excavations: to clarify the nature and extent of any archaeological evidence on the site.
 - Archaeological monitoring: to ensure that any archaeological relics discovered on the site during construction are assessed and recorded.
 - No further action: as relics are highly unlikely to be present.
- If the preliminary archaeological assessment reveals archaeological evidence of greater significance than was anticipated, a more detailed archaeological assessment and research design may be required, to enable the progression to controlled archaeological investigations.

8.3.3.2 Allotments with a High Level of Disturbance

If the field survey maps indicate a high level of disturbance, and an allotment is not associated with an inventory item, scheduled or otherwise, the developer should be advised that the site is considered to have little or no archaeological potential, and that no archaeological assessment is required.

They should still however be made aware of the requirements of the 'relics' provisions of the Heritage Act in case unpredicted archaeological relics are found on the site.

Note that almost all of the allotments within the Convict Settlement/Government Town precincts which do not contain a scheduled inventory item are noted as having a high level of disturbance. Notwithstanding this, any archaeological evidence that might exist in these allotments may be highly significant, and thus the application of the 'relics' provisions should be stressed in these cases.

8.3.4 Inventory Items Linked to Standing Heritage Items

Many of the inventory items are linked in some way to a standing structure that is an identified heritage item. The structure may be a later development of the archaeological site, or it may simply be coincident with the (usually earlier) archaeological site. Most of the study area also falls within one of the various Conservation Areas defined around the city centre, and so heritage issues will arise for redevelopment proposals in most cases.

In such cases controls already exist, under the Newcastle Local Environmental Plan and other instruments, whereby an assessment must be made of a place's heritage significance as part of the material supporting a Development Application. The archaeological potential of these sites should be considered in conjunction with the general heritage significance of the standing structure or the conservation area, and any requirements for conservation or further investigation of the archaeological resource identified in any heritage impact assessment, conservation plan or similar management document prepared for that place.

8.4 Archaeological Assessments

8.4.1 The Need for Archaeological Assessments

As previously noted there are two basic reasons for undertaking archaeological investigations, either:

- research-driven investigations: where further research is undertaken specifically to gain knowledge from the archaeological evidence; or
- threat-driven investigations: where redevelopment proposals threaten the survival of the resource.

Archaeological assessments associated with development proposals are obviously threat-driven. Table 8.2 sets out the typical procedures for such assessments and ensuing actions.

In some instances, the initial assessment will recommend more detailed research driven investigations which may be appropriate due to the assessed significance of the site. Table 8.3 sets out the standard procedures for urban archaeology in this regard.

Archaeological assessments are preferably undertaken in the early stages of the development process, and should always be lodged with the Development Application not afterwards.

Instances may arise where the applicant for a development may seek to avoid or delay commissioning an archaeological assessment. They may, for example, not wish to outlay the funds for an assessment unless they have certainty that the development will proceed. They may also believe that once approval is received they can negotiate with Council to provide only a basic assessment, or avoid it all together. There are however many practical reasons why the applicant should commission an assessment early in the process, as noted below, and these benefits should be stressed.

- It can be included in their programme and budget from the start and so cause less interference.
- It can avoid delays in processing the Development Application.
- It can identify parts of the site that are more likely to retain a resource than others, and hence avoid the need to modify the design at subsequent stages.
- If undertaken prior to even preliminary design of the development, the resource can either be avoided all together, bridged over, or actually exploited to give the development a unique character.

The legal reality is that Council must consider all relevant matters before they can determine whether a development should be approved, and any conditions of consent that should be imposed with that approval. To allow Council to determine whether the impact of a development on an archaeological site should be approved, then additional information, more detailed than the coverage and analysis possible within this study, will be necessary. The most appropriate method of supplying such information would generally be via an archaeological assessment.

8.4.2 The Generic Nature of Archaeological Assessments

An archaeological assessment is a standard professional report, the nature of which is comprehensively defined in the "Archaeological Assessment Guidelines" prepared by the Heritage Office, and which includes the following issues:

- *evaluate the probable extent, nature and integrity of the archaeological resource at a site;*
- *determine the significance of the resource;*
- *define the appropriate management for that resource having regard to significance and statutory requirements.*

Archaeological assessments should consider in detail the history of human activity on a site. They must certainly be more detailed than an initial or "baseline" assessment, for this study has already undertaken that task. Assessments must provide sufficient detail to confirm or disprove that an archaeological resource does exist, and then assess the significance of that resource. Various

methods are currently applied for assessing significance, such as that developed by Bickford and Sullivan (see Section 5.1), and the methodology used in the assessment should be clearly defined.

The "Archaeological Assessment Guidelines" note that archaeological assessments should "*contain sufficient data to stand alone; support documents should be unnecessary*", and notes the various types of information that should be provided in the assessment report. The report should set out these details in a clear and concise manner, including:

- identification of the study area
- relevant statutory controls or listings
- authorship of the study
- background to the assessment
- methodology applied
- reference sources consulted
- historical outline
- archaeological potential
- identification of research themes
- assessment of significance
- conservation policy
- recommendations

The assessment should then make clear the appropriate actions with respect to the archaeological site and the proposed development, which may include:

- undertaking test excavations;
- undertaking full archaeological excavations;
- preserving the site in situ and intact;
- archaeological monitoring or a "watching brief" during groundworks;
- redesign of the proposed development to avoid disturbing the record; or
- no further action required as the area is considered unlikely to retain archaeological evidence.

8.4.3 Specific Requirements for Archaeological Assessments in Newcastle

Archaeological assessment reports may be seen to provide two types of information, that is:

- site specific information: which is the basic identification and analysis of information to allow an assessment of the impact of a development upon the assessed archaeological significance of a site; and
- contextual information: which is information that not only allows us to analysis that particular site, but tells us about the place of that site within the city as a whole, and which may be collated and compared over many different sites.

The requirements for the former are generic, and are generally well defined and accepted in practice, as noted above.

The provision of contextual information is however often overlooked, and yet it is this information that is perhaps most important to the fundamental aim of historical archaeology, namely to contribute to our knowledge of the past. It is proposed that all archaeological assessments conducted in Newcastle address this issue, to allow a body of knowledge derived from and about the archaeological resource to be progressively collated.

The research themes identified earlier in this report provide the basis for the type of information to be considered (see Section 7.4.3). While it is likely that only a few of these themes will be relevant to any particular site, and thus will guide the research design for that site, every site has the potential to contribute some knowledge to each of the themes. By being alert to this potential during archaeological investigations, and then recording and collating any information obtained in a clear and concise way, the cumulative knowledge about the city as a whole will increase with each subsequent site that is investigated.

The research theme headings include:

- a) Natural Environment
- b) Environmental Modification & Disturbance
- c) Aboriginal Occupation/Contact
- d) Penal Settlement
- e) Military & Maritime
- f) Government Town
- g) Australian Agricultural Company
- h) Urbanisation and the 19th Century City
- i) Industry and Manufacturing
- j) Cultural Life
- k) Gender and Ethnicity
- l) Archaeological Management Issues

Some of the more basic topics that every site has the potential to provide information about include:

- original natural ground level
- depth and type of fill material
- preservation/condition/nature of archaeological deposits (both Aboriginal and European)

This information may not be readily available unless actual site investigations are undertaken but, should be considered during preparation of the archaeological assessment to ensure that relevant information will be retrieved during any subsequent archaeological investigations on the site, and then be recorded in a clear and concise manner in the report on the investigations.

For sites within areas of high archaeological sensitivity, even if the assessment identifies no further action as necessary, the potential significance of any relic uncovered during site redevelopment must be stressed, and the developer's obligations under the "relics" provisions of the Heritage Act made clear.

Where an archaeological assessment has been previously undertaken for a site, this may be submitted with the Development Application, with additional information as appropriate given the proposed development/design and current legislative requirements etc.

8.5 Specific Recommendations for Implementation

The following actions are proposed for implementation of the Newcastle Archaeological Management Plan:

1. Formal adoption of the Archaeological Management Plan by Newcastle City Council.
2. Amendments to the Newcastle Local Environmental Plan to include provisions covering the archaeological resource of the city as a whole.
3. Future inclusion of scheduled inventory items for protection under an appropriate planning instrument (a DCP or otherwise).
4. Amendments to other existing planning instruments to ensure archaeology is considered.
5. Ensure archaeological assessments are prepared to a consistent format, and collated to progressively build the body of available knowledge about the archaeological resource.
6. Coordinate the implementation of the plan with any recommendations of the Newcastle City-Wide Heritage Study currently under preparation to ensure a consistent approach to archaeological conservation throughout the city as a whole.
7. Promote educational opportunities associated with archaeological sites to enhance public appreciation of the resource.
8. Regular review of this plan, its scheduled sites and recommendations.

These actions are addressed in detail below.

8.5.1 Adoption of the Archaeological Management Plan by Council

The findings and recommendations of the Newcastle Archaeological Management Plan should be formally adopted by Newcastle City Council as the first step towards its implementation. This would particularly endorse:

- recognition of the importance of the city's archaeological resource.
- the general conservation policy for the archaeological resource of the city (see Section 8.2).
- the need to provide specific protection to those inventory sites recommended for scheduling.
- the need to ensure adequate and coordinated archaeological assessment preceding redevelopment.
- the need for enhancing awareness of archaeological issues generally amongst the community.

Subsequent to formal adoption, the study should be placed on public exhibition, along with details of the associated actions proposed by Council or as noted elsewhere in this report.

The consultation process during the exhibition period should include

- A workshop with Newcastle City Councillors and Council Officers, to be held prior to the study being put to Council for formal adoption; and
- A public workshop focussed on heritage-interest groups and developers, to be held at the start of the formal public exhibition period.

8.5.2 Amendment to the Local Environmental Plan

The Newcastle Local Environmental Plan (LEP) should be amended to include provisions dealing with conservation of the city's archaeological resource. It is suggested that the model provisions, as issued by the Heritage Office (see Appendix), be the basis for such amendments. These model provisions read in part:

The consent authority may grant approval to the carrying out of development on an archaeological site..... if:

(a) it has considered an assessment of how the proposed development would affect the conservation of the site, and any relic known or reasonably likely to be located at the site, prepared in accordance with any guidelines for the time....; and

(b) it has notified the Heritage Council of its intentions to do so and taken into consideration any comments received from the Heritage Council.....; and

(c) it is satisfied that any necessary excavation permit required by the Heritage Act 1977 has been granted.

These provisions do not refer to any specific schedule of sites, but require consideration of archaeological potential when redevelopment of a site is proposed. As such they would give some form of blanket protection to the city's archaeological resource as a whole, not only that within the CBD, and reinforce the protection provided by the 'relics' provisions of the Heritage Act.

These provisions would apply not only to development proposals which would cause ground disturbance, and hence pose a direct threat to archaeological sites, but may also apply to proposals that will involve extensive physical intervention in above ground building fabric, as this may reveal areas of the structure likely to contain archaeological relics, artefacts or occupational deposits, for example, underfloor areas, wall cavities, roof spaces. (Note that such above ground archaeological evidence was generally beyond the scope of this study.)

They would also ensure that archaeological potential is considered in any conservation plan or other heritage assessment prepared for listed heritage items.

8.5.3 Future Inclusion in a Council Planning Document

All inventory items nominated in the schedule for formal protection should be included in an appropriate Council planning document, along with relevant provisions and/or guidelines to enable the protection and management of these archaeological sites. Such provisions should aim to ensure that the archaeological resource is adequately assessed in the context of any development proposal.

It is anticipated that this planning document will take the form of a Development Control Plan (DCP). A DCP would provide statutory force, and simplify the Plan for the lay person. It would outline the main requirements for areas of archaeological potential, and so provide guidelines for developers and planners.

Council is currently investigating the establishment of place-based planning instruments, rather than subject-based instruments as at present. This would see the various different issues related to development or building approvals assessed under the one process. As such, it would appear appropriate to amend the existing DCP No.30, that is the Urban Design Guidelines for the CBD, to include archaeological provisions rather than to create an additional and separate Archaeological DCP.

An alternative is to include the schedule of inventory items within the LEP, with archaeological sites simply being classified as a type of heritage items. This would however require substantial additional work to define a legal boundary to each archaeological site (which would not necessarily relate to present allotment boundaries), and may cause undue concern amongst the community of the constraints such listing would impose. As such, LEP is listing not recommended at this time, though it may be appropriate in the future, particularly in association with a more general review of the heritage schedules in the LEP. Such a review is currently proposed by Council for late 1997.

The preparation of any such schedule and/or provisions would be the responsibility of Council, though based upon the recommendations of this study.

8.5.4 Amendments to Other Existing Planning Documents

Where areas of archaeological potential identified in this plan are also covered by an existing planning instrument, the provisions of that document should be amended to enable consideration of the below ground archaeological resource.

In particular, an assessment of archaeological potential should be included where appropriate in any conservation plan or other heritage assessment of listed heritage items.

8.5.5 Requirements for Archaeological Assessments

Appropriate provisions should include the need for the preparation of an archaeological assessment for each scheduled inventory item, or other sites of archaeological potential. Such assessments should be prepared in accordance with the various guidelines as issued by the Heritage Office and current at the time, and as noted in this report (see Section 8.4).

This particularly includes the following requirements:

- Lodgement of the assessment with the Development Application, not subsequent to it's approval.
- Setting out information in response to the identified research themes for Newcastle in a clear and concise manner.
- Provision of a copy of the assessment for lodgement by Council with the Local History Section of the Newcastle Regional Library.

Reports on subsequent site excavations, test excavation, archaeological monitoring or other archaeological investigations should follow similar principles, and again a copy of the documentation should be lodged with the library.

8.5.6 Co-ordination with City-Wide Heritage Study

The Newcastle City Wide Heritage Study currently nearing completion also includes consideration of archaeology, and proposes a number of archaeological sites outside the city centre for protection as heritage items under the LEP.

The provisions related to such items should be coordinated with the recommendations of the Archaeological Management Plan to ensure a consistent approach.

8.5.7 Promotion of Educational Opportunities

Many of the recommendations of this report are about how to deal with redevelopment proposals which may affect archaeological sites. This was a fundamental requirement of the brief, and reflects the reality that most archaeological investigations are going to be threat-driven. Such an approach does not however emphasise the importance of the archaeological resource to our community as fundamental evidence of our history.

There are various ways in which the archaeological resource can be used as an educational tool, and can also enhance the historic character of the city. Such actions should be promoted by the Council, including:

- Preparation and distribution of a brochure about the archaeological resource of the city, and the recommendations of this study for the management of the resource. The text for such a brochure has been prepared as part of this report (see Appendix).
- Archaeological excavations should be open to public viewing, and should where appropriate involve local volunteer assistance. The timing of such excavations, and their subsequent findings, could be broadcast by the various local media sources (TV, radio, newspaper). Such agencies are generally eager to include stories about local history.
- All archaeological assessments, and other reports on archaeological investigations, should be lodged with the Local History Section of the Newcastle Regional Library as noted above, and the potential of these as a reference source highlighted to researchers.
- Promotion of the importance of archaeology to the community should be an integral part of heritage promotion generally. One aspect of such promotion would be to stress that archaeological sites are a type of 'heritage item' on par with buildings and other structures.
- Archaeological sites of particular significance, particularly where in public ownership, should be considered for excavation/display and interpretation where appropriate. The current proposal for landscaping of the convict lumberyard site is one example.
- Even for archaeological sites of lesser significance, conservation of the site in situ and its integration into any redevelopment should be considered as an alternative to removal. With careful design this can achieve both interpretation of the archaeological site, and enhance the character of the new development by providing a focal element.

8.5.8 Regular Review of Plan and Inventory

This management plan should not be regarded as a static document. It should be updated by Council as changes in the circumstances of the archaeological resource in the study area requires, and reviewed at appropriate intervals subject to the amount of archaeological work proceeding in the City (5 - 10 years).

In particular, the research themes proposed in this report should be continuously assessed to determine their applicability in practice.

It may also be appropriate to identify certain themes or types of sites to be of greater importance for research once more factual information about the nature of the resource becomes known from the completion of future archaeological investigations.

Attachment 8.1 Developer's Obligations

Property developer's operate under a variety of constraints, including economic and timing pressures, public perception, and the legalities of the planning framework. Archaeology is one part of this, and should be considered as part of the planning, design and construction process. The responsibilities of the property developer are set out in the Archaeological Code of Practice. This document should be referred to for further details, however its major points include:

1. *Determine archaeological sensitivity* of the site.
2. *Initiate early liaison* with State and/or Local Government authorities.
3. *Ensure adequate communication* between all parties including government and archaeologist.
4. *Understand the need for research design* and the development of an appropriate methodology for assessment and excavation.
5. *Undertake site evaluation and significance assessment* to determine the appropriate course of action for the future of the site.
6. *Recognise constraints* due to the often unknown nature of the resource, the commitment of the archaeologist in the first instance to the resource rather than the project, and the need for contingency arrangements.
7. *Recognise the role of the archaeological team on-site* and ensure they have appropriate status amongst members of the project work force.
8. *Encourage public relations* both through media coverage and participation by the community in site investigations.
9. *Complete post-excavation work* including preparation and publication of the report and the storage of artefacts recovered.
10. *Accept government authority arbitration in disputes* where there is disagreement between the developer and the archaeologist regarding the appropriate course of action.

The Heritage Act requires the granting of an excavation permit by the Department of Planning prior to any site works that may uncover or damage an archaeological resource, whether undertaken specifically for an archaeological excavation or during general construction works. This may include such minor works as digging service trenches for services which may nevertheless unearth relics, through to full scale excavation of the site to provide a basement or the like.

It is not however required that the developer of a site must fund archaeological research of the site generally, irrespective of how significant any resource may be. If a proposed development should affect only part of a site, only the part affected need be assessed for its archaeological potential. Similarly, the design of a proposed development may be set out so that it will avoid any part of a site with archaeological potential.

It should also be noted that the Heritage Act provides that any relics recovered remain the property of the site's owner. As public recognition and interest in our heritage grows, the display of such items represents considerable potential for the developer, both as a public representation of their concern for the community, and in giving a new development a unique character and an instant connection to its place in local history.

The process for preparing an archaeological assessment preceding a development application as set out in table 8.2. Note that the relics provisions always apply, irrespective of the findings of any archaeological assessment.

Attachment 8.2 Authorities' Obligations

The various service authorities that operate within the city undertake many works that may affect archaeological resources. It has been noted in this report that all streets have the potential to retain a resource, and these are typically the places that authorities lay their service lines, be they water, gas, telephone or electricity.

The obligations of authorities with regard to disturbance of archaeological resources are similar to developers', in that they must apply for an excavation permit where work may reveal an archaeological resource, and they must comply with the relics provisions of the Heritage Act. They also have similar opportunities in terms of public relations.

Council should liaise with the various authorities, including Council's own engineering/works department, to ensure they understand their responsibilities with regard to archaeological resources. It may be appropriate to maintain a watching brief over any new excavations in areas of archaeological sensitivity, requiring the granting of an excavation permit. Work within trenches previously excavated would not however require monitoring, unless they are to be widened or deepened. Where an archaeological resource is known to be present, the authority should liaise with the Department of Planning regarding any excavation.

Common trenching, that is where a variety of different services are laid within a single trench, is becoming more common, and this is an important way to minimise the disturbance of potential archaeological sites. The use of common trenching by the various authorities should be encouraged.

Attachment 8.3 Council's Obligations

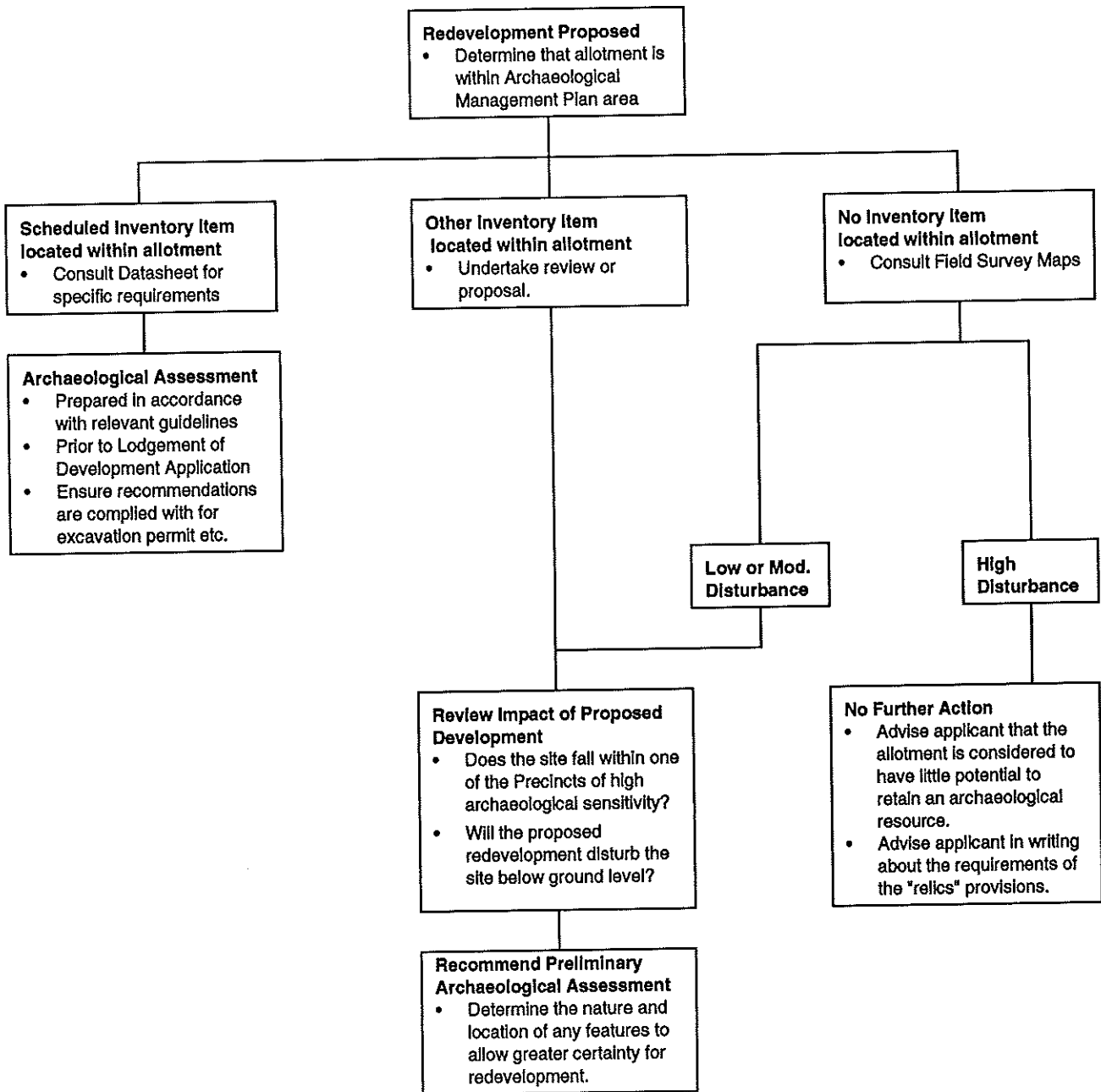
The Archaeological Code of Practice sets out the various responsibilities of a Council in the conservation of archaeological resources generally. This includes the need for preparation of Archaeological Management Plans such as this one, to include archaeological assessment within planning controls and instruments, and to provide appropriate information to the community. With regard to specific developments, the points noted may be summarised to include:

1. *Determine archaeological sensitivity of the site.*
2. *Develop early liaison* with the developer and advise them of the possible impact of the proposed development on an archaeological resource.
3. *Ensure adequate communication* especially clearly outlining the developer's legal obligations.
4. *Ensure site evaluation and significance assessment* is undertaken to determine the appropriate course of action for the future of the site, which may not necessarily include archaeological excavation.
5. *Recognise constraints* and the developers objectives, and ensure efficient processing of applications to minimise delays.
6. *Support the need for research design* to ensure investigations are undertaken within an appropriate methodology.
7. *Support the archaeological team on-site* through access to records and site assistance if required.
8. *Encourage public relations* including public recognition of the role of the developer and the archaeologist.
9. *Make decisions about the conservation of the site* with regard to the need for conservation of relics in situ and the impact on the proposed development.
10. *Assist with funding for the project* by measures such as rate relief.
11. *Dispute Resolution* between archaeologist and developer is primarily the role of the State government authority.
12. *Oversee completion of the post-investigation stage of the project* by recognising the importance of this part of the project and assisting with presentation where appropriate.

Council must seek to ensure that assessment of archaeological resources is included in the development process from the outset of any project, just as the impact of the proposal on any other community resource must be assessed. The appropriate point to raise such issues with developers is through the Development Assessment Panel where major new developments are discussed, or through the DA Guide which provides a more general set of guidelines to Development Applications.

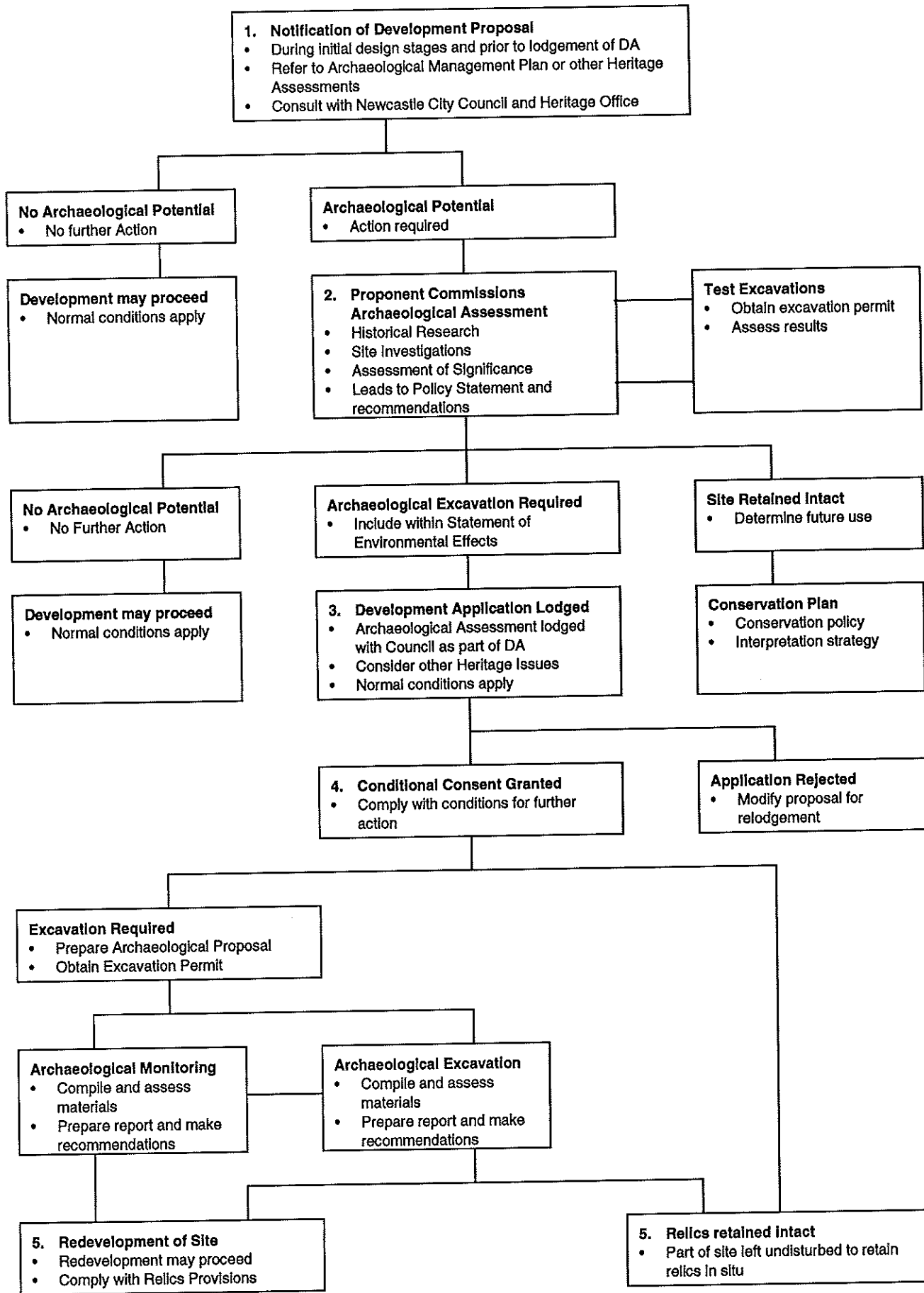
Council also has a similar obligation to the developer or service authority regarding any excavation within land it owns or administers, including streets and open spaces. Where an archaeological resource is known to be present, the council should liaise with the Department of Planning regarding any excavation.

Table 8.1 Procedure for Determining Action for an allotment within the Study Area



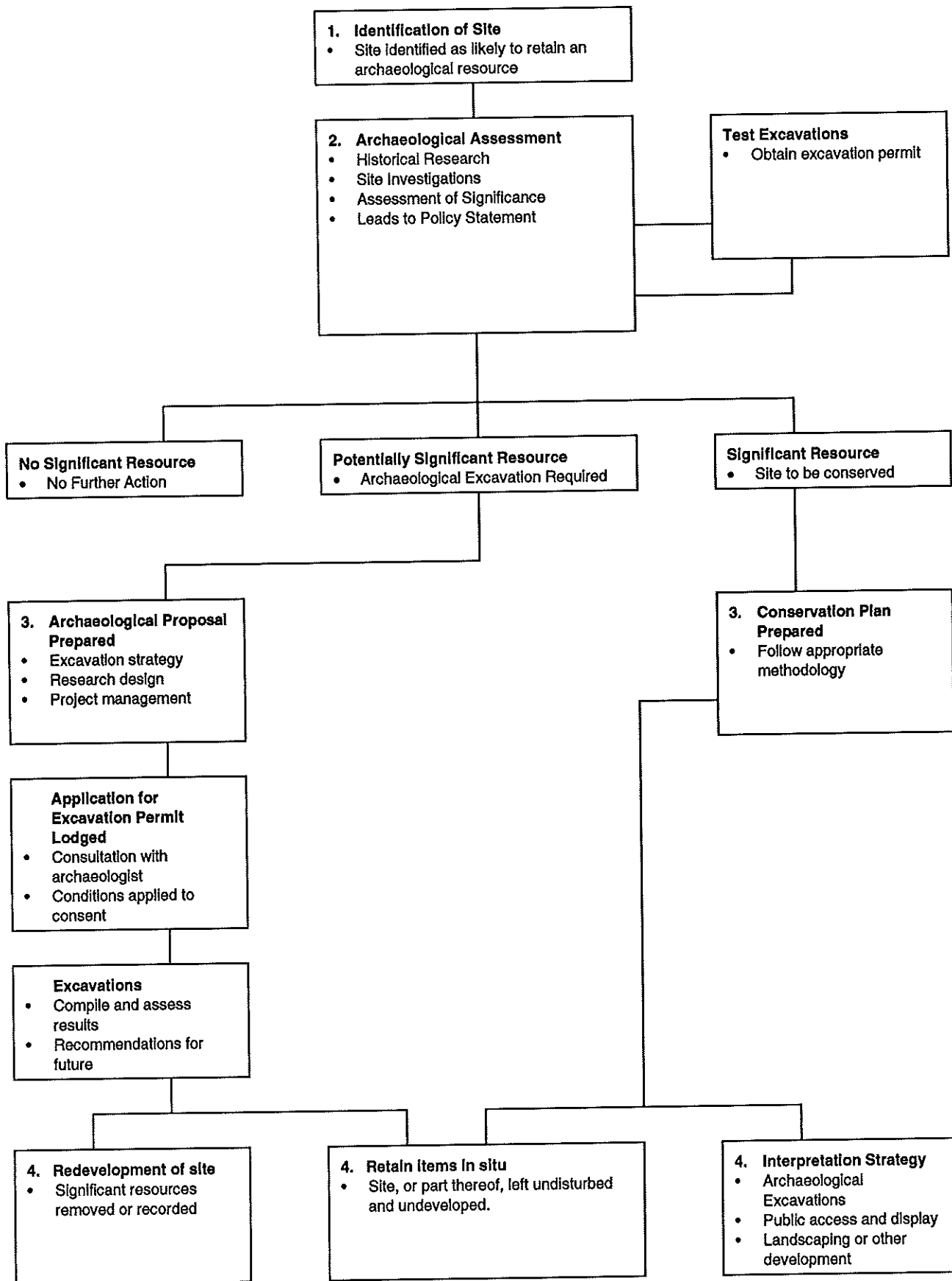
Note: This table summarises the Management Strategy detailed in Section 8 of this report. For full details, reference should be made to relevant sections of the Strategy.

Table 8.2 Procedures for Archaeological Assessments Preceding Development Application



Note: This table is intended as a guide to the procedures for archaeological assessments preceding a development application. It is based on a table presented by Tracey Ireland at the seminar on the Draft Guidelines for Archaeological Assessments organised by the NSW Department of Planning on 1 August 1994. Specific details may vary from project to project.

Table 8.3 Standard Procedures for Research Driven Urban Archaeology



Note: This table is intended as a guide to the process of Urban Archaeology. Specific details may vary from project to project. Reference should be made to the various guidelines issued by the Department of Planning.

STANDARD HERITAGE PROVISIONS

DEFINITIONS

[NOTE: The following definitions are to be inserted in the provision of the plan that contains definitions for the whole plan or at the start of a separate Part or Division of the plan relating to heritage.]

"archaeological site" means a site identified in Schedule [...] to this plan and shown [*insert how it is shown (for example, by heavy black broken edging)*] on the map marked ".....";

"demolish" a heritage item or a building, work, relic, tree or place within a heritage conservation area means wholly or partly destroy or dismantle the heritage item or building, work, relic, tree or place;

"heritage conservation area" means land shown [*insert how it is shown (for example, edged heavy black)*] on the map marked "....." and includes buildings, works, relics, trees and places situated on or within that land;

"heritage item" means a building, work, relic, tree or place (which may or may not be situated on or within land that is a heritage conservation area) described in [*insert a reference to the Schedule of the plan containing written descriptions of heritage items*] and shown [*insert how it is shown (for example, by diagonal hatching)*]

"heritage significance" means historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance;

"potential archaeological site" means a site identified in Schedule [...] to this plan and shown [*insert how it is shown (for example, by cross hatching)*] on the map marked "....." and includes a site known to the consent authority to have archaeological potential even if it is not so identified and shown;

"relic" means any deposit, object or material evidence relating to:

- (a) the use or settlement of the area of [*insert name of local government area*], not being

Aboriginal habitation, which is more than 50 years old; or

- (b) Aboriginal habitation of the area of [*insert name of local government area*] commencing before and continuing after its occupation by persons of European extraction, including human remains.

STANDARD PROVISIONS CONTROLLING DEVELOPMENT

Aims in relation to heritage

1. The aims of this plan in relation to heritage are:
 - (a) to conserve the environmental heritage of the area of [*insert name of local government area*]; and
 - (b) to integrate heritage conservation into the planning and development control process; and
 - (c) to provide for public involvement in the conservation of environmental heritage; and
 - (d) to ensure that any development does not adversely affect the heritage significance of heritage items and heritage conservation areas and their settings.

[NOTE: The clause above is required only if the heritage aims and objectives are to be stated separately from others in the instrument].

Protection of heritage items, heritage conservation areas and relics

2. (1) The following development may be carried out only with development consent:
 - (a) demolishing, defacing, damaging or moving a heritage item or a building, work, relic, tree or place within a

- heritage conservation area; or
- (b) altering a heritage item or a building, work or relic within a heritage conservation area by making structural changes to its exterior; or
- (c) altering a heritage item or a building, work or relic within a heritage conservation area by making non-structural changes to the detail, fabric, finish or appearance of its exterior, except changes resulting from any maintenance necessary for its ongoing protective care which does not adversely affect its heritage significance; or
- (d) moving a relic, or excavating land for the purpose of discovering, exposing or moving a relic; or
- (e) erecting a building on, or subdividing, land on which a heritage item is located or which is within a heritage conservation area.
- (2) Development consent is not required by this clause if the consent authority is of the opinion that the proposed development would not adversely affect the heritage significance of the heritage conservation area.
- (3) When determining a development application required by this clause, the consent authority must take into consideration the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area.

[NOTE: The consent or permission of the Director-General of National Parks and Wildlife may also be required if the land is an Aboriginal place or contains Aboriginal relics (see Part 6 of the National Parks and Wildlife Act 1974).]

Notice of certain heritage development applications

3. Sections 84, 85, 86, 87 (1) and 90 of the Act (which provide for the giving of notice, and for the making and consideration of submissions, about proposed development) apply to the demolishing, defacing or damaging of a heritage item or a building, work, relic, tree or place within a heritage conservation area (and to the use of a building or land referred to in clause 7 for a purpose which, but for that clause, would be prohibited by this plan) in the same way as those provisions apply to designated development.

Notice to the Heritage Council

4. Before granting development consent to the demolishing, defacing or damaging of a heritage item, the consent authority must notify the Heritage Council of its intention to do so and take into consideration any comments received from the Heritage Council within 28 days after the notice is sent.

Development of known or potential archaeological sites

5. (1) The consent authority may grant consent to the carrying out of development on an archaeological site that has Aboriginal heritage significance (such as a site that is the location of an Aboriginal place or a relic, within the meaning of the National Parks and Wildlife Act 1974) or a potential archaeological site that is reasonably likely to have

Aboriginal heritage significance only if:

- (a) It has considered an assessment of how the proposed development would affect the conservation of the site and any relic known or reasonably likely to be located at the site prepared in accordance with any guidelines for the time being notified to it by the Director-General of National Parks and Wildlife; and
 - (b) it has notified the Director-General of its intention to do so and taken into consideration any comments received from the Director-General within 28 days after the notice was sent; and
 - (c) it is satisfied that any necessary consent or permission under the National Parks and Wildlife Act 1974 has been granted.
- (2) the consent authority may grant consent to the carrying out of development on an archaeological site that has non-Aboriginal heritage significance or a potential archaeological site that is reasonably likely to have non-Aboriginal heritage significance only if:
- (a) it has considered an assessment of how the proposed development would affect the conservation of the site and any relic known or reasonably likely to be located at the site prepared in accordance with any guidelines for the time being notified to it by the Heritage Council; and

- (b) it has notified the Heritage Council of its intention to do so and taken into consideration any comments received from the Heritage Council within 28 days after the notice was sent; and
- (c) it is satisfied that any necessary excavation permit required by the Heritage Act 1977 has been granted.

Development in the vicinity of heritage items, heritage conservation areas, archaeological sites or potential archaeological sites

6. The consent authority must take into consideration the likely effect of the proposed development on the heritage significance of a heritage item, heritage conservation area, archaeological site or potential archaeological site, and on its setting, when determining an application for consent to carry out development on land in its vicinity.

Conservation incentives

7. (1) The consent authority may grant consent to the use, for any purpose, of a building that is a heritage item or is within a heritage conservation area, or of the land on which the building is erected, even though the use would otherwise be prohibited by this plan, if it is satisfied that:
- (a) the proposed use would not adversely affect the heritage significance of the item or heritage conservation area; and
 - (b) the conservation of the building depends on the granting of the consent.
- (2) When considering an application for consent to erect a building on land on which a heritage item is

located or on land within a heritage conservation area, the consent authority may, for the purpose of determining:

- (a) the floorspace ratio; and
- (b) the number of parking spaces to be provided on the site,

exclude the floor space of the building from its calculation of the floor space of the buildings erected on the land but only if the consent authority is satisfied that the conservation of the building depends on it making the exclusion.

OPTIONAL ADDITIONAL PROVISIONS

Protection of heritage items, heritage conservations areas and relics (Add to clause 2)

2. (1)

; or

- (f) making structural changes to the interior of a building or work listed in Part 2 of Schedule [*insert cross-reference to the Schedule of the plan containing written descriptions of heritage items*],
- (4) The consent authority must not grant consent to a development application required by this clause until it has considered a conservation plan that assesses the impact of the proposal on the heritage significance of the item and its setting, or of the heritage conservation area. A conservation plan is a document establishing the heritage significance of a heritage item or a heritage conservation area and identifying conservation policies and management mechanisms that are appropriate to enable that significance to be retained.

- (5) When considering applications for consent to the erection of a building within a heritage conservation area, the consent authority must make an assessment of:

- (a) the pitch and form of the roof, if any; and
- (b) the style, size, proportion and position of the openings for windows or doors, if any; and
- (c) whether the colour, texture, style, size and type of finish of the materials to be used on the exterior of the building are compatible with those of the materials used in existing buildings within the heritage conservation area.

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Scheduled Items

ITEM REF:	NAME:	STREET NO:	STREET NAME:	CONJUGENT ITEMS:	ASSOC.HERITAGE LIST:
0001	Nobbys Head		Nobbys Road	1001, 1113	NLEP- S, N/E
0002	Macquarie Pier		Nobbys Road	1002	NLEP- S, N/E
0003	Signal Hill	31	Nobbys Road	1003	NLEP- S
0004	Salt Works	9	Shortland Esplanade		
0005	Gaol		Scott Street		
0006	Foreshore Reserve	51	Wharf Road	1118, 1207, 1217, 1002	
0007	Boat Harbour	51 55	Wharf Road	1198	NLEP- R
0008	Watt Street Wharf		Watt Street	1198	
0009	Hill Allotment	14	Telford Street		
0010	Guard House	63	Scott Street	1074, 1197	NLEP- S
0011	Pacific Park	1	Pacific Street		
0012	Former Custom House		Pacific Street	1074, 1197	NLEP- S
0013	Convict Lumber Yard Site	98	Scott Street	1071, 1072	NLEP- S, PCO, N/E
0014	Nash Allotment	65	Scott Street		
0015	Smith Allotment	2 4	Pacific Street		
0016	Elliot/Scott Allotment		Pacific Street		
0017	Hunter Street Extension		Hunter Street	1079	
0018	Scott Allotment	30	Pacific Street		
0019	Former Nurses Home	30	Pacific Street		NLEP- L
0020	Outbuilding		Pacific Street		
0021	Wheeler House	30	Pacific Street		NLEP- L
0022	Surgeon's Residence		Church Street	1090	
0023	Park		Church Street	1090	
0024	Fletcher Park and Monument	75	Watt Street		NLEP- R
0025	Commandants Residence		Watt Street		
0026	Subaltern's Barracks	59	Watt Street		
0027	United Services Club	55	Watt Street		NLEP- L
0028	Manufacturers House	35 37	Watt Street		NLEP- S, PCO
0029	Richardson Allotment	31	Watt Street	1082	
0030	Reid Allotment	27	Watt Street		
0031	Reid Allotment	25	Watt Street	1081, 1080	
0032	T&G Mutual Life Assurance Building	45	Hunter Street		NLEP- S, PCO
0033	Former National Bank	64	Hunter Street		NLEP- L
0034	Reid Allotment	15	Watt Street		
0035	Reid Allotment	13	Watt Street		
0036	Tide Walter's Residence	9 11	Watt Street		
0037	Great Northern Hotel	7	Watt Street	1077	NLEP- S, PCO, N/E
0038	Customs House	1	Bond Street		
0039	Carrington Chambers	4	Watt Street	1088	
0040	PWD Buildings	74 100	Hunter Street	1086	NLEP- S, N/E
0041	Hunter Heritage Centre	90	Hunter Street		NLEP- S, N/E

Scheduled Items

ITEM REF:	NAME:	STREET NO:	STREET NAME:	CONINCIDENT ITEMS:	ASSOC.HERITAGE LIST:
0042	AMP Building	55	Hunter Street		NLEP- L
0043	Riley Allotment		Hunter Street		
0044	Howard Smith Chambers	14	Watt Street		NLEP- L
0045	Scott Allotment	16	Watt Street	1132	
0046	Commissariat Store	28	Watt Street		
0047	Whyte Allotment	34	36 King Street		
0048	King Street Buildings		King Street		
0049	McIntyre Allotment	25	29 King Street		
0050	McGillvray Allotment		King Street		
0051	Forbes Allotment	38	Watt Street		
0052	Allman Allotment	46	Watt Street		
0053	St. Phillips Church	48	Watt Street		NLEP- L
0054	Watt Street Terrace Group	50	62 Watt Street		NLEP- S, PCO
0055	Sessions House	8	Church Street		NLEP- S, PCO, N/E
0056	Buchanan Terraces	10	30 Church Street		NLEP- S, PCO, N/E
0057	Grand Hotel	32	Church Street	1159	NLEP- S, PCO, N/E
0058	Toll Cottage		Bolton Street		NLEP- R
0059	Court House	9	Church Street		NLEP- S, N/E
0060	Parsonage	15	Church Street	1162	
0061	Psychiatric Hospital	72	Watt Street	1121, 1124	NLEP- S, N/E
0062	Steels Garage	47	Bolton St		NLEP- L
0063	Lilly Allotment	45	Bolton Street		
0064	Spark Allotment	43	Bolton Street		
0065	Eckford Allotment	37	39 King Street		
0066	Usher Allotment	25	Bolton Street		
0067	National Australia Bank	73	75 Hunter Street		NLEP- L
0068	Bolton Street Buildings		Bolton Street		
0069	Former Court House	74	100 Hunter Street		NLEP- S, N/E
0070	Priest Allotment	1	5 Bolton Street		
0071	Bolton Street Buildings		Scott Street		
0072	Convict Hut	97	105 Scott Street	1089	
0073	Convict Hut	111	Scott Street	1089, 1130	
0074	Smith Allotment	117	Scott Street		
0075	NZI Building	12	14 Bolton Street		NLEP- L
0076	Union Trustee Building	18	20 Bolton Street		NLEP- L
0077	Hudson Allotment	26	Bolton Street		
0078	Shand Allotment	38	King Street		
0079	Court Chambers	40	Bolton Street		NLEP- R, N/E
0080	Former David Cohen & Co. Warehouse	50	Bolton Street		NLEP- S, PCO, N/E
0081	Former Newcastle East Public School	58	Bolton Street		NLEP- L
0082	Jackson Allotment	36	Church Street		

Scheduled Items

ITEM REF.	NAME:	STREET NO:	STREET NAME:	CONINCIDENT ITEMS:	ASSOC.HER ITAGE LIST:
0083	Residence	46	Church Street		NLEP- L
0084	Guard House & Residence	52	Newcomen Street		
0085	Residence	51	Newcomen Street		NLEP- L
0086	Wesleyan School	47 49	Newcomen Street		NLEP- L
0087	Wesleyan Church		Newcomen Street		
0088	Dillon Allotment	33	Newcomen Street		
0089	Madie Allotment	83	King Street		
0090	Residence	81	King Street		
0091	Sinclair Allotment	46 54	King Street		
0092	Long Allotment	64	King Street		
0093	Hickey Allotment		Newcomen Street		
0094	Cory Allotment		Newcomen Street		
0095	Owen Allotment		Newcomen Street		
0096	Brown Allotment	93 101	Hunter Street		
0097	Former Emporium Building	87 89	Hunter Street		NLEP- L
0098	Frankland Allotment	79 81	Hunter Street		
0099	CML Building	108 112	Hunter Street		NLEP- R
0100	Blinder's Inn	116	Hunter Street		
0101	Public Wells	11	Newcomen Street	1108, 1200	
0102	Buxton's Hut	122 132	Hunter Street		NLEP- L
0103	Rodd Allotment	145	Scott Street	1109	
0104	Newcastle Air Force Club	129 133	Scott Street		NLEP- R, N/E
0105	Hughes Allotment	123	Scott Street		
0106	Water Pit	6	Newcomen Street	1096	
0107	Rundles Building	153 163	Scott Street		NLEP- L
0108	Rundles Building	153 163	Scott Street		NLEP- L
0109	Lyons Allotment	167	Scott Street	1098	
0110	Huts	154	Hunter Street	1105	NLEP- L
0111	Buxton Allotment	142	Hunter Street		
0112	Newcomen Street Well		Newcomen Street	1200, 1108	
0113	Gillman Allotment	103 105	Hunter Street	1138	
0114	Page Allotment	18	Newcomen Street		
0115		22	Newcomen Street		
0116	Wilton Allotment	26	Newcomen Street		
0117	Daquid Allotment	28	King Street		
0118	The Newcastle Club	40	Newcomen Street		NLEP- R, N/E
0119	Claremont House	42	Newcomen Street		NLEP- R
0120	Watson Allotment		Newcomen Street		
0121	Langham Allotment	48 52	Church Street		
0122	Christ Church Cathedral	52	Church Street	1119	NLEP- S, PCO, N/E
0123	Obelisk Reserve	3	Ordnance Street	1157, 1195	NLEP- S

Scheduled Items

ITEM REF:	NAME:	STREET NO:	STREET NAME:	CONINCIDENT ITEMS:	ASSOC.HER ITAGE LIST:
0124	Coal Pit/Shaft	3	Reserve Road	1122, 1121	NLEP- R
0125	Bogie Hole	3	Reserve Road		NLEP- R
0126	Davies/Spears Allotment	54	Church Street		
0127	Dwyer Allotment	58 64	Church Street		
0128	Hinchcliffe Allotment		Wolfe Street		
0129	Retaining Wall and Steps	43	Wolfe Street		NLEP- L
0130	Retaining Wall and Steps		King Street		NLEP- L
0131	Burial Ground	93	King Street	1119, 1120	NLEP- S
0132	Nash Allotment	1	Morgan Street		
0133	Wilton Allotment	3	Morgan Street	1139	
0134	Earl Allotment	109 111	Hunter Street		
0135	Coal Pit/Shaft	137	Hunter Street	1146	
0136	Burton Allotment	98 100	King Street		
0137	Wright Allotment	16	Wolfe Street		
0138	Platt Allotment		Wolfe Street		
0139	Scott Allotment	147	Hunter Street	1144	
0140	Scott Allotment	153 155	Hunter Street	1145	
0141	Outbuildings		Market Street		
0142	Lyons Allotment	2	Scott Street	1099	
0143	Former Baberfaulds Warehouse	175	Scott Street	1099	NLEP- L
0144	Former AA Dangar Building	176	Hunter Street		NLEP- L
0145	Former School of Arts	182 188	Hunter Street		NLEP- L
0146	School and Church	192 196	Hunter Street	1103	
0147	Catholic Parsonage	200 212	Hunter Street		NLEP- L
0148	Wesleyan School and Manse	220	Hunter Street	1102	NLEP- L
0149	Bingle Allotment	159 163	Hunter Street		
0150	David Jones	169	Hunter Street		NLEP- L
0151	Lyons Allotment	114	King Street		
0152	Thorp Allotment	105	King Street		
0153	Usher Allotment	38	Wolfe Street		
0154	Davies/Spears Allotment	40	Wolfe Street		
0155	Scott Allotment	56	Wolfe Street		
0156	Lance Villa Terrace Group	66 68	Church Street		NLEP- L
0157	Lance Villa Terrace Group	70 76	Church Street		NLEP- L
0158	Lance Villa Terrace Group	78	Church Street		NLEP- L
0159	Lance Villa	80	Church Street		NLEP- L
0160	Scott Allotment	51 53	Perkins Street		
0161	Residence	49	Perkins Street		NLEP- L
0162	Levey Allotment	39 43	Perkins Street		
0163	Wright Allotment	31 37	Perkins Street		
0164		27 29	Perkins Street		

Scheduled Items

ITEM REF.	NAME:	STREET NO.	STREET NAME:	CONINCIDENT ITEMS:	ASSOC.HERITAGE LIST:
0165	Ireland Bond Store	123	King Street		NLEP- L
0166	Crown and Anchor Hotel	189	Hunter Street	1155	NLEP- L
0167	Davies Allotment	193 195	Hunter Street		
0168	Hughes Allotment	207	Hunter Street		
0169	Kemp Allotment	4	Perkins Street		
0170	Fomer Victoria Theatre	8 10	Perkins Street		NLEP- L
0171	Kemp Allotment	20 22	Perkins Street		
0172	Kemp Allotment	140	King Street		
0173	Mitchell Allotment	34	Perkins Street		
0174	Nash Allotment		Perkins Street		
0175	Pilcher Allotment	50	Perkins Street		
0176	Hughes Allotment	52	Perkins Street		
0177	Furlong Allotment	84	Church Street		
0178	Minumbah	86 88	Church Street		NLEP- L
0179	Croasdill Allotment	25	Brown Street		
0180	Croasdill Allotment	21 23	Brown Street		
0181	Mitchell Allotment	2 8	Carlton Street		
0182	Croasdill Allotment	15 19	Brown Street		
0183	Croasdill Allotment	149	King Street		
0184	Croasdill Allotment	141	King Street		
0185	Mitchell Allotment		Carlton Street		
0186	Smith Allotment		King Street		
0187	AA Co. 'A' Pit	106 104	Church Street	1026, 1150, 1151	
0188	Newcastle Hospital North Wing	1	King Street	1076	NLEP- R
0189	King Street Buildings		King Street		
0190	Former Burial Ground		Hunter Street		
0191	AA Co. Timber Bridge		Crown Street	1022	
0192	AA Co. Inclined Plane		Crown Street	1022	
0193	Private Coal Staithes		Wharf Road	1017, 1018, 1019	
1001	Nobbys Head		Nobbys Road	001, 1113	NLEP-S
1002	Nobbys Head Railway		Nobbys Road	002	
1003	Fort Scratchley		Nobbys Road	003, 1004	NLEP-S
1004	Cottages below Fort Scratchley		Nobbys Road	1003, 1008	
1005	Pilot Station		Wharf Road		
1007	Steam Cranes on Kings Wharf		Wharf Road		
1013	Coal Company Offices		Watt Street		
1016	Market Street Boat Harbour		Wharf Road		NLEP-R
1021	Burwood Coal Company Railway		Burwood Street		
1022	AA Co. Railway Bridges		Hunter Street	191, 192, 1023, 1024, 1224	
1023	AA Co. Coal Staithes or Shoots		Wharf Road	1022, 1024	
1025	AA Co. Offices and Depot.		Wharf Road		

Scheduled Items

ITEM REF:	NAME:	STREET NO:	STREET NAME:	CONINCIDENT ITEMS:	ASSOC. HERITAGE LIST:
1026	AA Co. "A" Pit and Surface Works	104 118	Church Street	187, 1150, 1151	
1027	AA Co. Inclined Tramway for "A" Pit		Crown Street		
1028	AA Co. "B" Pit	13 17	Brooks Street		
1029	AA Co. "C" Pit and Surface Works	10 20	Bingle Street		
1032	Honeysuckle Point Settlement		Lee Wharf Road	1033	
1033	Honeysuckle Point Railway Worksho		Lee Wharf Road	1032, 1034	NLEP-S, NT
1034	Honeysuckle Point Railway Turntable		Great Northern Railwa		
1036	GNR Railway, Causeway and Bridges		Great Northern Railwa	1037, 1034	
1037	Honeysuckle Point Station		Great Northern Railwa		
1038	Former Cemeteries	684 730	Hunter Street		
1051	Cosmopolitan Hotel		Union Street		
1053	Stevenson Place Houses	6 8	Stevenson Place	1009	
1055	Engine House		Scott Street	1054	
1068	Zaara Street House		Zaara Street		
1071	Stationmaster's House Group	90 92	Scott Street	013	NLEP-R
1072	Railway Offices		Watt Street	013	
1074	Water Police Buildings Group		Scott Street	10, 12, 1197	
1075	Newcastle Terminus Railway Station		Scott Street	1014, 1015	NLEP-S
1077	Great Northern Hotel	65 89	Scott Street	37	NLEP-S, NT, HREP, PCO. IEnoA
1079	Royal Standard Hotel		Hunter Street	017	
1080	Watt Street Buildings		Watt Street	1076, 1081, 1082, 1084	
1081	Caledonian Hotel	23 25	Watt Street	31, 1080	
1082	Ralph's Family Hotel	31 33	Watt Street	29	
1084	Early Terrace & Stables		King Street		
1086	Post Office and Telegraph Office		Hunter Street	40	NLEP-S
1088	Metropolitan Hotel		Scott Street	39	
1090	Surgeon's Residence Group		Church Street	022, 023	
1091	Shortland Esplanade Building		Shortland Esplanade		
1092	Locomotive Turntable		Scott Street		
1099	Market Wharf Hotel	169 175	Scott Street	142, 143	
1102	Wesleyan School		Scott Street	148	
1103	Australian Hotel		Wolfe Street	1101, 146	
1105	City Arms Hotel		Hunter Street	110	
1108	Corporation Baths	11 13	Newcomen Street	101, 1200	
1109	Harbour View Hotel		Scott Street	103	
1110	Centennial Hotel	125	Scott Street		
1113	Nobbys Head Tunnel		Nobbys Head	001, 1001	
1114	Frederick Ash Warehouse		Burwood Street		
1115	Steam Tram Shed and Turntable	336 338	Hunter Street	1116, 1224	
1117	South Newcastle Beach Adit		Shortland Esplanade	1121, 1122, 1123, 1127	
1118	Zaara Street Power Station		Foreshore Park	06	

Scheduled Items

ITEM REF:	NAME:	STREET NO:	STREET NAME:	CONINCIDENT ITEMS:	ASSOC.HERITAGE LIST:
1119	Old Christ Church Cathedral		Church Street	122, 131, 1120	NLEP-S
1120	Christ Church Cemetery		King Street	131	
1121	Asylum Mine Shaft No.1		Watt Street	061, 1117, 1122, 1123	
1122	Government Mine Shaft		Ordnance Street	124, 1117, 1121, 1123	
1123	Convict Coal Mine Adit		Shortland Esplanade	1117, 1121, 1122	
1124	Asylum Mine Shaft No.2		Watt Street	061, 1121	
1126	Shepherds Hill Fortifications		The Terrace		NLEP-R
1127	Vertical Shaft & Tunnel		Church Street	1117, 1121, 1122, 1123	
1128	Perkins Street Boat Harbour	203	Wharf Road		
1129	Carriage Turntables		Scott Street	1014, 1015, 1034, 1092, 1115	
1130	Terminus Hotel		Scott Street	73	
1132	Star and Garter Hotel		Watt Street	45	
1138	Hunt Club Hotel		Newcomen Street	113	
1139	London Hotel		Morgan Street	133	
1144	Globe Hotel		Thorn Street	139	
1145	Royal Exchange Hotel		Hunter Street	140	
1146	Old Government Coal Pit		Laing Street	135, 1121, 1122	
1149	Rough Stone Pit or Well	51 53	Church Street	1026, 1150	
1150	Rubbish Pit	45 47	Church Street	187, 1026	
1151	Brown Street House	102 104	Church Street	187, 1026, 1150	
1152	Oxford Hotel	237	Hunter Street		NLEP-L
1155	Crown & Anchor Hotel	189 193	Hunter Street	166	NLEP-L, NT, HREP
1156	Perkins Street Beacon Light	54 56	Perkins Street		NLEP-R
1157	Obelisk Reservoir		Ordnance Street	123, 1158, 1195, 1209	
1158	Brown Street Reservoirs	51	Brown Street		
1159	Grand Hotel		Bolton Street	57	
1162	Deanery		Church Street	060	
1163	High Street Reservoir		High Street		
1167	Black Diamond Hotel		Hunter Street		
1169	Rodgers Foundry		King Street		
1175	AA Co. Dam		Brooks Street		
1177	NESCA Depot		Tyrrell Street		
1183	Newcastle Gas Company Works		King Street		NLEP-L
1184	Arnotts Biscuit Factory		Union Street		
1192	Castlemaine Brewery		Wood Street		NLEP-S
1195	Large Mill		Ordnance Street	123, 1157	
1197	Old Customs House		Pacific Street	10, 12, 1074	
1198	Watt Street Wharf & Boat Harbour		Wharf Road	007, 008	
1200	Government Wells	11 13	Newcomen Street	112, 1108	
1203	Shepherds Hill Mine Entrance		Ocean Cliffs		
1204	Sewage Pumping Station No.1		King Street	1205	

Scheduled Items

ITEM REF:	NAME:	STREET NO:	STREET NAME:	CONINCIDENT ITEMS:	ASSOC.HERITAGE LIST:
1205	Former Sewage Pumping Station		Hunter Street	1204	
1206	Small Windmill	81 83	Wolfe Street		
1207	Foreshore Park Well		Foreshore Park	006	
1209	Pipeline from Walka Water Works		Hunter Street		
1212	Early Cliff-Face Coal Mine		Ocean Cliffs		
1213	Watt Street Mine Shaft		Watt Street		
1215	Soldiers' Baths		Shortland Esplanade		NLEP-R
1216	Maitland's Road Alignment Post		Watt Street		
1217	Railway Carriage Shed		Foreshore Park	006	
1218	AA Co. Adit, Parry Street		Parry Street	1219	
1219	AA Co. Sea Pit		Brooks Street	1026, 1028, 1029, 1218	
1220	Monier Seawall, Lee Wharf		Lee Wharf Road		
1224	Iron Picket Fence, Hunter Street		Hunter Street	1022, 1115	
1232	Obelisk Hill Military Positions		Ordnance Street		NLEP-S

Historic Themes - AA Company

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0106	Water Pit	6	Newcomen Street	<input checked="" type="checkbox"/>
0119	Claremont House	42	Newcomen Street	<input checked="" type="checkbox"/>
0187	AA Co. 'A' Pit	106 104	Church Street	<input checked="" type="checkbox"/>
0191	AA Co. Timber Bridge		Crown Street	<input checked="" type="checkbox"/>
0192	AA Co. Inclined Plane		Crown Street	<input checked="" type="checkbox"/>
1020	A.A.Coy. Boundary Wall	237	Wharf Road	<input type="checkbox"/>
1022	AA Co. Railway Bridges		Hunter Street	<input checked="" type="checkbox"/>
1023	AA Co. Coal Stalthes or Shoots		Wharf Road	<input checked="" type="checkbox"/>
1024	AA Co. Collery Railways		Various streets	<input type="checkbox"/>
1025	AA Co. Offices and Depot.		Wharf Road	<input checked="" type="checkbox"/>
1026	AA Co. "A" Pit and Surface Works	104 118	Church Street	<input checked="" type="checkbox"/>
1027	AA Co. Inclined Tramway for "A" Pit		Crown Street	<input checked="" type="checkbox"/>
1028	AA Co. "B" Pit	13 17	Brooks Street	<input checked="" type="checkbox"/>
1029	AA Co. "C" Pit and Surface Works	10 20	Bingle Street	<input checked="" type="checkbox"/>
1030	AA Co. Boundary Marker, Merewether Street		Merewether Street	<input type="checkbox"/>
1050	Bruce Street Building	30 30	Bruce Street	<input type="checkbox"/>
1149	Rough Stone Pit or Well	51 53	Church Street	<input checked="" type="checkbox"/>
1150	Rubbish Pit	45 47	Church Street	<input checked="" type="checkbox"/>
1151	Brown Street House	102 104	Church Street	<input checked="" type="checkbox"/>
1170	AA Co. Engine Shed	41	Darby Street	<input type="checkbox"/>
1172	Russell & Co. Foundry		Wharf Road	<input type="checkbox"/>
1175	AA Co. Dam		Brooks Street	<input checked="" type="checkbox"/>
1203	Shepherds Hill Mine Entrance		Ocean Cliffs	<input checked="" type="checkbox"/>
1214	AA Co. Eastern Boundary			<input type="checkbox"/>
1218	AA Co. Adit, Parry Street		Parry Street	<input checked="" type="checkbox"/>
1219	AA Co. Sea Pit		Brooks Street	<input checked="" type="checkbox"/>
1225	AA Co. Stone Crushing Works		Wharf Road	<input type="checkbox"/>

Historic Themes - Agriculture

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1195	Large Mill		Ordnance Street	<input checked="" type="checkbox"/>
1206	Small Windmill	81 83	Wolfe Street	<input checked="" type="checkbox"/>
1223	Dark's Ice Works	237	Wharf Road	<input type="checkbox"/>

Historic Themes - Cemeteries

ITEM REF NO:	NAME	STREET NO:	STREET NAME:	SCHEDULED:
1038	Former Cemeteries	684 730	Hunter Street	<input checked="" type="checkbox"/>
1040	Mortuary Station & Signal Box	528 534	Hunter Street	<input type="checkbox"/>
1100	Presbyterian Church and Graveyard	173 175	Scott Street	<input type="checkbox"/>
1101	Roman Catholic School and Church		Wolfe Street	<input type="checkbox"/>
1120	Christ Church Cemetery		King Street	<input checked="" type="checkbox"/>

Historic Themes - Coal Mining

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0003	Signal Hill	31	Nobbys Road	<input checked="" type="checkbox"/>
0124	Coal Pit/Shaft	3	Reserve Road	<input checked="" type="checkbox"/>
0135	Coal Pit/Shaft	137	Hunter Street	<input checked="" type="checkbox"/>
0187	AA Co. 'A' Pit	106 104	Church Street	<input checked="" type="checkbox"/>
0188	Newcastle Hospital North Wing	1	King Street	<input checked="" type="checkbox"/>
0191	AA Co. Timber Bridge		Crown Street	<input checked="" type="checkbox"/>
0192	AA Co. Inclined Plane		Crown Street	<input checked="" type="checkbox"/>
0193	Private Coal Staithes		Wharf Road	<input checked="" type="checkbox"/>
1003	Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1009	Plank Pathway to Signal Hill		Wharf Road	<input type="checkbox"/>
1017	Government Coal Staithes		Wharf Road	<input type="checkbox"/>
1018	Private Coal Wharves and Railway		Wharf Road	<input type="checkbox"/>
1021	Burwood Coal Company Railway		Burwood Street	<input checked="" type="checkbox"/>
1022	AA Co. Railway Bridges		Hunter Street	<input checked="" type="checkbox"/>
1023	AA Co. Coal Staithes or Shoots		Wharf Road	<input checked="" type="checkbox"/>
1024	AA Co. Collery Railways		Various streets	<input type="checkbox"/>
1025	AA Co. Offices and Depot.		Wharf Road	<input checked="" type="checkbox"/>
1026	AA Co. "A" Pit and Surface Works	104 118	Church Street	<input checked="" type="checkbox"/>
1027	AA Co. Inclined Tramway for "A" Pit		Crown Street	<input checked="" type="checkbox"/>
1028	AA Co. "B" Pit	13 17	Brooks Street	<input checked="" type="checkbox"/>
1029	AA Co. "C" Pit and Surface Works	10 20	Bingle Street	<input checked="" type="checkbox"/>
1076	Royal Newcastle Hospital		Pacific Street	<input type="checkbox"/>
1113	Nobbys Head Tunnel		Nobbys Head	<input checked="" type="checkbox"/>
1117	South Newcastle Beach Adit		Shortland Esplanade	<input checked="" type="checkbox"/>
1121	Asylum Mine Shaft No.1		Watt Street	<input checked="" type="checkbox"/>
1122	Government Mine Shaft		Ordnance Street	<input checked="" type="checkbox"/>
1123	Convict Coal Mine Adit		Shortland Esplanade	<input checked="" type="checkbox"/>
1124	Asylum Mine Shaft No.2		Watt Street	<input checked="" type="checkbox"/>
1127	Vertical Shaft & Tunnel		Church Street	<input checked="" type="checkbox"/>
1146	Old Government Coal Pit		Laing Street	<input checked="" type="checkbox"/>
1149	Rough Stone Pit or Well	51 53	Church Street	<input checked="" type="checkbox"/>
1150	Rubbish Pit	45 47	Church Street	<input checked="" type="checkbox"/>
1170	AA Co. Engine Shed	41	Darby Street	<input type="checkbox"/>
1175	AA Co. Dam		Brooks Street	<input checked="" type="checkbox"/>
1203	Shepherds Hill Mine Entrance		Ocean Cliffs	<input checked="" type="checkbox"/>
1210	Coal Company Offices		Scott Street	<input type="checkbox"/>
1212	Early Cliff-Face Coal Mine		Ocean Cliffs	<input checked="" type="checkbox"/>
1213	Watt Street Mine Shaft		Watt Street	<input checked="" type="checkbox"/>
1218	AA Co. Adit, Parry Street		Parry Street	<input checked="" type="checkbox"/>
1219	AA Co. Sea Pit		Brooks Street	<input checked="" type="checkbox"/>
1225	AA Co. Stone Crushing Works		Wharf Road	<input type="checkbox"/>

Historic Themes - Commerce the CBD

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1013	Coal Company Offices		Watt Street	<input checked="" type="checkbox"/>
1016	Market Street Boat Harbour		Wharf Road	<input checked="" type="checkbox"/>
1025	AA Co. Offices and Depot.		Wharf Road	<input checked="" type="checkbox"/>
1042	Bank of New South Wales	535 539	Hunter Street	<input type="checkbox"/>
1056	Dalgety Wool Store		Wharf Road	<input type="checkbox"/>
1057	D Cohen & Co. Goods Shed & Ralls		Foreshore Park	<input type="checkbox"/>
1058	Earp Gillam Warehouse	16	Telford Street	<input type="checkbox"/>
1060	D Cohen & Co. Store House	41 47	Stevenson Place	<input type="checkbox"/>
1062	The Coach House	41 43	Alfred Street	<input type="checkbox"/>
1063	Hall's Bond Store	60 62	Scott Street	<input type="checkbox"/>
1064	Toohy's Branch Store	64 68	Scott Street	<input type="checkbox"/>
1066	Scott Street Buildings		Scott Street	<input type="checkbox"/>
1067	Scott Street Building	23	Scott Street	<input type="checkbox"/>
1070	R Hall & Sons Warehouse	70	Scott Street	<input type="checkbox"/>
1078	Bank of New South Wales	5 7	Watt Street	<input type="checkbox"/>
1085	AJS Bank	49	Hunter Street	<input type="checkbox"/>
1087	Parnell's Buildings		Watt Street	<input type="checkbox"/>
1093	Market Wharf Building		Wharf Road	<input type="checkbox"/>
1095	HR & NSN Co. Wharf and Shed		Wharf Road	<input type="checkbox"/>
1097	Hall & Son Warehouse	153 161	Scott Street	<input type="checkbox"/>
1107	Commercial Bank of Australia		Newcomen Street	<input type="checkbox"/>
1111	London Bank of Australia		Bolton street	<input type="checkbox"/>
1112	Union Bank and Bank of Australasia	8 16	Bolton street	<input type="checkbox"/>
1114	Frederick Ash Warehouse		Burwood Street	<input checked="" type="checkbox"/>
1128	Perkins Street Boat Harbour	203	Wharf Road	<input checked="" type="checkbox"/>
1131	City Horse and Carriage Bazaar	14	Watt Street	<input type="checkbox"/>
1135	Newcastle Herald		Bolton Street	<input type="checkbox"/>
1140	Old Market Building		Hunter Street	<input type="checkbox"/>
1206	Small Windmill	81 83	Wolfe Street	<input checked="" type="checkbox"/>
1210	Coal Company Offices		Scott Street	<input type="checkbox"/>

Historic Themes - Contact

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0013	Convict Lumber Yard Site	98	Scott Street	<input checked="" type="checkbox"/>
0190	Former Burial Ground		Hunter Street	<input checked="" type="checkbox"/>

Historic Themes - Discovery

ITEM REF NO: NAME:

STREET NO:

STREET NAME:

SCHEDULED:

0001 Nobbys Head

Nobbys Road



Historic Themes - Domestic post-1853

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1133	Chinese Quarters and Stables		King Street	<input type="checkbox"/>
1137	Newcomen Street House		Newcomen Street	<input type="checkbox"/>
1149	Rough Stone Pit or Well	51 53	Church Street	<input checked="" type="checkbox"/>
1150	Rubbish Pit	45 47	Church Street	<input checked="" type="checkbox"/>
1151	Brown Street House	102 104	Church Street	<input checked="" type="checkbox"/>
1173	Laman Street Houses		Laman Street	<input type="checkbox"/>
1182	Imperial Hotel	171 173	Darby Street	<input type="checkbox"/>

Historic Themes - Early Govt. Buildings

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0013	Convict Lumber Yard Site	98	Scott Street	<input checked="" type="checkbox"/>
0002	Macquarie Pier		Nobbys Road	<input checked="" type="checkbox"/>
0003	Signal Hill	31	Nobbys Road	<input checked="" type="checkbox"/>
0005	Gaol		Scott Street	<input checked="" type="checkbox"/>
0012	Former Custom House		Pacific Street	<input checked="" type="checkbox"/>
0022	Surgeon's Residence		Church Street	<input checked="" type="checkbox"/>
0025	Commandants Residence		Watt Street	<input checked="" type="checkbox"/>
0026	Subaltern's Barracks	59	Watt Street	<input checked="" type="checkbox"/>
0027	United Services Club	55	Watt Street	<input checked="" type="checkbox"/>
0036	Tide Waiter's Residence	9 11	Watt Street	<input checked="" type="checkbox"/>
0038	Customs House	1	Bond Street	<input checked="" type="checkbox"/>
0040	PWD Buildings	74 100	Hunter Street	<input checked="" type="checkbox"/>
0041	Hunter Heritage Centre	90	Hunter Street	<input checked="" type="checkbox"/>
0046	Commissariat Store	28	Watt Street	<input checked="" type="checkbox"/>
0053	St. Phillips Church	48	Watt Street	<input checked="" type="checkbox"/>
0054	Watt Street Terrace Group	50 62	Watt Street	<input checked="" type="checkbox"/>
0055	Sessions House	8	Church Street	<input checked="" type="checkbox"/>
0059	Court House	9	Church Street	<input checked="" type="checkbox"/>
0060	Parsonage	15	Church Street	<input checked="" type="checkbox"/>
0061	Psychiatric Hospital	72	Watt Street	<input checked="" type="checkbox"/>
0069	Former Court House	74 100	Hunter Street	<input checked="" type="checkbox"/>
0084	Guard House & Residence	52	Newcomen Street	<input checked="" type="checkbox"/>
0123	Obelisk Reserve	3	Ordnance Street	<input checked="" type="checkbox"/>
0125	Bogle Hole	3	Reserve Road	<input checked="" type="checkbox"/>
0008	Watt Street Wharf		Watt Street	<input checked="" type="checkbox"/>
0188	Newcastle Hospital North Wing	1	King Street	<input checked="" type="checkbox"/>


Historic Themes - Early Private Buildings

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1004	Cottages below Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1048	Wells and Cess Pits		Various streets	<input type="checkbox"/>
1050	Bruce Street Building	30 30	Bruce Street	<input type="checkbox"/>
1053	Stevenson Place Houses	6 8	Stevenson Place	<input checked="" type="checkbox"/>
1061	Telford Street Building		Telford Street	<input type="checkbox"/>
1062	The Coach House	41 43	Alfred Street	<input type="checkbox"/>
1068	Zaara Street House		Zaara Street	<input checked="" type="checkbox"/>
1071	Stationmaster's House Group	90 92	Scott Street	<input checked="" type="checkbox"/>
1076	Royal Newcastle Hospital		Pacific Street	<input type="checkbox"/>
1078	Bank of New South Wales	5 7	Watt Street	<input type="checkbox"/>
1080	Watt Street Buildings		Watt Street	<input checked="" type="checkbox"/>
1081	Caledonian Hotel	23 25	Watt Street	<input checked="" type="checkbox"/>
1082	Ralph's Family Hotel	31 33	Watt Street	<input checked="" type="checkbox"/>
1084	Early Terrace & Stables		King Street	<input checked="" type="checkbox"/>
1090	Surgeon's Residence Group		Church Street	<input checked="" type="checkbox"/>
1091	Shortland Esplanade Building		Shortland Esplanade	<input checked="" type="checkbox"/>
1137	Newcomen Street House		Newcomen Street	<input type="checkbox"/>
1229	Weller's Cottage	684 692	Hunter Street	<input type="checkbox"/>
0004	Salt Works	9	Shortland Esplanade	<input checked="" type="checkbox"/>
0019	Former Nurses Home	30	Pacific Street	<input checked="" type="checkbox"/>
0037	Great Northern Hotel	7	Watt Street	<input checked="" type="checkbox"/>
0039	Carrington Chambers	4	Watt Street	<input checked="" type="checkbox"/>
0186	Smith Allotment		King Street	<input checked="" type="checkbox"/>
0099	CML Building	108 112	Hunter Street	<input checked="" type="checkbox"/>
0100	Binder's Inn	116	Hunter Street	<input checked="" type="checkbox"/>
0102	Buxton's Hut	122 132	Hunter Street	<input checked="" type="checkbox"/>
0104	Newcastle Air Force Club	129 133	Scott Street	<input checked="" type="checkbox"/>
0105	Hughes Allotment	123	Scott Street	<input checked="" type="checkbox"/>
0110	Huts	154	Hunter Street	<input checked="" type="checkbox"/>
0111	Buxton Allotment	142	Hunter Street	<input checked="" type="checkbox"/>
0119	Claremont House	42	Newcomen Street	<input checked="" type="checkbox"/>
0141	Outbuildings		Market Street	<input checked="" type="checkbox"/>

Historic Themes - Early Private Buildings

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0004	Salt Works	9	Shortland Esplanade	<input checked="" type="checkbox"/>
0019	Former Nurses Home	30	Pacific Street	<input checked="" type="checkbox"/>
0037	Great Northern Hotel	7	Watt Street	<input checked="" type="checkbox"/>
0039	Carrington Chambers	4	Watt Street	<input checked="" type="checkbox"/>
0099	CML Building	108 112	Hunter Street	<input checked="" type="checkbox"/>
0100	Binder's Inn	116	Hunter Street	<input checked="" type="checkbox"/>
0102	Buxton's Hut	122 132	Hunter Street	<input checked="" type="checkbox"/>
0104	Newcastle Air Force Club	129 133	Scott Street	<input checked="" type="checkbox"/>
0105	Hughes Allotment	123	Scott Street	<input checked="" type="checkbox"/>
0110	Huts	154	Hunter Street	<input checked="" type="checkbox"/>
0111	Buxton Allotment	142	Hunter Street	<input checked="" type="checkbox"/>
0119	Claremont House	42	Newcomen Street	<input checked="" type="checkbox"/>
0141	Outbuildings		Market Street	<input checked="" type="checkbox"/>
0186	Smith Allotment		King Street	<input checked="" type="checkbox"/>
1004	Cottages below Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1048	Wells and Cess Pits		Various streets	<input type="checkbox"/>
1050	Bruce Street Building	30 30	Bruce Street	<input type="checkbox"/>
1053	Stevenson Place Houses	6 8	Stevenson Place	<input checked="" type="checkbox"/>
1061	Telford Street Building		Telford Street	<input type="checkbox"/>
1062	The Coach House	41 43	Alfred Street	<input type="checkbox"/>
1068	Zaara Street House		Zaara Street	<input checked="" type="checkbox"/>
1071	Stationmaster's House Group	90 92	Scott Street	<input checked="" type="checkbox"/>
1076	Royal Newcastle Hospital		Pacific Street	<input type="checkbox"/>
1078	Bank of New South Wales	5 7	Watt Street	<input type="checkbox"/>
1080	Watt Street Buildings		Watt Street	<input checked="" type="checkbox"/>
1081	Caledonian Hotel	23 25	Watt Street	<input checked="" type="checkbox"/>
1082	Ralph's Family Hotel	31 33	Watt Street	<input checked="" type="checkbox"/>
1084	Early Terrace & Stables		King Street	<input checked="" type="checkbox"/>
1090	Surgeon's Residence Group		Church Street	<input checked="" type="checkbox"/>
1091	Shortland Esplanade Building		Shortland Esplanade	<input checked="" type="checkbox"/>
1137	Newcomen Street House		Newcomen Street	<input type="checkbox"/>
1229	Weller's Cottage	684 692	Hunter Street	<input type="checkbox"/>

Historic Themes - Early Public Utilities

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0006	Foreshore Reserve	51	Wharf Road	

Historic Themes - Education

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1101	Roman Catholic School and Church		Wolfe Street	<input type="checkbox"/>
1102	Wesleyan School		Scott Street	<input checked="" type="checkbox"/>
1104	School of Arts	1 9	Wolfe Street	<input type="checkbox"/>
1196	Presbyterian Church and School		Watt Street	<input type="checkbox"/>

Historic Themes - Electricity

ITEM REF NO:	NAME	STREET NO:	STREET NAME:	SCHEDULED:
1116	Tramway Substation	340 342	Hunter Street	<input type="checkbox"/>
1118	Zaara Street Power Station		Foreshore Park	<input checked="" type="checkbox"/>
1177	NESCA Depot		Tyrrell Street	<input checked="" type="checkbox"/>

Historic Themes - Gas

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1013	Coal Company Offices		Watt Street	<input checked="" type="checkbox"/>
1183	Newcastle Gas Company Works		King Street	<input checked="" type="checkbox"/>

Historic Themes - Govt. Town 1823-1853

ITEM REF NO:	NAME	STREET NO:	STREET NAME:	SCHEDULED:
0006	Foreshore Reserve	51	Wharf Road	<input checked="" type="checkbox"/>
0012	Former Custom House		Pacific Street	<input checked="" type="checkbox"/>
0016	Elliot/Scott Allotment		Pacific Street	<input checked="" type="checkbox"/>
0017	Hunter Street Extension		Hunter Street	<input checked="" type="checkbox"/>
0018	Scott Allotment	30	Pacific Street	<input checked="" type="checkbox"/>
0019	Former Nurses Home	30	Pacific Street	<input checked="" type="checkbox"/>
0020	Outbuilding		Pacific Street	<input checked="" type="checkbox"/>
0021	Wheeler House	30	Pacific Street	<input checked="" type="checkbox"/>
0023	Park		Church Street	<input checked="" type="checkbox"/>
0028	Manufacturers House	35 37	Watt Street	<input checked="" type="checkbox"/>
0029	Richardson Allotment	31	Watt Street	<input checked="" type="checkbox"/>
0030	Reid Allotment	27	Watt Street	<input checked="" type="checkbox"/>
0031	Reid Allotment	25	Watt Street	<input checked="" type="checkbox"/>
0032	T&G Mutual Life Assurance Building	45	Hunter Street	<input checked="" type="checkbox"/>
0033	Former National Bank	64	Hunter Street	<input checked="" type="checkbox"/>
0034	Reid Allotment	15	Watt Street	<input checked="" type="checkbox"/>
0035	Reid Allotment	13	Watt Street	<input checked="" type="checkbox"/>
0036	Tide Waiter's Residence	9 11	Watt Street	<input checked="" type="checkbox"/>
0037	Great Northern Hotel	7	Watt Street	<input checked="" type="checkbox"/>
0040	PWD Buildings	74 100	Hunter Street	<input checked="" type="checkbox"/>
0041	Hunter Heritage Centre	90	Hunter Street	<input checked="" type="checkbox"/>
0042	AMP Building	55	Hunter Street	<input checked="" type="checkbox"/>
0043	Riley Allotment		Hunter Street	<input checked="" type="checkbox"/>
0047	Whyte Allotment	34 36	King Street	<input checked="" type="checkbox"/>
0048	King Street Buildings		King Street	<input checked="" type="checkbox"/>
0049	McIntyre Allotment	25 29	King Street	<input checked="" type="checkbox"/>
0050	McGillivray Allotment		King Street	<input checked="" type="checkbox"/>
0051	Forbes Allotment	38	Watt Street	<input checked="" type="checkbox"/>
0052	Allman Allotment	46	Watt Street	<input checked="" type="checkbox"/>
0055	Sessions House	8	Church Street	<input checked="" type="checkbox"/>
0056	Buchanan Terraces	10 30	Church Street	<input checked="" type="checkbox"/>
0057	Grand Hotel	32	Church Street	<input checked="" type="checkbox"/>
0058	Toll Cottage		Bolton Street	<input checked="" type="checkbox"/>
0062	Steels Garage	47	Bolton St	<input checked="" type="checkbox"/>
0063	Lilly Allotment	45	Bolton Street	<input checked="" type="checkbox"/>
0064	Spark Allotment	43	Bolton Street	<input checked="" type="checkbox"/>
0065	Eckford Allotment	37 39	King Street	<input checked="" type="checkbox"/>
0066	Usher Allotment	25	Bolton Street	<input checked="" type="checkbox"/>
0067	National Australia Bank	73 75	Hunter Street	<input checked="" type="checkbox"/>
0068	Bolton Street Buildings		Bolton Street	<input checked="" type="checkbox"/>
0069	Former Court House	74 100	Hunter Street	<input checked="" type="checkbox"/>

Historic Themes - Govt.Town 1823-1853

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0070	Priest Allotment	1 5	Bolton Street	<input checked="" type="checkbox"/>
0071	Bolton Street Buildings		Scott Street	<input checked="" type="checkbox"/>
0074	Smith Allotment	117	Scott Street	<input checked="" type="checkbox"/>
0075	NZI Building	12 14	Bolton Street	<input checked="" type="checkbox"/>
0076	Union Trustee Building	18 20	Bolton Street	<input checked="" type="checkbox"/>
0077	Hudson Allotment	26	Bolton Street	<input checked="" type="checkbox"/>
0078	Shand Allotment	38	King Street	<input checked="" type="checkbox"/>
0079	Court Chambers	40	Bolton Street	<input checked="" type="checkbox"/>
0080	Former David Cohen & Co. Warehouse	50	Bolton Street	<input checked="" type="checkbox"/>
0081	Fomer Newcastle East Public School	58	Bolton Street	<input checked="" type="checkbox"/>
0082	Jackson Allotment	36	Church Street	<input checked="" type="checkbox"/>
0083	Residence	46	Church Street	<input checked="" type="checkbox"/>
0085	Residence	51	Newcomen Street	<input checked="" type="checkbox"/>
0086	Wesleyan School	47 49	Newcomen Street	<input checked="" type="checkbox"/>
0087	Wesleyan Church		Newcomen Street	<input checked="" type="checkbox"/>
0088	Dillon Allotment	33	Newcomen Street	<input checked="" type="checkbox"/>
0089	Madle Allotment	83	King Street	<input checked="" type="checkbox"/>
0090	Residence	81	King Street	<input checked="" type="checkbox"/>
0091	Sinclair Allotment	46 54	King Street	<input checked="" type="checkbox"/>
0092	Long Allotment	64	King Street	<input checked="" type="checkbox"/>
0093	Hickey Allotment		Newcomen Street	<input checked="" type="checkbox"/>
0094	Cory Allotment		Newcomen Street	<input checked="" type="checkbox"/>
0095	Owen Allotment		Newcomen Street	<input checked="" type="checkbox"/>
0096	Brown Allotment	93 101	Hunter Street	<input checked="" type="checkbox"/>
0097	Former Emporium Building	87 89	Hunter Street	<input checked="" type="checkbox"/>
0098	Frankland Allotment	79 81	Hunter Street	<input checked="" type="checkbox"/>
0099	CML Building	108 112	Hunter Street	<input checked="" type="checkbox"/>
0100	Binder's Inn	116	Hunter Street	<input checked="" type="checkbox"/>
0102	Buxton's Hut	122 132	Hunter Street	<input checked="" type="checkbox"/>
0103	Rodd Allotment	145	Scott Street	<input checked="" type="checkbox"/>
0104	Newcastle Air Force Club	129 133	Scott Street	<input checked="" type="checkbox"/>
0105	Hughes Allotment	123	Scott Street	<input checked="" type="checkbox"/>
0107	Rundles Building	153 163	Scott Street	<input checked="" type="checkbox"/>
0108	Rundles Building	153 163	Scott Street	<input checked="" type="checkbox"/>
0109	Lyons Allotment	167	Scott Street	<input checked="" type="checkbox"/>
0110	Huts	154	Hunter Street	<input checked="" type="checkbox"/>
0111	Buxton Allotment	142	Hunter Street	<input checked="" type="checkbox"/>
0112	Newcomen Street Well		Newcomen Street	<input checked="" type="checkbox"/>
0113	Gillman Allotment	103 105	Hunter Street	<input checked="" type="checkbox"/>
0114	Page Allotment	18	Newcomen Street	<input checked="" type="checkbox"/>
0116	Wilton Allotment	26	Newcomen Street	<input checked="" type="checkbox"/>

Historic Themes - Govt.Town 1823-1853

ITEM REF NO:	NAME	STREET NO:	STREET NAME	SCHEDULED:
0117	Daquid Allotment	28	King Street	<input checked="" type="checkbox"/>
0118	The Newcastle Club	40	Newcomen Street	<input checked="" type="checkbox"/>
0120	Watson Allotment		Newcomen Street	<input checked="" type="checkbox"/>
0121	Langham Allotment	48 52	Church Street	<input checked="" type="checkbox"/>
0126	Davies/Spears Allotment	54	Church Street	<input checked="" type="checkbox"/>
0127	Dwyer Allotment	58 64	Church Street	<input checked="" type="checkbox"/>
0128	Hinchcliffe Allotment		Wolfe Street	<input checked="" type="checkbox"/>
0129	Retaining Wall and Steps	43	Wolfe Street	<input checked="" type="checkbox"/>
0130	Retaining Wall and Steps		King Street	<input checked="" type="checkbox"/>
0132	Nash Allotment	1	Morgan Street	<input checked="" type="checkbox"/>
0133	Wilton Allotment	3	Morgan Street	<input checked="" type="checkbox"/>
0134	Earl Allotment	109 111	Hunter Street	<input checked="" type="checkbox"/>
0136	Burton Allotment	98 100	King Street	<input checked="" type="checkbox"/>
0137	Wright Allotment	16	Wolfe Street	<input checked="" type="checkbox"/>
0138	Platt Allotment		Wolfe Street	<input checked="" type="checkbox"/>
0139	Scott Allotment	147	Hunter Street	<input checked="" type="checkbox"/>
0140	Scott Allotment	153 155	Hunter Street	<input checked="" type="checkbox"/>
0141	Outbuildings		Market Street	<input checked="" type="checkbox"/>
0142	Lyons Allotment	2	Scott Street	<input checked="" type="checkbox"/>
0143	Former Baberfaulds Warehouse	175	Scott Street	<input checked="" type="checkbox"/>
0144	Former AA Dangar Building	176	Hunter Street	<input checked="" type="checkbox"/>
0145	Former School of Arts	182 188	Hunter Street	<input checked="" type="checkbox"/>
0146	School and Church	192 196	Hunter Street	<input checked="" type="checkbox"/>
0147	Catholic Parsonage	200 212	Hunter Street	<input checked="" type="checkbox"/>
0148	Wesleyan School and Manse	220	Hunter Street	<input checked="" type="checkbox"/>
0149	Bingle Allotment	159 163	Hunter Street	<input checked="" type="checkbox"/>
0150	David Jones	169	Hunter Street	<input checked="" type="checkbox"/>
0151	Lyons Allotment	114	King Street	<input checked="" type="checkbox"/>
0152	Thorp Allotment	105	King Street	<input checked="" type="checkbox"/>
0153	Usher Allotment	38	Wolfe Street	<input checked="" type="checkbox"/>
0154	Davies/Spears Allotment	40	Wolfe Street	<input checked="" type="checkbox"/>
0155	Scott Allotment	56	Wolfe Street	<input checked="" type="checkbox"/>
0156	Lance Villa Terrace Group	66 68	Church Street	<input checked="" type="checkbox"/>
0157	Lance Villa Terrace Group	70 76	Church Street	<input checked="" type="checkbox"/>
0158	Lance Villa Terrace Group	78	Church Street	<input checked="" type="checkbox"/>
0159	Lance Villa	80	Church Street	<input checked="" type="checkbox"/>
0160	Scott Allotment	51 53	Perkins Street	<input checked="" type="checkbox"/>
0161	Residence	49	Perkins Street	<input checked="" type="checkbox"/>
0162	Levey Allotment	39 43	Perkins Street	<input checked="" type="checkbox"/>
0163	Wright Allotment	31 37	Perkins Street	<input checked="" type="checkbox"/>
0165	Ireland Bond Store	123	King Street	<input checked="" type="checkbox"/>

Historic Themes - Govt.Town 1823-1853

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0166	Crown and Anchor Hotel	189	Hunter Street	<input checked="" type="checkbox"/>
0167	Davies Allotment	193 195	Hunter Street	<input checked="" type="checkbox"/>
0168	Hughes Allotment	207	Hunter Street	<input checked="" type="checkbox"/>
0169	Kemp Allotment	4	Perkins Street	<input checked="" type="checkbox"/>
0170	Fomer Victoria Theatre	8 10	Perkins Street	<input checked="" type="checkbox"/>
0171	Kemp Allotment	20 22	Perkins Street	<input checked="" type="checkbox"/>
0172	Kemp Allotment	140	King Street	<input checked="" type="checkbox"/>
0173	Mitchell Allotment	34	Perkins Street	<input checked="" type="checkbox"/>
0174	Nash Allotment		Perkins Street	<input checked="" type="checkbox"/>
0175	Pilcher Allotment	50	Perkins Street	<input checked="" type="checkbox"/>
0176	Hughes Allotment	52	Perkins Street	<input checked="" type="checkbox"/>
0177	Furlong Allotment	84	Church Street	<input checked="" type="checkbox"/>
0178	Minumbah	86 88	Church Street	<input checked="" type="checkbox"/>
0179	Croasdill Allotment	25	Brown Street	<input checked="" type="checkbox"/>
0180	Croasdill Allotment	21 23	Brown Street	<input checked="" type="checkbox"/>
0181	Mitchell Allotment	2 8	Carlton Street	<input checked="" type="checkbox"/>
0182	Croasdill Allotment	15 19	Brown Street	<input checked="" type="checkbox"/>
0183	Croasdill Allotment	149	King Street	<input checked="" type="checkbox"/>
0184	Croasdill Allotment	141	King Street	<input checked="" type="checkbox"/>
0185	Mitchell Allotment		Carlton Street	<input checked="" type="checkbox"/>
0186	Smith Allotment		King Street	<input checked="" type="checkbox"/>
0189	King Street Buildings		King Street	<input checked="" type="checkbox"/>
1001	Nobbys Head		Nobbys Road	<input checked="" type="checkbox"/>
1003	Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1004	Cottages below Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1009	Plank Pathway to Signal Hill		Wharf Road	<input type="checkbox"/>
1020	A.A.Coy. Boundary Wall	237	Wharf Road	<input type="checkbox"/>
1022	AA Co. Railway Bridges		Hunter Street	<input checked="" type="checkbox"/>
1023	AA Co. Coal Stalthes or Shoots		Wharf Road	<input checked="" type="checkbox"/>
1026	AA Co. "A" Pit and Surface Works	104 118	Church Street	<input checked="" type="checkbox"/>
1027	AA Co. Inclined Tramway for "A" Pit		Crown Street	<input checked="" type="checkbox"/>
1028	AA Co. "B" Pit	13 17	Brooks Street	<input checked="" type="checkbox"/>
1029	AA Co. "C" Pit and Surface Works	10 20	Bingle Street	<input checked="" type="checkbox"/>
1030	AA Co. Boundary Marker, Merewether Street		Merewether Street	<input type="checkbox"/>
1032	Honeysuckle Point Settlement		Lee Wharf Road	<input checked="" type="checkbox"/>
1039	Hunter Street Road Bridge		Hunter Street	<input type="checkbox"/>
1048	Wells and Cess Pits		Various streets	<input type="checkbox"/>
1050	Bruce Street Building	30 30	Bruce Street	<input type="checkbox"/>
1059	Pound		Wolfe Street	<input type="checkbox"/>
1068	Zaara Street House		Zaara Street	<input checked="" type="checkbox"/>
1076	Royal Newcastle Hospital		Pacific Street	<input type="checkbox"/>

Historic Themes - Govt.Town 1823-1853

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1077	Great Northern Hotel	65 89	Scott Street	<input checked="" type="checkbox"/>
1078	Bank of New South Wales	5 7	Watt Street	<input type="checkbox"/>
1080	Watt Street Buildings		Watt Street	<input checked="" type="checkbox"/>
1081	Caledonian Hotel	23 25	Watt Street	<input checked="" type="checkbox"/>
1082	Ralph's Family Hotel	31 33	Watt Street	<input checked="" type="checkbox"/>
1084	Early Terrace & Stables		King Street	<input checked="" type="checkbox"/>
1089	Smithy	97 105	Scott Street	<input type="checkbox"/>
1090	Surgeon's Residence Group		Church Street	<input checked="" type="checkbox"/>
1091	Shortland Esplanade Building		Shortland Esplanade	<input checked="" type="checkbox"/>
1101	Roman Catholic School and Church		Wolfe Street	<input type="checkbox"/>
1102	Wesleyan School		Scott Street	<input checked="" type="checkbox"/>
1108	Corporation Baths	11 13	Newcomen Street	<input checked="" type="checkbox"/>
1113	Nobbys Head Tunnel		Nobbys Head	<input checked="" type="checkbox"/>
1117	South Newcastle Beach Adit		Shortland Esplanade	<input checked="" type="checkbox"/>
1119	Old Christ Church Cathedral		Church Street	<input checked="" type="checkbox"/>
1120	Christ Church Cemetery		King Street	<input checked="" type="checkbox"/>
1121	Asylum Mine Shaft No.1		Watt Street	<input checked="" type="checkbox"/>
1122	Government Mine Shaft		Ordnance Street	<input checked="" type="checkbox"/>
1124	Asylum Mine Shaft No.2		Watt Street	<input checked="" type="checkbox"/>
1127	Vertical Shaft & Tunnel		Church Street	<input checked="" type="checkbox"/>
1133	Chinese Quarters and Stables		King Street	<input type="checkbox"/>
1137	Newcomen Street House		Newcomen Street	<input type="checkbox"/>
1140	Old Market Building		Hunter Street	<input type="checkbox"/>
1146	Old Government Coal Pit		Laing Street	<input checked="" type="checkbox"/>
1162	Deanery		Church Street	<input checked="" type="checkbox"/>
1173	Laman Street Houses		Laman Street	<input type="checkbox"/>
1195	Large Mill		Ordnance Street	<input checked="" type="checkbox"/>
1197	Old Customs House		Pacific Street	<input checked="" type="checkbox"/>
1198	Watt Street Wharf & Boat Harbour		Wharf Road	<input checked="" type="checkbox"/>
1200	Government Wells	11 13	Newcomen Street	<input checked="" type="checkbox"/>
1203	Shepherds Hill Mine Entrance		Ocean Cliffs	<input checked="" type="checkbox"/>
1206	Small Windmill	81 83	Wolfe Street	<input checked="" type="checkbox"/>
1207	Foreshore Park Well		Foreshore Park	<input checked="" type="checkbox"/>
1208	Engineering Works, Signal Hill		Fort Scratchley	<input type="checkbox"/>
1213	Watt Street Mine Shaft		Watt Street	<input checked="" type="checkbox"/>
1214	AA Co. Eastern Boundary			<input type="checkbox"/>
1229	Weller's Cottage	684 692	Hunter Street	<input type="checkbox"/>

Historic Themes - Govt. Administration

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1033	Honeysuckle Point Railway Workshops		Lee Wharf Road	<input checked="" type="checkbox"/>
1043	Post Office	545 551	Hunter Street	<input type="checkbox"/>
1059	Pound		Wolfe Street	<input type="checkbox"/>
1072	Railway Offices		Watt Street	<input checked="" type="checkbox"/>
1073	City Fire Station		Scott Street	<input type="checkbox"/>
1074	Water Police Buildings Group		Scott Street	<input checked="" type="checkbox"/>
1086	Post Office and Telegraph Office		Hunter Street	<input checked="" type="checkbox"/>
1090	Surgeon's Residence Group		Church Street	<input checked="" type="checkbox"/>
1104	School of Arts	1 9	Wolfe Street	<input type="checkbox"/>
1108	Corporation Baths	11 13	Newcomen Street	<input checked="" type="checkbox"/>
1177	NESCA Depot		Tyrrell Street	<input checked="" type="checkbox"/>
1197	Old Customs House		Pacific Street	<input checked="" type="checkbox"/>
1202	Former Council Chambers		Watt Street	<input type="checkbox"/>
1216	Maitland's Road Alignment Post		Watt Street	<input checked="" type="checkbox"/>
1226	Council Stone Crushing Works		Lee Wharf Road	<input type="checkbox"/>
1229	Weller's Cottage	684 692	Hunter Street	<input type="checkbox"/>

Historic Themes - Hotels

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1044	Locomotive Hotel	465 467	Hunter Street	<input type="checkbox"/>
1046	Young Australia Hotel	443	Hunter Street	<input type="checkbox"/>
1049	Hidden Treasure Hotel	82 84	Laman Street	<input type="checkbox"/>
1051	Cosmopolitan Hotel		Union Street	<input checked="" type="checkbox"/>
1065	Imperial Hotel		Scott Street	<input type="checkbox"/>
1077	Great Northern Hotel	65 89	Scott Street	<input checked="" type="checkbox"/>
1079	Royal Standard Hotel		Hunter Street	<input checked="" type="checkbox"/>
1081	Caledonian Hotel	23 25	Watt Street	<input checked="" type="checkbox"/>
1082	Ralph's Family Hotel	31 33	Watt Street	<input checked="" type="checkbox"/>
1083	Naval Brigade Hotel		Watt Street	<input type="checkbox"/>
1088	Metropolitan Hotel		Scott Street	<input checked="" type="checkbox"/>
1096	Commercial Hotel		Scott Street	<input type="checkbox"/>
1098	Great Britain Hotel	167	Scott Street	<input type="checkbox"/>
1099	Market Wharf Hotel	169 175	Scott Street	<input checked="" type="checkbox"/>
1103	Australian Hotel		Wolfe Street	<input checked="" type="checkbox"/>
1105	City Arms Hotel		Hunter Street	<input checked="" type="checkbox"/>
1106	Crystal Palace Hotel		Newcomen Street	<input type="checkbox"/>
1109	Harbour View Hotel		Scott Street	<input checked="" type="checkbox"/>
1110	Centennial Hotel	125	Scott Street	<input checked="" type="checkbox"/>
1130	Terminus Hotel		Scott Street	<input checked="" type="checkbox"/>
1132	Star and Garter Hotel		Watt Street	<input checked="" type="checkbox"/>
1134	Criterion Hotel		Hunter Street	<input type="checkbox"/>
1138	Hunt Club Hotel		Newcomen Street	<input checked="" type="checkbox"/>
1139	London Hotel		Morgan Street	<input checked="" type="checkbox"/>
1141	Newmarket Hotel		Hunter Street	<input type="checkbox"/>
1142	McDonalds Hotel		Hunter Street	<input type="checkbox"/>
1143	Blue Bell Hotel		Laing Street	<input type="checkbox"/>
1144	Globe Hotel		Thorn Street	<input checked="" type="checkbox"/>
1145	Royal Exchange Hotel		Hunter Street	<input checked="" type="checkbox"/>
1152	Oxford Hotel	237	Hunter Street	<input checked="" type="checkbox"/>
1153	Hunter River Hotel		Brown Street	<input type="checkbox"/>
1154	Paragon Hotel		Hunter Street	<input type="checkbox"/>
1155	Crown & Anchor Hotel	189 193	Hunter Street	<input checked="" type="checkbox"/>
1159	Grand Hotel		Bolton Street	<input checked="" type="checkbox"/>
1160	Reserve Hotel		Bolton Street	<input type="checkbox"/>
1164	Tattersalls Hotel		Darby Street	<input type="checkbox"/>
1165	Fryar's Royal Hotel		Hunter Street	<input type="checkbox"/>
1166	Clarendon Hotel		Hunter Street	<input type="checkbox"/>
1167	Black Diamond Hotel		Hunter Street	<input checked="" type="checkbox"/>
1171	Volunteer Hotel		Darby Street	<input type="checkbox"/>
1178	White Horse Hotel		Darby Street	<input type="checkbox"/>

Historic Themes - Hotels

ITEM REF NO:	NAME	STREET NO:	STREET NAME	SCHEDULED:
1179	Prince Alfred Hotel	115	Darby Street	<input type="checkbox"/>
1180	Fountain of Friendship Hotel	126 128	Darby Street	<input type="checkbox"/>
1181	Miners' Arms Hotel	155 159	Darby Street	<input type="checkbox"/>
1182	Imperial Hotel	171 173	Darby Street	<input type="checkbox"/>
1185	Cameron's Family Hotel	635	Hunter Street	<input type="checkbox"/>
1186	New Station Hotel	629 631	Hunter Street	<input type="checkbox"/>
1191	Cambridge Hotel		Hunter Street	<input type="checkbox"/>
1194	West End Hotel		Hunter Street	<input type="checkbox"/>
1199	Galatea Hotel	78 80	Darby Street	<input type="checkbox"/>

Historic Themes - Limeburning

ITEM REF NO: NAME:

STREET NO:

STREET NAME:

SCHEDULED:

#Error



Historic Themes - Lumberyard

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0013	Convict Lumber Yard Site	98	Scott Street	<input checked="" type="checkbox"/>
1188	Ash's Timber Yard and Saw Mill		King Street	<input type="checkbox"/>

Historic Themes - Manufacturing/Engineering

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1013	Coal Company Offices		Watt Street	<input checked="" type="checkbox"/>
1033	Honeysuckle Point Railway Workshops		Lee Wharf Road	<input checked="" type="checkbox"/>
1045	Hunter Street Forge	451 453	Hunter Street	<input type="checkbox"/>
1047	Gibson's Foundry	291 303	King Street	<input type="checkbox"/>
1052	King Street Forge	275 279	King Street	<input type="checkbox"/>
1069	Rowland's Cordial Factory	8 14	Telford Street	<input type="checkbox"/>
1089	Smithy	97 105	Scott Street	<input type="checkbox"/>
1094	Stone Crushing Works		Wharf Road	<input type="checkbox"/>
1113	Nobbys Head Tunnel		Nobbys Head	<input checked="" type="checkbox"/>
1135	Newcastle Herald		Bolton Street	<input type="checkbox"/>
1168	Fuller and Rogers		Hunter Street	<input type="checkbox"/>
1169	Rodgers Foundry		King Street	<input checked="" type="checkbox"/>
1172	Russell & Co. Foundry		Wharf Road	<input type="checkbox"/>
1184	Arnotts Biscuit Factory		Union Street	<input checked="" type="checkbox"/>
1187	Hunter Street Forge	625	Hunter Street	<input type="checkbox"/>
1189	Coach Factory		Hunter Street	<input type="checkbox"/>
1192	Castlemaine Brewery		Wood Street	<input checked="" type="checkbox"/>
1195	Large Mill		Ordnance Street	<input checked="" type="checkbox"/>
1201	Salt Works		Scott Street	<input type="checkbox"/>
1208	Engineering Works, Signal Hill		Fort Scratchley	<input type="checkbox"/>
1209	Pipeline from Walka Water Works		Hunter Street	<input checked="" type="checkbox"/>
1223	Dark's Ice Works	237	Wharf Road	<input type="checkbox"/>
1225	AA Co. Stone Crushing Works		Wharf Road	<input type="checkbox"/>
1226	Council Stone Crushing Works		Lee Wharf Road	<input type="checkbox"/>
1230	Smithy, Hannell Street		Hannell Street	<input type="checkbox"/>

Historic Themes - Maritime

ITEM REF NO:	NAME	STREET NO:	STREET NAME	SCHEDULED:
1001	Nobbys Head		Nobbys Road	<input checked="" type="checkbox"/>
1002	Nobbys Head Railway		Nobbys Road	<input checked="" type="checkbox"/>
1003	Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1004	Cottages below Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1005	Pilot Station		Wharf Road	<input checked="" type="checkbox"/>
1006	Bull Beacons		Nobbys Road	<input type="checkbox"/>
1007	Steam Cranes on Kings Wharf		Wharf Road	<input checked="" type="checkbox"/>
1010	Stables & Weighbridge		Wharf Road	<input type="checkbox"/>
1016	Market Street Boat Harbour		Wharf Road	<input checked="" type="checkbox"/>
1017	Government Coal Staithes		Wharf Road	<input type="checkbox"/>
1018	Private Coal Wharves and Railway		Wharf Road	<input type="checkbox"/>
1023	AA Co. Coal Staithes or Shoots		Wharf Road	<input checked="" type="checkbox"/>
1035	Bullock Island Bridge and Approaches		Worth Place	<input type="checkbox"/>
1074	Water Police Buildings Group		Scott Street	<input checked="" type="checkbox"/>
1093	Market Wharf Building		Wharf Road	<input type="checkbox"/>
1095	HR & NSN Co. Wharf and Shed		Wharf Road	<input type="checkbox"/>
1128	Perkins Street Boat Harbour	203	Wharf Road	<input checked="" type="checkbox"/>
1156	Perkins Street Beacon Light	54 56	Perkins Street	<input checked="" type="checkbox"/>
1195	Large Mill		Ordnance Street	<input checked="" type="checkbox"/>
1198	Watt Street Wharf & Boat Harbour		Wharf Road	<input checked="" type="checkbox"/>
1208	Engineering Works, Signal Hill		Fort Scratchley	<input type="checkbox"/>
1211	Stone Retaining Wall		Lee Wharf Road	<input type="checkbox"/>
1220	Monier Seawall, Lee Wharf		Lee Wharf Road	<input checked="" type="checkbox"/>
1222	Leading Light, Wharf Road		Wharf Road	<input type="checkbox"/>
1227	Honeysuckle Rail Wharf		Lee Wharf Road	<input type="checkbox"/>
1231	Rail Tracks to Lee Wharf		Lee Wharf Road	<input type="checkbox"/>

Historic Themes - Medical

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1048	Wells and Cess Pits		Various streets	<input type="checkbox"/>
1076	Royal Newcastle Hospital		Pacific Street	<input type="checkbox"/>
1220	Monier Seawall, Lee Wharf		Lee Wharf Road	<input checked="" type="checkbox"/>

Historic Themes - Early Military Maritime

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0001	Nobbys Head		Nobbys Road	<input checked="" type="checkbox"/>
0002	Macquarie Pier		Nobbys Road	<input checked="" type="checkbox"/>
0003	Signal Hill	31	Nobbys Road	<input checked="" type="checkbox"/>
0007	Boat Harbour	51 55	Wharf Road	<input checked="" type="checkbox"/>
0008	Watt Street Wharf		Watt Street	<input checked="" type="checkbox"/>
0024	Fletcher Park and Monument	75	Watt Street	<input checked="" type="checkbox"/>
0026	Subaltern's Barracks	59	Watt Street	<input checked="" type="checkbox"/>
0027	United Services Club	55	Watt Street	<input checked="" type="checkbox"/>
0054	Watt Street Terrace Group	50 62	Watt Street	<input checked="" type="checkbox"/>

Historic Themes - Military

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1001	Nobbys Head		Nobbys Road	<input checked="" type="checkbox"/>
1003	Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1005	Pilot Station		Wharf Road	<input checked="" type="checkbox"/>
1113	Nobbys Head Tunnel		Nobbys Head	<input checked="" type="checkbox"/>
1126	Shepherds Hill Fortifications		The Terrace	<input checked="" type="checkbox"/>

Historic Themes - Open Space

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0011	Pacific Park	1	Pacific Street	<input checked="" type="checkbox"/>
0131	Burial Ground	93	King Street	<input checked="" type="checkbox"/>

Historic Themes - Penal Colony, 1801-1822

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0005	Gaol		Scott Street	<input checked="" type="checkbox"/>
0008	Watt Street Wharf		Watt Street	<input checked="" type="checkbox"/>
0013	Convict Lumber Yard Site	98	Scott Street	<input checked="" type="checkbox"/>
0022	Surgeon's Residence		Church Street	<input checked="" type="checkbox"/>
0025	Commandants Residence		Watt Street	<input checked="" type="checkbox"/>
0027	United Services Club	55	Watt Street	<input checked="" type="checkbox"/>
0038	Customs House	1	Bond Street	<input checked="" type="checkbox"/>
0041	Hunter Heritage Centre	90	Hunter Street	<input checked="" type="checkbox"/>
0046	Commissariat Store	28	Watt Street	<input checked="" type="checkbox"/>
0053	St. Phillips Church	48	Watt Street	<input checked="" type="checkbox"/>
0054	Watt Street Terrace Group	50 62	Watt Street	<input checked="" type="checkbox"/>
0055	Sessions House	8	Church Street	<input checked="" type="checkbox"/>
0059	Court House	9	Church Street	<input checked="" type="checkbox"/>
0060	Parsonage	15	Church Street	<input checked="" type="checkbox"/>
0061	Psychiatric Hospital	72	Watt Street	<input checked="" type="checkbox"/>
0072	Convict Hut	97 105	Scott Street	<input checked="" type="checkbox"/>
0073	Convict Hut	111	Scott Street	<input checked="" type="checkbox"/>
0084	Guard House & Residence	52	Newcomen Street	<input checked="" type="checkbox"/>
0101	Public Wells	11	Newcomen Street	<input checked="" type="checkbox"/>
0122	Christ Church Cathedral	52	Church Street	<input checked="" type="checkbox"/>
0125	Bogle Hole	3	Reserve Road	<input checked="" type="checkbox"/>
0131	Burial Ground	93	King Street	<input checked="" type="checkbox"/>
0188	Newcastle Hospital North Wing	1	King Street	<input checked="" type="checkbox"/>
1001	Nobbys Head		Nobbys Road	<input checked="" type="checkbox"/>
1003	Fort Scratchley		Nobbys Road	<input checked="" type="checkbox"/>
1008	Water Reservoir below Signal Hill		Nobbys Road	<input type="checkbox"/>
1009	Plank Pathway to Signal Hill		Wharf Road	<input type="checkbox"/>
1031	Waterhole, Darby Street		Darby Street	<input type="checkbox"/>
1039	Hunter Street Road Bridge		Hunter Street	<input type="checkbox"/>
1048	Wells and Cess Pits		Various streets	<input type="checkbox"/>
1053	Stevenson Place Houses	6 8	Stevenson Place	<input checked="" type="checkbox"/>
1054	Parnell Place Tram Depot		Scott Street	<input type="checkbox"/>
1068	Zaara Street House		Zaara Street	<input checked="" type="checkbox"/>
1076	Royal Newcastle Hospital		Pacific Street	<input type="checkbox"/>
1080	Watt Street Buildings		Watt Street	<input checked="" type="checkbox"/>
1081	Caledonian Hotel	23 25	Watt Street	<input checked="" type="checkbox"/>
1082	Ralph's Family Hotel	31 33	Watt Street	<input checked="" type="checkbox"/>
1084	Early Terrace & Stables		King Street	<input checked="" type="checkbox"/>
1089	Smithy	97 105	Scott Street	<input type="checkbox"/>
1090	Surgeon's Residence Group		Church Street	<input checked="" type="checkbox"/>
1091	Shortland Esplanade Building		Shortland Esplanade	<input checked="" type="checkbox"/>

Historic Themes - Penal Colony, 1801-1822

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1108	Corporation Baths	11 13	Newcomen Street	<input checked="" type="checkbox"/>
1113	Nobbys Head Tunnel		Nobbys Head	<input checked="" type="checkbox"/>
1119	Old Christ Church Cathedral		Church Street	<input checked="" type="checkbox"/>
1120	Christ Church Cemetery		King Street	<input checked="" type="checkbox"/>
1121	Asylum Mine Shaft No.1		Watt Street	<input checked="" type="checkbox"/>
1123	Convict Coal Mine Adit		Shortland Esplanade	<input checked="" type="checkbox"/>
1124	Asylum Mine Shaft No.2		Watt Street	<input checked="" type="checkbox"/>
1127	Vertical Shaft & Tunnel		Church Street	<input checked="" type="checkbox"/>
1195	Large Mill		Ordnance Street	<input checked="" type="checkbox"/>
1198	Watt Street Wharf & Boat Harbour		Wharf Road	<input checked="" type="checkbox"/>
1200	Government Wells	11 13	Newcomen Street	<input checked="" type="checkbox"/>
1207	Foreshore Park Well		Foreshore Park	<input checked="" type="checkbox"/>
1212	Early Cliff-Face Coal Mine		Ocean Cliffs	<input checked="" type="checkbox"/>
1213	Watt Street Mine Shaft		Watt Street	<input checked="" type="checkbox"/>

Historic Themes - Police/Courts/Gaols

ITEM REF NO:	NAME	STREET NO:	STREET NAME	SCHEDULED:
1054	Parnell Place Tram Depot		Scott Street	<input type="checkbox"/>
1074	Water Police Buildings Group		Scott Street	<input checked="" type="checkbox"/>

Historic Themes - Port Development

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0001	Nobbys Head		Nobbys Road	<input checked="" type="checkbox"/>
0002	Macquarie Pier		Nobbys Road	<input checked="" type="checkbox"/>
0007	Boat Harbour	51 55	Wharf Road	<input checked="" type="checkbox"/>

Historic Themes - Railways

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
0006	Foreshore Reserve	51	Wharf Road	<input checked="" type="checkbox"/>
1002	Nobbys Head Railway		Nobbys Road	<input checked="" type="checkbox"/>
1010	Stables & Weighbridge		Wharf Road	<input type="checkbox"/>
1011	Well near Eastern Goods Shed		Foreshore Park	<input type="checkbox"/>
1012	Ralls and Goods Shed		Foreshore Park	<input type="checkbox"/>
1013	Coal Company Offices		Watt Street	<input checked="" type="checkbox"/>
1014	Railway Pit A		Scott Street	<input type="checkbox"/>
1015	Railway Pit B		Scott Street	<input type="checkbox"/>
1017	Government Coal Staithes		Wharf Road	<input type="checkbox"/>
1018	Private Coal Wharves and Railway		Wharf Road	<input type="checkbox"/>
1021	Burwood Coal Company Railway		Burwood Street	<input checked="" type="checkbox"/>
1022	AA Co. Railway Bridges		Hunter Street	<input checked="" type="checkbox"/>
1023	AA Co. Coal Staithes or Shoots		Wharf Road	<input checked="" type="checkbox"/>
1024	AA Co. Colliery Railways		Various streets	<input type="checkbox"/>
1033	Honeysuckle Point Railway Workshops		Lee Wharf Road	<input checked="" type="checkbox"/>
1034	Honeysuckle Point Railway Turntable		Great Northern Railway	<input checked="" type="checkbox"/>
1036	GNR Railway, Causeway and Bridges		Great Northern Railway	<input checked="" type="checkbox"/>
1037	Honeysuckle Point Station		Great Northern Railway	<input checked="" type="checkbox"/>
1040	Mortuary Station & Signal Box	528 534	Hunter Street	<input type="checkbox"/>
1056	Dalgely Wool Store		Wharf Road	<input type="checkbox"/>
1057	D Cohen & Co. Goods Shed & Ralls		Foreshore Park	<input type="checkbox"/>
1058	Earp Gillam Warehouse	16	Telford Street	<input type="checkbox"/>
1071	Stationmaster's House Group	90 92	Scott Street	<input checked="" type="checkbox"/>
1072	Railway Offices		Watt Street	<input checked="" type="checkbox"/>
1075	Newcastle Terminus Railway Station		Scott Street	<input checked="" type="checkbox"/>
1092	Locomotive Turntable		Scott Street	<input checked="" type="checkbox"/>
1094	Stone Crushing Works		Wharf Road	<input type="checkbox"/>
1118	Zaara Street Power Station		Foreshore Park	<input checked="" type="checkbox"/>
1129	Carriage Turntables		Scott Street	<input checked="" type="checkbox"/>
1170	AA Co. Engine Shed	41	Darby Street	<input type="checkbox"/>
1175	AA Co. Dam		Brooks Street	<input checked="" type="checkbox"/>
1217	Railway Carriage Shed		Foreshore Park	<input checked="" type="checkbox"/>
1221	Original Great Northern Railway		Scott Street	<input type="checkbox"/>
1224	Iron Picket Fence, Hunter Street		Hunter Street	<input checked="" type="checkbox"/>
1225	AA Co. Stone Crushing Works		Wharf Road	<input type="checkbox"/>
1227	Honeysuckle Rail Wharf		Lee Wharf Road	<input type="checkbox"/>
1231	Rail Tracks to Lee Wharf		Lee Wharf Road	<input type="checkbox"/>

Historic Themes - Religion

ITEM REF NO:	NAME	STREET NO:	STREET NAME	SCHEDULED:
0056	Buchanan Terraces	10 30	Church Street	<input checked="" type="checkbox"/>
0060	Parsonage	15	Church Street	<input checked="" type="checkbox"/>
0086	Wesleyan School	47 49	Newcomen Street	<input checked="" type="checkbox"/>
0087	Wesleyan Church		Newcomen Street	<input checked="" type="checkbox"/>
0122	Christ Church Cathedral	52	Church Street	<input checked="" type="checkbox"/>
0129	Retaining Wall and Steps	43	Wolfe Street	<input checked="" type="checkbox"/>
0131	Burial Ground	93	King Street	<input checked="" type="checkbox"/>
0146	School and Church	192 196	Hunter Street	<input checked="" type="checkbox"/>
0147	Catholic Parsonage	200 212	Hunter Street	<input checked="" type="checkbox"/>
0148	Wesleyan School and Manse	220	Hunter Street	<input checked="" type="checkbox"/>
0190	Former Burial Ground		Hunter Street	<input checked="" type="checkbox"/>
1038	Former Cemeteries	684 730	Hunter Street	<input checked="" type="checkbox"/>
1040	Mortuary Station & Signal Box	528 534	Hunter Street	<input type="checkbox"/>
1100	Presbyterian Church and Graveyard	173 175	Scott Street	<input type="checkbox"/>
1101	Roman Catholic School and Church		Wolfe Street	<input type="checkbox"/>
1102	Wesleyan School		Scott Street	<input checked="" type="checkbox"/>
1119	Old Christ Church Cathedral		Church Street	<input checked="" type="checkbox"/>
1120	Christ Church Cemetery		King Street	<input checked="" type="checkbox"/>
1161	Christ Church Pro-Cathedral		Church Street	<input type="checkbox"/>
1162	Deanery		Church Street	<input checked="" type="checkbox"/>
1196	Presbyterian Church and School		Watt Street	<input type="checkbox"/>

Historic Themes - Salt Making

ITEM REF NO: NAME

STREET NO: STREET NAME:

SCHEDULED:

0004 Salt Works

9 Shortland Esplanade



Historic Themes - Tramways

ITEM REF NO:	NAME:	STREET NO:	STREET NAME:	SCHEDULED:
1033	Honeysuckle Point Railway Workshops		Lee Wharf Road	<input checked="" type="checkbox"/>
1041	Tram Tracks		Various streets	<input type="checkbox"/>
1054	Parnell Place Tram Depot		Scott Street	<input type="checkbox"/>
1055	Engine House		Scott Street	<input checked="" type="checkbox"/>
1115	Steam Tram Shed and Turntable	336 338	Hunter Street	<input checked="" type="checkbox"/>
1116	Tramway Substation	340 342	Hunter Street	<input type="checkbox"/>
1118	Zaara Street Power Station		Foreshore Park	<input checked="" type="checkbox"/>
1224	Iron Picket Fence, Hunter Street		Hunter Street	<input checked="" type="checkbox"/>

Historic Themes - Shipbuilding

ITEM REF NO: NAME:

STREET NO: STREET NAME:

SCHEDULED:

#Error



Text for Public Brochure

Archaeology may be compared to tracking - it is like telling a story with very, very little evidence.

What is Archaeology?

Archaeology is a discipline which seeks to explain the past by studying physical evidence. Many aspects of past societies, environments, cultures and places are studied using excavated evidence, objects and other material culture. Historical archaeology is a more recent branch of the discipline, which deals specifically with the archaeology of those eras which have written records in addition to surviving archaeological evidence. Historical and archaeological evidence, when used together, enables a more complete picture of the past to be revealed. Historical archaeology not only deals with buried evidence but considers sites and objects of all kinds, including buildings, structures, ruins, objects of everyday use, tools, equipment and machinery, as well as maritime sites such as shipwrecks. The study of the age, type, origin, construction and location of these items can contribute new information about past changes and the evolution of our present society and environment. In Australia, Historical Archaeology is largely concerned with the study of our history since the occupation of the country as a place of European settlement in 1788.

What is Archaeological Evidence?

Archaeological features are any physical evidence of past human activity, and may include buildings, works, relics, structures, foundations, deposits, cultural landscapes and shipwrecks. An "Archaeological Relic" is specifically defined under the NSW Heritage Act 1977 as "any deposit, object or material evidence relating to non-Aboriginal settlement which is more than 50 years old". All of the archaeological features of a defined area may be referred to as its "archaeological resource", which in this case is the Newcastle city centre.

What is the Purpose of the Archaeological Management Plan?

The Newcastle Archaeological Management Plan was completed in 1997. Its objectives were to provide a clear indication of the nature and extent of historical archaeological sites in central Newcastle, and then to formulate a management strategy that ensures the city's archaeological resource is recognised and integrated into the urban planning framework, particularly where redevelopment of a site is proposed. Some of the sites are known to exist due to past archaeological excavations or being otherwise visible, however many are rather identified as potential sites, where the survival of some archaeological evidence is considered highly likely. The intention of this study is not to promote the preservation of archaeological sites at all costs, nor to establish legislative controls that place an undue financial burden on developers to research archaeological sites. Such actions would hinder the continued development of the CBD, and are inconsistent with current heritage planning practices. Rather, its aim was to identify significant archaeological sites, and then make recommendations for their ongoing management and conservation.

What is important about Newcastle's Archaeological Resource?

Initial fieldwork indicated that about 75-80% of the allotments in the city centre have the potential to retain an archaeological resource from earlier developments. This is much greater than indicated by a similar analysis of Sydney (5-10%) or Melbourne (20-25%). Within this resource, a great number of sites are related to the original settlement of Newcastle as a penal colony, and its later development as a government town. While other Australian cities including Sydney, Hobart, Brisbane and Port Macquarie also had their origins as convict settlements, they are considered unlikely to achieve the level of archaeological survival or the extent and significance of resource predicted for Newcastle. The archaeological resource forms a finite and irreplaceable part of the heritage of the city, and is of considerable significance not only locally but at the State and National level.

Research Design Background Paper

1. Overseas Precedents And Approaches

The concept of research design, which essentially involves the application of models, theories and hypotheses to the collection and interpretation of archaeological data, was principally developed by overseas archaeologists, especially those working upon urban sites in America. The need for adequate research design is now generally accepted amongst archaeologists in America, the United Kingdom and Australia, however there exists considerable variation in approaching the task.

A reasonable amount of archaeological literature exists which discusses the pros and cons of the analytical approaches developed during and after the emergence of the American "New Archaeology" during the 1960s. A number of articles or papers which discuss the merits of applying these approaches to the Australian context, and the need for adequate research designs, also exist. It is not proposed to deal with these aspects in any great detail in this report, although some relevant background is provided below. Those interested in this specific topic should consult the material listed in the footnotes for further information.

In considering possible future directions for the urban archaeology of Newcastle it is useful to briefly summarise some of the previous frameworks which have been developed for the integration and synthesis of archaeological information in comparable urban environments. American precedents are dominant and provide some indications of possible research avenues. Despite some important individual contributions and suggestions, as yet no archaeological management plans in the Australian context and no single cities or other urban centres have yet developed an overall unified archaeological research design, or other explanatory framework, which might be used to integrate the results between separate archaeological investigations. Other archaeological management plans are also briefly examined in subsequent sections of the text.

1.1 Levels Of Investigation

In recent years there has been considerable discussion by historical archaeologists about the merits of different levels of investigation in urban environments. These levels are linked to the issue of scale and may be categorised as Household, Neighbourhood and City-wide.

Household

The household level of investigation essentially equates with that of the single separate site or allotment. This remains by far the most common level of urban archaeological project with the history and archaeology of individual land allotments (sites) being examined as they come up for redevelopment. In order for the household level approach to work it is necessary to have detailed historical information about the identity of the occupants (number & type eg. single individual or family; male/female, ethnic identity, cultural and religious affiliations, etc.); the nature and duration of their occupation of the site, and to have well-preserved, stratified archaeological deposits which may be linked to the known occupants and phases in order to test the 'fit' of the two data sets (history and archaeology).

Note that while this model typically relates to an actual "domestic" household, it can also relate to any small and contained site within which a defined occupation occurred, such as an office, store or workshop.

Whilst this may be a valid comment in attempting to adapt the model to areas subject to massive redevelopment, such as the City of Sydney (which has undergone massive transformation and modification since WW II resulting in a low survival rate for archaeological resources), many other early townships and regional capitals which have not undergone as much redevelopment pressure can be expected to have a much higher survival rate. This is certainly the case for Newcastle, where the field survey identified a 'survival rate' estimated at about 80% of the total land area. In this circumstance, once this predicted high survival has been tested through archaeological excavations, a coherent, agreed and overall "sampling strategy" based on greater consultation and additional documentary research, could potentially be developed for the city as a longer term management tool.

1.2 Analytical Models and Frameworks

The Core-Periphery Model

In the Core/Periphery type of model an economic, political and social central core (ie. the town/city or the CBD) will contain sites and localities which are typically wealthier and more developed than those that are further from the centre (ie. on the periphery, or edge / frontier). In theory, the centre or core will also be subject to more intense activity with a greater density of population and a concentration of particular and specialised land uses including political and economic functions such as government, financial and large-scale commercial uses ⁶.

It is also likely that the city/core will also have greater access through trade networks to imported manufactured goods, etc. This type of differentiation should be apparent in different material culture evidence such as artefact assemblages, where it may be expected that those from core areas will have a greater density and variety. It has also been argued that the dominant or elite groups of the society will occupy the (better developed and serviced) central core, while the marginalised groups will be relegated to the less developed periphery or semi-periphery areas. As any city expands the relationship and the actual physical distance between the core and the periphery will alter through time. This fact may be particularly relevant to the observation of patterns within urban archaeological sites which themselves will be sensitive to space and time parameters.

Concentric Zone Model

For New York City in the nineteenth and twentieth centuries it has been suggested that a Core/Periphery type of model could be applied to the city during its pre-industrial phase in the eighteenth century, but that for later periods a different model might be used, namely that developed by Burgess for the explanation of the layout of the city of Chicago in the early twentieth century which is considered to characterise an industrial city. ⁷

The Burgess 'Concentric Zone' model involves a series of concentric circles which represent an innermost business district; a surrounding zone of light manufacturing and slum housing; a working class residential area; a middle class residential area; and on the outer edge an elite residential area. The residents of the two outermost areas must commute to work in the core.

⁶The use of a Core/Periphery model as an analytical device in urban archaeology derives from the work of geographers, economists and historians. The model may be applied at various levels from that of the world-wide system down to that of a single city-system. The pioneering work on the application of a Core-Periphery model to an urban archaeological context was undertaken for the city of Alexandria, Virginia (USA) in the late 1970s and early 1980s. See:

P J Cressey, J F Stephens, S J Shephard, B H Magid,

"The Core-Periphery Relationship and the Archaeological Record in Alexandria, Virginia" pp 144 - 173, in R.S. Dickens Jr. (Ed.) *The Archaeology of Urban America: The Search for Pattern and Process*, Academic Press, 1982

P J Cressey, and J F Stephens,

"The City Site Approach to Urban Archaeology" pp 41 - 61, in R.S. Dickens Jr. (Ed.) *The Archaeology of Urban America: The Search for Pattern and Process*, Academic Press, 1982

For comment on the applicability of the model to Australian circumstances, see:

Birmingham, *op. cit.*, 1988, p 161; Bairstow, *op. cit.*, 1991, p 53; also see J Broadbent "The Push East: Woolloomooloo Hill, the first suburb", pp 12 - 29 in M Kelly (Ed.), *Sydney City of Suburbs*, UNSW Press, 1987.

⁷ D D Wall,

"Settlement System Analysis in Historical Archaeology: An Example from New York City", pp 65 - 74 in E. Staski (Ed.), *Living In Cities: Current Research in Urban Archaeology*, Society for Historical Archaeology (USA), 1987.

Work by Burgess is also discussed in:

E Staski "Advances in Urban Archaeology" pp 97 - 149 in M B Schiffer (Ed.) *Advances in Archaeological Method and Theory, Volume 5*, Academic Press, 1982.

and the types of material culture owned by households. (Thus the consumer-choice framework is also strongly linked to the 'household' level of enquiry discussed earlier).

The main application of the 'consumer-choice' framework lies in explaining why the goods of differing quality or price (which then appear in archaeological sites) were selected for acquisition by different cultural sub-groups in a market economy.

Advocates of 'consumer-choice' point out that "Over the eighteenth and nineteenth centuries the critical transformation was made from a mercantilistic to a capitalistic market economy, with the accompanying development of a social stratification system corresponding to capitalist relations of production".¹⁴

Generalizations and observations about the broad scale changes which occurred in the nineteenth century and the consequent implications for archaeological work have also been made by many others, including Sydney-based historians and historical archaeologists.¹⁵

Other Frameworks

Use of the "city as a system" concept easily allows for consideration of the historic evolution of particular city uses and the variation in land-use categories within any city which are caused through the interplay of physical and social characteristics. Physical characteristics comprise actual land uses and the material results of those uses (or in archaeological terms, 'occupations'). Social characteristics include demographics, and less quantifiable factors such as cultural attitudes and behaviour (sometimes referred to as the 'mind-set').

Physical characteristics will include factors such as environment and topography (including location of resources); the existence or development of transport routes; development and introduction of new technologies and urban infrastructure. Social factors will encompass demographic issues such as gender or ethnicity; status (both social and economic); and administrative issues such as municipal awareness; and the land-use planning and controls developed in evolving urban centres.

The work of urban geographers is able to provide information about some of the broader patterns of city development, and sequential historic development patterns can also be determined. All of this type of information may feed into, and assist the interpretation of archaeological evidence.

1.2 The Sydney Context And Other Urban Centres

An early attempt at focussing attention on the advantages of individual archaeological contract projects being coordinated by an overall set of research objectives occurred in a seminar organised to consider the first seasons of 'salvage' excavations which had been completed on the First Government House Site in Bridge Street, Sydney. Published proceedings of the seminar included a paper on "Research Design in Urban Salvage Excavations" which may be considered quite innovative for its time.¹⁶ This paper produced a broad checklist of historic themes and categories of archaeological evidence which might contribute evidence to these themes. The actual theoretical position of the paper remains fairly broad, essentially seeming to comprise the framework of 'continuity versus change' in any patterns which might be observed in the archaeological record.

¹⁴ Ibid., p 1-2.

¹⁵ See for example:

Baird *op. cit.*, 1989, p 3-4; and *op. cit.*, 1991, p 56 - 57; Birmingham, *op. cit.*, 1988, p 161; G Karskens and W Thorp,

"History and Archaeology in Sydney: Towards Integration and Interpretation" *Journal of the Royal Australian Historical Society*, Vol 78 Pt 3 & 4, pp 52 - 75, 1992.

¹⁶ H Temple and S Sullivan (Eds.),

First Government House Site, Sydney: Its significance and its future, Dept of Environment and Planning, Sydney, 1985. Paper within volume by Judy Birmingham, "Research Design in Urban Salvage Excavations" pp 39 - 45.

The management plan for Melbourne essentially followed the same level of investigation as that for the Pymont/Ultimo plan and the Sydney visual assessment survey (1992). It concentrates on the identification of probable resource survival but does not specifically deal with issues of research potential or individual site/allotment significance.

The more recent group of management plans or specific-area studies, (undertaken during the same time period the Newcastle Archaeological Management Plan) includes a management plan for Port Macquarie (1994) and a revised 'excavation master strategy' for the urban neighbourhood of Millers Point in Sydney (1994).¹⁹ Archaeological management plans have also been prepared for the early satellite townships of Richmond and Liverpool, both now part of the greater Sydney area. (These were not available at the time of writing this overview.)

The Port Macquarie Plan does not specifically include "Research Design" as a topic or subject heading. The potential research value of archaeological sites is, however, implied throughout the discussion of Significance and various 'research themes' are suggested and discussed in Section 4.5 of the management volume. These are:

- the penal settlement;
- the early 19th century development of the town;
- the late 19th or early 20th century development of the town;
- the nature of convict labour & public works by convicts;
- government administration or improvement of maritime trade & communications;
- the nature & importance of maritime trade;
- the religious beliefs and burial practices;
- nature & importance of mineral extraction & other industries in the region.

A recent report providing an 'excavation master strategy' for Millers Point has synthesised the research questions postulated for a number of separate archaeological sites in Sydney over recent years into a single list of research themes considered "directly relevant to social and urban history". The author also adds her own supplementary topics to the list drawn from other reports.²⁰ These themes may be summarised as follows (in-text references deleted):

- the impact of the industrial revolution: the change during the 19th century from an integrated, pre-industrial, small scale city to a segregated, class-based male dominated industrial city
- gender: the role of women in culture and society, both middle and working class
- standards of living: rise or fall in the inner city in the late 19th century
- the nature of the community, of the "neighbourhood"
- the working man's paradise
- the growth of Victorian Sydney (urbanisation)
- the rise of a distinct working-class culture, in defiance of middle-class behaviour
- impact of the middle-class temperance movement on the inner-city working class
- home and work, integrated and segregated
- attitudes to health and hygiene, public and private
- ethnicity
- Victorian morality and children

Two other themes are then added specifically for the Millers Point study area.²¹

This type of synthesis correlates the various research questions suggested for a range of urban sites, however at present the list remains more of a theoretical and philosophical statement rather than an actually applied and working management tool.

¹⁹ D Bairstow, *Millers Point Site 8900 Historical Archaeology Excavation Master Strategy*, report prepared for the Department of Housing, June, 1994.

²⁰ The reports or papers drawn upon for the synthesis were:

G Karskens and W Thorp, *op. cit.*, 1992

Godden Mackay Pty Ltd and G Karskens,

The Cumberland Street / Gloucester Street Archaeological Investigation: Archaeological Assessment and Research Design, report to Sydney Cove Authority, 1994.

²¹ D Bairstow, *Millers Point Site 8900 Historical Archaeology Excavation Master Strategy*, report prepared for the Department of Housing, June, 1994, p 11 - 12.