Newcastle City Council

Newcastle
City Wide
Heritage Study
1996-97

Volume 1: Study Report and Recommendations

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Foreword

In this Newcastle's bicentenary year, it is an appropriate time to take stock of our city's rich heritage. Newcastle is after all one of the earliest European settlements in Australia - how many other bicentennial celebrations have been held in this country. It is also one of the largest cities in Australia - larger than some of the state capitals.

But unlike the capital cities it has seen relatively little redevelopment in the post war years, and so retains a wealth of historic buildings as well as it's general historic character - commodities that the capital cities are now trying desperately to preserve their remaining modest quantities. Indeed Newcastle's heritage resource demonstrates in some way every historic theme in the development of Australia - from convicts to communications, farming to factories.

Newcastle is at a crucial point in it's history, with the balance tipping from an industrial economy to a services economy, and the pressure for large scale redevelopment mounting. While Newcastle may always have been on the back burner as far as the Sydney bureaucrats were concerned, it is now stated government policy that population and services should be encouraged to shift from overcrowded Sydney into Newcastle and other areas. Without appropriate guidelines in place, that rich heritage resource is likely to disappear rapidly under such pressure.

The main purpose of this study is to try and provide such guidelines. It does perhaps take a much broader look at what is heritage than we have in the past, but at the same time tries to break down the hierarchy of an isolated heritage planning system.

It proposes that heritage conservation and the retention of historic character should be integrated into the urban design process for any development. This approach is consistent with the new Urban Strategy currently being considered by Council, and supports the "Clean & Green" theme promoted by Council.

At the end of the day however, the implementation of this study rests with Council and the community. The study sets out the case for conservation of Newcastle's heritage, and the challenges and potential it provides for the ongoing development of the city.

SUTERS ARCHITECTS

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Acknowledgments

The Completion of a study of this type involves a great commitment from many people. We would like to express our gratitude to those people who have been involved in the study process, and who have provided valuable input to the direction and content of the study.

In particular we would like to thank Rachel Kelly and Jennifer Groman at Newcastle City Council, for their enthusiasm and commitment to the project, as well as the other Council and Heritage Office staff who have assisted.

We would also like to thank the librarians at the Local History Section of Newcastle Regional Library for their invaluable assistance in accessing historic documents, as well as members of the local history society and other groups and individuals who have assisted with historic research.

And in conclusion, we thank all members of the Newcastle community who, on a voluntary basis, provided input to the study either by supplying information on individual items or by allowing members of the team access to items of interest. Without such local knowledge and assistance our task would have been made immeasurably more difficult.

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Appendix. Public Workshops Summary

1. Introduction

1.1 Background

This study was commissioned by Newcastle City Council in April 1995. It has been funded jointly through a grant under the Heritage Assistance Program administered by the NSW Heritage Office, and Newcastle City Council.

The Study team for the project comprised:

- Suters Architects Principle Consultant
- Dr John Turner Historic Overview
- Meredith Walker Heritage Planner
- Gardner Browne Town Planner
- Damaris Bairstow Archaeological Assessment
- Geoffrey Britton Landscape Assessment

1.1.1 Report Format and Use

This final version of the report is the culmination of several drafts. The report content and format is based on the various relevant guidelines as issued by the NSW Heritage Office and the articles of the Burra Charter.

It has also been prepared with acknowledgment of the needs of the final day-to-day users. These include Councillors and Council staff, consultants in the heritage and construction fields, heritage groups, individuals who own or control heritage items, as well as those members of the broader community with an interest in their city's heritage.

The report should not be seen as a static or final document in the process of heritage conservation within the City. In particular, the need is identified for continuing review of the inventory items.

1.1.2 Terminology

Throughout this study the conservation terminology used is consistent with that of the Burra Charter. This includes definitions for such terms as *preservation*, *restoration* and *reconstruction*.

The term 'item of environmental heritage' is used frequently in this report. It is defined in the NSW Heritage Act 1977 as "...those buildings, works, relics or places of historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance". The term 'relic' is further defined as "...any deposit, object or material evidence...which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and...which is 50 or more years old". An item is therefore not specifically a building, and Inventory items are noted as to their type in this regard.

1.2 The Study Brief

1.2.1 Study Objectives

The Objectives of the study are:

- a. to identify and analyse the environmental heritage of the Local Government Area; and
- b. to make practical recommendations for its conservation and management.

The Study Area included the whole of the Newcastle Council Local Government Area, but was to predominantly concentrate on the middle to outer ring suburbs not previously studied.

The study covers only European settlement of the area. Issues related to aboriginal or natural heritage are not addressed, though some natural features have been identified in the inventory.

1.2.2 Study Approach

The study approach has involved the following phases:

- Preparation of an historic overview of the city, including the defining of relevant historic themes and identification of possible heritage items related to these themes.
- Community consultation, to review the historic overview, identify places of significance to the community, and discuss community perceptions of heritage and concerns about conservation within the city.
- 3. Compilation of a preliminary inventory list by review of the thematic history, the results of the community consultation process, and various established heritage registers.
- 4. Field survey, historic research and analysis of the preliminary inventory to identify the relative significance of each item, and of any others identified during the field survey.
- 5. Making a statement of significance for the heritage resource of the city as a whole.
- 6. Review of the existing heritage planning framework, threats and opportunities.
- 7. Preparing a Conservation Policy for conservation of the heritage resource.
- 8. Formulating recommendations for amendments to the heritage planning framework and other initiative to implement the conservation policy.

2. Thematic History

2.1 Introduction

The Hunter Valley is a vast catchment area, collecting rain water in immense quantities and channelling it back to the ocean. Presently, the mouth of the Hunter River is the Port of Newcastle but it was not always so. As B. Nashar explains in *The Geology of the Hunter Valley*, before the end of the last ice age,

when the shore line stood about 270 feet lower than it does now, the mouth of the Hunter River oscillated from time to time over a wide area lying between Nobby's and Morna Point and coarse shingle was spread over this plain between these two localities.

Later there was a submergence of the coastal area in which Lake Macquarie, Port Stephens, Brisbane Water, Broken Bay and Port Jackson shared. This allowed the waters of the ocean far up the old land valley ... The spot on which the city of Newcastle now stands was an island. The sea cut it off from the high cliffs near Merewether in a narrow strait which ran between Merewether and Shepherd's Hill. Likewise, Nobby's and Shepherd's Hill were islands.

Subsequent silting by the river and the emergence of the land to the extent of about fifteen feet, enabled the Hunter to push its delta out to the present position along the Newcastle Bight, while Shepherd's Hill became joined to Merewether by the alluvial plains which extend from Merewether Beach inland to Broadmeadow, Hamilton and Waratah.

In this fashion the site of Newcastle was created in the delta of the Hunter, with a sandy peninsular to the north, a huge swamp to the north-west, hilly forests in the west with sandy plains and more forest country to the south. Outcropping on the coast were rich coal seams, destined to be the *raison d'etre* of the city.

To sum up, the area around the mouth of the Hunter River was useless for agriculture, but coal rich and entirely suitable for urban development.

2.1.2 The Establishment of Newcastle

At Newcastle, where sea meets shore, the rich coal seams of the Hunter region displayed themselves in a range of cliffs, showcases to early European explorers. This spectacular display impressed the newcomers, and between 1791 and 1801 escaping convicts, pursuing naval officers, off-course fishermen and official explorers all commented on the mineral wealth of Newcastle. Not so obvious, but clearly evident to members of the first official exploring expedition in June 1801, were some of the other resources of the hinterland and the region's manufacturing potential. Thus Colonel William Paterson, the leader of the party, reported to Governor King:

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 remarkable fine soil.

Impressed by Paterson's report, the Governor decided that a settlement should be formed immediately at the mouth of the Hunter River and the exploitation of its coal and cedar began at once. The camp at the Coal River, as it was called, was closed six months later but reestablished in 1804 when the names, Northumberland for the county, and Newcastle for its capital, were adopted. Over the next two decades, while coal, lime, timber and salt were inefficiently extracted from the region by gangs of convicts, the vast agricultural potential of the well-watered, fertile Hunter Valley was revealed.

2.2 Newcastle's Four Quarters

Beginning in 1801 the abundant resources revealed to those early explorers were tapped in four roughly equal but clearly marked stages. Until the coming of railways in the 1850s exploitation was hampered by inefficient land transport, but in the era of the steam locomotive the Newcastle coalfield became the powerhouse of the Australian colonies and there were encouraging developments in smelting and manufacturing. Despite these, there were signs of decline in the city by the turn of the century as its ageing collieries began to close and its principal copper smelter ceased to operate. However, the year 1915 marked the end of one era and the beginning of another as the First World War disrupted the export of coal and the opening of the B.H.P. steelworks transformed Newcastle into Australia's industrial capital. This third stage of development was marred by the Great Depression, but it culminated in a remarkable flurry of industrial activity as the region diversified to meet the needs of a nation at war once more.

As the world adjusted to a life of peace, Novocastrians anticipated a return to dependence on heavy industry, hopefully free of depression and without so much reliance on one industry. To avoid this, the city planned a great expansion of its industrial district but the Kooragang project did not live up to expectations and since 1983 the steelworks and it subsidiaries have been replacing labour with advanced technology and Newcastle has been forced into other economic activities, particularly the service industries. Each of these periods left its distinctive mark on the heritage of the region.

2.2.1 The First Quarter - Convictism And Coal

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. 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 purposes - 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.

2.2.1.1 The Government Buildings

Begun in haste, the settlement was laid out in an irregular fashion around the axis of George Street (later Watt Street) which led from the wharf to the commandant's house overlooking the settlement. 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 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. (Map 4)

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 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.

2.2.1.2 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. 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. None of these buildings has survived.

2.2.1.3 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.

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. 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. (Map 5)

The official vision of Newcastle as the major town and port of the developing Hunter Valley was ill-conceived 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, retaining up to a hundred convicts 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 1840s.

2.2.1.4 Australian Agricultural Company Stimulates Coalmining

It was the development of steam navigation which began to carry Newcastle out of the doldrums in the 1830s. Firstly the A.A. Company (capital £1,000,000) which had been chartered by the British Parliament in 1824, entered the coal industry with the 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 2,000 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 A.A. 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. 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.

2.2.1.5 The State of the Town to 1846

The A.A. 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 1850s. 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, courthouse, 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.

2.2.2 The Second Quarter - The Railways and Coal

In the mid-1850s Newcastle was still a tiny place, a mere village, the home of about 1,500 people of whom some one fifth were coal miners. As such, it had few attractions for visitors and, as one naval officer remarked as he steamed away in H.M.S. *Torch*, he was pleased to be leaving "those shores of sand and coal dust". However, the steam railway age was at hand.

The first stage of the Great Northern Railway, between Newcastle and East Maitland, was begun in 1854 and opened by Governor Sir William Denison on 30 March 1857. That afternoon at the terminus at East Maitland 1,500 people gathered to try to take advantage of the free rides on the new train and to see His Excellency set off for Honeysuckle Point station at Newcastle. Their interest and excitement was an indication of the importance of the occasion, arguably the most important day in the history of Newcastle. As the railway was gradually extended through the Hunter Valley and into northern New South Wales, taking 25 years to reach Tamworth, Newcastle served as the port of an expanding region. Simultaneously, private railways facilitated the transport of coal to the port, permitting the opening of new mines at Minmi, Wallsend, Lambton and Waratah within a decade, thereby laying the foundations of Newcastle's key role in the Australian economy.

The significant improvement the railways made in land transport would have been of little use if there had not been a parallel programme of port improvements. The railway came more

suddenly, as an "iron horse" should, and the fanfare was louder but the less spectacular improvement of harbour facilities was just as important.

2.2.2.1 The Port Develops

The prime concern of the newly formed Newcastle Chamber of Commerce in 1856 was to press for harbour improvements. Demanding local control of the port, the Chamber described the only public wharf as "a crumbling and shelving heap of stones" and predicted that "the Port will soon have no wharfage accommodation whatsoever..." A steam tug, a properly constructed lighthouse, an increase in the number of pilots and the dredging of the shipping channels were all pressing needs and it was clear that a long term plan was required if Newcastle was to make the most of its coal. Fortunately, the New South Wales Government was already moving in that direction.

A blueprint for the development of the Port of Newcastle was in preparation by Captain E.O. Moriarty, the Engineer-in-Chief for Harbours and Rivers, who spoke of "a great scheme for the permanent improvement of the harbour by the erection of a pier" across Bullock Island (now Carrington) to provide much needed additional coal loading facilities. It involved the construction of a long dyke on a tidal sand tract of some 1,600 acres to the east of Bullock Island. Initially to be formed of ballast stone, it was eventually widened, faced with a line of wharves and equipped with coal loading appliances. Dredging would create a shipping basin to the south and the facility was later linked to the Great Northern Railway to the north. (Map 16).

The execution of this far-sighted plan, which required the eventual removal of all coal loading from the southern side of the estuary, began in 1862 and was more or less complete in 1878 when a new system of coal loading came into operation. Designed by Sir William Armstrong, the British pioneer of hydraulic engineering, and built at his Newcastle-on-Tyne Engine Works, the cranes could lift 15 tons of coal with ease. Linked by water pipes to a powerhouse in Carrington, these appliances were the wonder of the age and 'the chief glory of Newcastle':

Additional cranes, more boilers and a new engine, larger cranes capable of 'hoisting the foremast of a ship just as if it were a walking stick', gas lights to allow night loading, extensions to the dyke, improvements to the rail network and a northern harbour breakwater were gradually added under Moriarty's direction. By his retirement in 1888 Newcastle had been equipped to handle a vast coal trade and his contribution to the development of its port has never been surpassed.

As the railway network developed, the Newcastle coalfield expanded both geographically and in terms of output. In 1850 the Australian Agricultural Company was the only large producer and total Newcastle output did not exceed 54,000 tons: by 1914 the 76 mines shipping through the Port of Newcastle produced over seven million tons. About two thirds of this was consumed in the Australian colonies and the remainder was exported, mainly to Asian ports and to North and South America.

In the second half of the last century the coal industry had more than fulfilled the hopes of Novocastrians, but the potential of their district for manufacturing was still unrealised. In the 1840s, as the Australian colonies underwent their first severe depression, the manufacture of preserved meats, pottery and woollen textiles had flourished in Newcastle. The return of prosperity after the discovery of payable gold in New South Wales and Victoria in the following decade created labour shortages and an inflation which combined to destroy most of these early factories. Nevertheless, from the 1860s local manufacturers, especially those who were processing the produce of the Hunter Valley, began to recover.

The most famous of these was William Arnott, the biscuit manufacturer. In 1865 he started a small bakery in Newcastle, and within a few years was able to construct a large two-storey biscuit factory employing the most modern steam machinery where he made a wide variety of plain and sweet biscuits including ship's biscuits which sold for twopence a pound.

2.2.2.2 Towns in the Hinterland

With these improvements in transportation came the villages that would eventually become suburbs to the city. In the 1830s Cooks Hill and Stockton had their beginnings and in the next decade Merewether and Wickham began to take shape. Waratah and Carrington followed in the 1850s and then came Wallsend and Lambton, New Lambton and Adamstown. With the exception of Stockton, Wickham and Carrington all these towns were closely connected with the development of the coal industry and since its produce was shipped through the Port of Newcastle, the fortunes of the city and the towns were interlocked from the beginning. The three that did not depend mainly on coal were based on industries which also utilised the port and so they, too, had close ties with Newcastle. Thus, in that sense it is erroneous to consider these places as independent towns and yet, for most of the second half of the last century many of them did enjoy separate status. However, powerful forces were at work threatening the independence of the towns. The colliery railways had brought them close to the hub of the city and the opening of the Newcastle to Plattsburg-Wallsend tramway in 1887 was another decisive step towards unification.

2.2.2.3 Local Government Makes its Debut

While economic forces tended to unify the city and the towns in its hinterland, the development of local government was strengthening parochialism. Inner Newcastle (from the coast to the Bank Corner) accepted the need for local government in 1859 but no further councils were formed until the 1870s when Hamilton, Lambton, Waratah, Wickham, Wallsend and Plattsburg followed suit. In the next decade Adamstown, Merewether, Carrington, Stockton and New Lambton were incorporated to create an excess of small, inefficient town councils in the area: most began with a council and a part-time Town Clerk as the sole staff. By 1900 these municipalities were locally governing the lives of 50,000 people and industry promised to attract many more to the coalopolis at the mouth of the Hunter River.

2.2.3 The Third Quarter - Steel Takes up the Running

In the first decade of the twentieth century, as the South Maitland coalfield boomed and the inner Newcastle collieries continued to close, it appeared that the city might have to rely on its port function but the Broken Hill Proprietary Company transformed the local economy by opening a steelworks at Port Waratah. Famous as a silver-lead producer, the B.H.P. moved into the new industry on the recommendation of the American consulting engineer, David Baker, who predicted

that ... you can assemble at Newcastle the iron ore, coke and limestone for pig iron production at a lower cost per unit of iron produced than is possible for the United States Steel Corporation, the largest and cheapest producer in its country.

2.2.3.1 The Steelworks in Operation

Opened in the middle of the Great War, the steelworks was profitable from the beginning, and the plant expanded more rapidly than the company had planned. Simultaneously, the New South Wales Government opened a State Dockyard on Walsh Island, only a stone's throw from the steelworks. By 1919 these two plants had a combined labour force of 7,300. Such economic expansion created the impression that jobs were plentiful in Newcastle and migrants from other parts of Australia and overseas flooded into the Hunter, creating a housing shortage and forcing up rents. This led in turn to new subdivisions and to more intensive development of older residential areas in the 1920s.

The end of the war caused a severe contraction in the demand for steel and, as coal exports did not recover, the 1920s were marred by periods of recession. There were signs, however, that the steel industry would eventually recover. Essington Lewis, an outstanding industrialist, now at the head of B.H.P., embarked on a programme of diversification and cost cutting.

Encouraging overseas firms, mainly from Britain, to establish steel processing plants on the fringe of the steel works, Lewis gradually expanded the demand for its produce. Thus, in the 1920s and 1930s, Newcastle acquired the works of the Titan Manufacturing Company, the Australian Wire Rope Works Company, Bullivants Australian Company, the Commonwealth

Steel Company, Ryland Brothers, Lysaght Brothers and Stewart and Lloyds. At the same time he sought to control the cost of raw materials and shipping by buying collieries and ships so that, by the 1930s, his company began to fulfil David Baker's forecast of 1912 by producing some of the world's cheapest steel.

2.2.3.2 Rapid Population Growth and the Great Depression

Stimulated by the steel industry, the population of Newcastle (excluding Lake Macquarie Shire) grew from 54,000 in 1911 to 84,000 in 1921 and 104,000 in 1933. With such significant industrial and demographic development, the C.B.D. responded with new commercial buildings, particularly hotels and stores, and Newcastle City Council constructed a town hall and Civic Theatre worthy of the State's second city in 1929.

The general optimism of the 1920s was dispelled by the Great Depression which brought the construction industry to a halt and severely affected the steelworks and its dependent plants. With high unemployment, estimated at 30% of the workforce, hundreds of people moved into shanty towns at Nobbys Beach, Stockton, Carrington, Adamstown, Lambton, Waratah and Hexham. Partly because of the depression the State Dockyard closed in 1933 but the steelworks gradually increased its production, leading the city out of the slump as the decade progressed.

2.2.3.3 A Greater Newcastle

In 1938 the eleven municipalities of Newcastle finally united to form the City of Greater Newcastle, thereby ending many decades of friction between the councils and permitting, for the first time, a city-wide approach to problem solving. From that point united action on regional issues, e.g. the site of the city's airport, was possible and the councils could no longer compete against each other in policy making or rate fixing. Achieved by Act of Parliament and finally forced on the constituents by the State Government, the amalgamation was an important landmark in Newcastle's development.

2.2.3.4 World War II Stimulates the City

World War II had a profound effect on Newcastle which became a key industrial area of great strategic importance. Anticipating the outbreak of hostilities in the Pacific, Essington Lewis began to prepare B.H.P. for its wartime role after his 1934 overseas tour. Facilities for the production of munitions were installed at the steelworks and the company's metallurgists had to cope with the new technologies involved in the manufacture of special alloys not previously made in Australia. Magnesium, which was vital for aircraft production, was made for the first time, and tungsten carbide, an essential cutting and shaping agent in precision engineering, began to flow from a pilot plant at the steelworks in late 1941. In fact, Newcastle steel was used in the manufacture of a wide range of military items from shells to ships and the overall effect of the war was to greatly stimulate metals manufacture in the city. This was important for the war effort but it also created a base for post-war industrial expansion.

To defend the city a network of coastal fortifications was constructed with Fort Wallace as the linchpin of the system. Radar installations on Ash Island directed from a control centre in the New Lambton primary school; anti-aircraft batteries around the port; army huts in King Edward Park; large private houses commandeered for use by the military; all these were features of the national war effort in the study area.

2.2.3.5 Continuing Population Growth and a Post War Vision

Because of the war no census was taken until 1947 when the results showed marked population growth in the years since 1933. In Greater Newcastle lived 127,000 people, an increase of 23,000 but growth in the adjacent Lake Macquarie Shire had been more spectacular and for the city as a whole the population was 157,000.

With an economy strengthened and diversified by the war and a nation hungry for consumer goods after six years of relative deprivation, Australia's industrial capital set out to repeat the successes of the past. It launched the Kooragang Island reclamation scheme to create another

6,000 acres of first class industrial land with deepwater frontage. Perhaps the city might yet be the Pittsburgh of the Pacific.

2.2.4 The Fourth Quarter - Adjusting to a New World

Since World War II the confidence of Newcastle in its secondary industry base has been shaken. After initial successes the Kooragang Island project ground to a halt and much of its land has been freed for ecological developments. The population of Newcastle-Lake Macquarie has continued to grow, reaching 293,000 in 1991 but the study area lost about 11,000 residents between 1961 and 1994 with significant consequences for the preservation of its built environment and the survival of its historic communities.

As if these problems were not serious enough, Newcastle was hit by a severe earthquake on 28 December 1989. Estimated at 5.6 on the Richter Scale, the earthquake killed 13 people, injured about 120 and did widespread damage to buildings. Total damage exceeded \$1.2 billion and the loss to insurers made it their most expensive disaster in Australian history. In heritage terms the earthquake had positive and negative effects. It provided funds for the restoration of thousands of buildings, the most outstanding being the Customs House, which cost \$4m. to restore, but it also led to the destruction of many fine structures which were too seriously damaged, or considered to be too seriously damaged, for restoration.

The city is still adjusting to the long term decline of employment in its heavy industrial base. In 1983 the B.H.P. Company announced the first stage of its restructuring, involving a \$356m. upgrade in capital equipment but a marked reduction in the numbers employed: this process in continuing.

Fortunately the Port of Newcastle has continued to increase its coal shipments but this, too, is capital intensive. The population of the lower Hunter continues to grow faster than the number of jobs available in the area: Where will the people work?

2.3 Historic Themes in Newcastle's Development

In compiling this history of Newcastle, the themes have been developed to correspond to those nominated in the State Heritage Inventory Guidelines prepared by the Heritage Branch, NSW Department of Urban Affairs and Planning. This lists 34 different themes, and are intended as being applicable to the assessment of all heritage items in the state. While in some areas its is likely that only a number of them will be of any great significnace, in a city of the size, complexity and age of Newcastle all the themes are relevant.

Having said this, there are five major themes wich have shaped Newcastle's history, and these have been alluded to in the Historic Overview and the naming of the four Quarters. That is:

- Convicts
- Coal
- The Port
- The Railways
- Heavy Industry

These themes are interlinked and woven through almost every aspect of the city's development. A principle reason for the establishment of Newcastle as a convict settlement in the first instance was to provide a workforce to mine the coal that had been dicsovered. The need to ship this coal back to Sydney and elsewhere, as well as other natural resources such as timber, led to the development of the port, and later the railways as activities moved inland. The provision of this massive infrastructure in the port and the railways provided a basis for the development of heavy industry early this century. Then, as the transportation and communication systems have further developed, for the changing role Newcastle is facing today as a regional service centre.

In order to simplify the framework of the themes, and demonstrate the connections between items, they have been arranged into four principle groups of development, and a fifth group dealing with people and events. That is;

- Pattern of Settlement: this considers why the land of the city has been developed as it has, the boundaries of subdivisons, the routes of roads and railways, the location of townships.
- Economic Development: this considers the occupations that have been pursued in the city, the way we work and trade.
- The Role of Government: that is the provision of roads and services and the maintenance of law and order.
- Social Development: this considers the development of our social, civic and cultural development including housing, religion, welfare and leisure.

and;

 Associations and Influences: this considers the people and events that have played an important role in the city's development, and which may relate to any or all of the above groups

These are more clearly set out in the following table. Each of the 34 state themes is cross referenced to the local themes identified. Sometimes a number of important local themes have been identified in relation to each state theme. The principle activities or events that are related to each local theme is then noted, and it is these activities that we would expect to find evidence of when looking at the characteristics that make up our city today.

When assessing the heritage significance of a place, reference is made to the themes to determine. To be significant, a place should somehow demonstrate one or more of these themes. Just because a place is "old" it is not necessarily significant.

2.3.1 Table of Historic Themes

Following is a summary of the historic themes that have been identified in Newcatsle.

Group Theme	State Theme	Local Theme	Principle Subjects
Pattern of Settlement	Exploration (3)	Exploration	Maritime Exploration Pursuit of Resources
	Aboriginal Contact (1)	Aboriginal Contact	Early Liaisons Missions Reconciliation
	Convicts (2)	Penal Colony	The First Penal Settlements Secondary Punishment Allocated Labour
	Migration (11)	Migration	Coal Mining Origins British Dominance until 1960's
	Land Tenure (6)	Land Tenure	Aboriginal Tribal Boundaries Land Grants for Development Dangar's Town Plan AA Company Land Sales Garden Suburbs
	Townships (10)	Townships	Government Town 1823-1853 Mining Villages Transport Corridors AA Company Land Sales Garden Suburbs Inner City Revival

	Transportation (12)	Chinning	Davidenment of the Doct
	Transportation (13)	Shipping	Development of the Port Shipwrecks River Boats
	ë	Railways and Trams	Early Private Railways The Great Northern Railway Tramways
		Road Transport	Lack of Early Road Links Later Road Transport Inter-City Connections
		Air Transport Transport Corridors	Air Transport Mining Villages
Economic Development	Pastoralism (4)	Early Farming	Cattle Grazing
	Agriculture (5)	Early Farming	Mixed Farming Market Gardens & Orchards
	Mining (7)	Coal Mining Quarrying	Coal Mining Stone Quarrying Clay Pits
	Fishing (8)	Fishing	Estuary Fishing Oyster farming Deep Sea Fishing Fish Marketing
	Industry (16)	Early Manufacturing and Processing	Lime, Salt and Timber Early Engineering Brickworks and Potteries Soap and Candles Early Boatbuilding
		Shipbuilding	State Dockyards Copper and Tin
		Metal Smelting	Steel Flour Milling
		Food and Beverage Processing	Food Processing Brewery
	Commerce (17)	The CBD	Establishment of Town Centre Shipping Trade Western Growth of the CBD
		Suburban Centres Wholesaling	Origins as Isolated Villages Growth along Transport Routes Markets
		Inner City Revival	Changing Role of the City
	Technology (18)	Industrial Technology	Railways Shipping Smelting and Steelmaking
	Science (19)	Applied Science	Industrial Development of X-rays
Role of Government	Government (20)	Colonial Government	Administrative Centre Predominance of Maitland
	100000000000000000000000000000000000000	Local Government	Merging of 12 Early Councils Regional Administration Centre
	Law and Order (21)	Penal Colony Industrial Disputes	The First Penal Settlements Secondary Punishment Riots and Marches
	Defence (22)	Defence	Coastal Defences
			Signing On for the War Supplies and Services Memorials Post War Convalesence
	Communication (14)	Communications	Newspapers Telegraph and Telephone Postal Services Radio Television Publishing
	Utilities (15)	Utilities	Gas Production Water Distribution Sewerage Electricity

Social Development	Housing (23)	Housing	Gentlemens Residences Workers Cottages Garden Suburbs Inner City Revival
	Social Institutions (24)	Social Institutions	Friendly Societies Trade Unions Co-operatives Service Clubs
	Ethnic Influences (12)	Ethnic Influences	Coal Mining Origins British Dominance until 1960's
	Environment (9)	Environmental Awareness	Industrial Pollution Pollution Controls Flora and Fauna Conservation
	Cultural Sites (25)	Cultural Sites	Aboriginal Ceremonial Sites Parks and Reserves Early Hotels Halls and Institutes Trade Union Halls
	Leisure (26)	Leisure	Parks and Reserves Water Sports Theatre and Cinema
	Sport (27)	Sport	Early Boating Horse Racing Cricket Clubs Surf Clubs Lawn Bowls Soccer, Rugby & League Boxing
	Health (28)	Health	Convict Health Medical Benefits Societies Industrial Accidents Public Hospitals Private Hospitals Post War Convalescence
	Welfare (29)	Welfare	Benevolent Societies Fund Raising Unemployment Institutes & Missions Community Health
	Religion (30)	Religion	Early Land Grants Coal Miners Origins Diversity of Denominations Health and Welfare Private Education
	Education (31)	Education	Early Schools State Schools Private Schools Technical Education Universities and Colleges
	Death (32)	The Life Cycle	Aboriginals Convicts Industrial Accidents Shipwrecks Church or Private Graveyards Public Cemeteries Crematorium
Associations and Influences	Persons (33)	Prominent Individuals People	Prominent Individuals Social Classes Racial Groups Womens Roles
	Events (34)	Natural Disasters Workplace Accidents	Earthquakes Floods Fires Industrial Accidents
		Commemorative Events	Shipwrecks Memorials

2.4.1 Exploration

The first Europeans into the Hunter region, apart from escaping convicts of whom the best known was the famous Bryant party in 1791, were mariners. Port Stephens was visited twice in 1795, Lt. John Shortland officially discovered the Hunter River and its coal two years later and then Sydney merchants began to send small ships to the area for coal and timber. In 1801 Governor King despatched Colonel William Paterson to make an official survey of the lower Hunter Valley and his favourable reports led to the first settlement on the site of Newcastle. This did not last but Newcastle was established in 1804 as a convict settlement, a role it played until 1822.

Exploration by land of the interior of the Lower Hunter Valley was carried out by parties from Newcastle seeking timber, hunting game and pursuing escapees.

Because of the rugged sandstone county north of Sydney explorers were slower to reach the Hunter Region by land. John Howe in 1818 and again in the following year, when he was accompanied by Benjamin Singleton, was probably the first to reach the plains of the Hunter near Jerrys Plains. This was a circuitous route from Windsor via the Colo River but it enabled him to bring cattle into the Hunter. A more direct route via the Wollombi to Wiseman's Ferry on the Hawkesbury was pioneered by Major J.T. Morisset in 1823 and then improved by John Blaxland in the same year.

Physical evidence

Exploration is a transitory process and leaves few physical signs of the passage of the explorers. Shortland's map and the journals and maps of the Paterson expedition remain but many of the place names they chose have been discarded. (Map 2)

2.4.2 Aboriginal Contact

From 1801 when the first settlement was made at the mouth of the Hunter River, the Aboriginals of the area were exposed to white settlers with disastrous results for the tribes. During the convict period the Aboriginals 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. 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.

After the convict settlement was wound down in the 1820s, the Rev. Lancelot Threlkeld established a mission to the Aboriginals at Lake Macquarie and his correspondence records the decline of their way of life. In 1854 Harry Brown, who was regarded as "the last of the Newcastle tribe", died and Margaret, considered "the last of the Awabakal", died in 1900. However, the local Aboriginals have intermarried with European Australians and their descendants continued to live in the region, usually in an unobtrusive way, working in the timber industry of the railways or in similar occupations.

When the Board for the Protection of Aborigines began to set aside land for reserves in the areas where Aboriginals lived in considerable numbers, it bypassed the Newcastle area but created reserves at Karuah and Singleton. It is likely that Aboriginals from Newcastle lived at these locations.

As the economy recovered after the 1930s depression, Aboriginals began to secure jobs in the Newcastle industries and on the railways and some of them lived on Platts Estate at Waratah. In 1960 the Newcastle Trades Hall created a Committee for Aboriginal Advancement, an important early development in the improvement of relations between the races.

The Awabakal, Koompahtoo, Bahtabah and Worimi Aboriginal Land Councils were formed in 1984 to control the purchase of property by local Aboriginals. Since then other agencies have begun to offer health and welfare services to Aboriginals.

Physical evidence

Although there are many references in historical records to Aboriginal activity in the colonial period, they were rarely, if ever, detailed enough to allow the sites to be identified. However, there is documentary evidence of camp sites on the harbour foreshores, the islands of the Hunter River and at Newcastle Beach.

2.4.3 Convicts - The Penal Settlement, 1801-1822

For two decades after its permanent occupation as a penal settlement in 1804 Newcastle accommodated prisoners from New South Wales and Tasmania. Its population was small until about 1814, about a hundred convicts and their guards, but in the next few years it became the principal penal settlement of the Australian colonies, housing up to a thousand prisoners at a time but very few female convicts.

The settlement was regarded as an industrial camp fit only for the punishment of the convicts and as a source of raw materials (timber, coal, salt and lime) for use elsewhere. Accordingly, there were no large buildings until 1816 and brick and stone were not used for building purposes until then. When major buildings of stone and brick were erected (gaol, church and hospital) the lack of a skilled workforce condemned them to a relatively short life and only foundations remain from this period.

Watt Street (then known as George Street) roughly bisected the settlement with the parade ground, the flagstaff, superintendent of convicts' house, the guard house, the boat house, the sand pits, the lumber yard, the officers' barracks, the hospital, the surgeon's quarters, a coal mine, the stone quarry, the gaol and the signalling post all lying to the east of the sandy track. At its northern end lay the wharf, the first stage of the substantial port improvement programme that has been progressively implemented. (Map 4)

The breakwater linking Nobbys to the mainland was begun in 1818 and completed in 1846, a monument to convict labour. The Crown continued to operate the Newcastle coalmines with convicts until 1830 and after the transfer of the collieries to the Australian Agricultural Company in that year it, too, used a convict labour force.

Given the presence of so many convicts, the Government maintained a military detachment in the town until the early 1850s. The gaol also remained in use until 1848, serving the northern districts of the Colony until the prison at East Maitland opened in that year.

Newcastle had a continuous convict experience for about half a century. Moreover, the proportion of convicts to free people was very high: in 1820 about 670 to 140; in 1836, 426 to 278.

Physical Evidence

Although the Nobbys breakwater has been much altered since the convict period, it is a potent reminder of those days. The site of Fort Scratchley, where there were two stone quarries, and the Nobbys breakwater are testimonials to the power of the convict pick. The army barracks in Watt Street and some of the stone walls in its vicinity date from the convict era and there are also some houses from that period, e.g. Claremont and (possibly) Toll Cottage.

The site of the convict settlement is also rich in archaeological remains from the 1801-1822 period.

2.4.4 Land Tenure

Before white settlement two Aboriginal groups inhabited the lower Hunter Valley with the river forming a rough boundary between the territories of the Worimi to the north and the Awabakal to the south. These two tribes or sub-tribes divided up into clans or hordes, extended family groups which were identified by white observers with particular geographical areas. (Map 3) Thus, as the missionary Lancelot Threlkeld understood the situation, three clans of the Awabakal lived in or near the site of Newcastle. They were the Five Islands people at the northern end of Lake Macquarie, the Pambalong Clan on the western side of the river and the Ash Island clan. In addition, there were the Garuagal Clan of the Wormimi whose territory was the coastal strip from Stockton to Port Stephens. Although these groups lived in separate areas because of their hunter-gathering economic system, they came together on ceremonial occasions and made regular visits to each others' territories. The establishment of a convict settlement at the mouth of the Hunter interfered with the tenure of those Aboriginals who used the site to obtain food, for camping and for ceremonial purposes.

When the valley was opened to free settlers in 1821, interference with the tribal life of the Aboriginals became more widespread as land was granted away in relatively large acreages by the Crown.

In the early 1820s the Government created a plan for the development of the Newcastle area. Based on principles laid down by Commissioner J.T. Bigge, it provided for large land grants in the interior to proprietors with the capital to develop them using convict labour. Newcastle was seen as the seaside town of the region and each proprietor was allowed to select an allotment there on which to build his townhouse. These land grants were free except for a quit rent and the town lots were conditional upon the construction of a substantial house within a specified time.

The town plan prepared by Surveyor Henry Dangar reserved the land on the west side of Newcastle for its further expansion but the Australian Agricultural Company was allowed to occupy 2,000 acres in this location for coal mining purposes in 1829. (Map 5) A town common adjoining the westerly boundary of the A.A. Company's grant and stretching from Broadmeadow to Wallsend was set aside in 1849 but most of this was alienated by the Government to individuals who squatted on it after the development of collieries in the area. However, ownership of the railway lines through the Pasturage Reserve eventually reverted to the Crown, as did the mining leases. Many of the best recreational areas in the Newcastle Region, such as the District Park complex, Newcastle International Sports Centre and Lambton and New Lambton Parks, the sites of large schools, including Broadmeadow High and the John Hunter Hospital (Map 6) now occupy parts of the old Pasturage Reserve.

Physical evidence

Of thousands of years of Aboriginal tenure there is abundant archaeological evidence though few sites in the Hunter Valley and none in the study area have been excavated. This is partly due to the destruction of many sites around the estuary by reclamation and construction. The layouts of Newcastle and the other towns.

2.4.5 The Towns

In 1822 when it was planned, Newcastle was intended for the regional capital of the Hunter Valley, having the advantages of established buildings and the sea highway to Sydney. However, steamships made Morpeth-Maitland the dominant town until railways developed to tip the balance back towards Newcastle and in the second half of the century the population of the city and the towns within a ten mile radius of the Port reached 50,000. By then it was unmistakably the major urban centre with a developed industrial base and comprehensive transport systems.

Newcastle went into decline when it ceased to be a penal colony and its population did not reach 3,000 until the late 1850s. Consequently, its building stock from the first half of the last century is very small. Growth from that point was continuous except for setbacks in the 1890s and 1930s. The most rapid population growth occurred after heavy industry developed from 1913.

2.4.5.1 The Government Town, Newcastle 1823 to 1853

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. The town was expected to serve its hinterland as a port and to provide seaside residences for wealthy settlers taking up large land grants in the interior. Accordingly a government surveyor, Henry Dangar, was directed in 1823 to prepare a town plan on the site of the convict settlement.

As was usual, Dangar set aside land for churches, schools and government buildings and planned a market square in the centre of the town. The streets of the convict settlement were realigned and land was reserved on the western side for its future expansion. (Map 5)

Free settlers were allowed to select a town allotment and land was also offered for sale. However, Newcastle stagnated in the 1820s because the settlers were preoccupied with the development of their estates and because they preferred to do business in Sydney which was only 60 sea miles further away.

To permit the A.A. Company to develop a new colliery and to provide it with adequate reserves, the British Government allowed it to select 2,000 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 the town reserve. This could be regarded as the most important event in its nineteenth century history as it had profound effects on future development.

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 1850s. This was of no great significance at that time because the population, including a large contingent of convicts working on the Nobby's breakwater, was only 1,400 in 1846 but thereafter the Company's land sales policy dominated the development of the central business district.

2.4.5.2 A.A. Company Land Sales

Much of the grant had to be retained for collieries and railways and large sections were swampy but in 1853 the Company began to plan its first land sale. The Company's pioneer surveyor, G.E. Darby, provided for quarter acre allotments along Lake Macquarie and Maitland Roads and on parts of the Company's high land at the east end of its estate and made available the lower land to the west for gardening in portions of from one to ten acres. (Map 7)

The first auction in 1854 was very successful. There were sales to miners and other A.A. 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.

Some of the larger allotments were taken up for market gardening by Chinese who formed a well recognised minority in Newcastle by the 1880s. However, much of this lower portion of the Company's Estate was destined to become parkland when the remainder of it was opened up later in the century.

To make the best of its assets the Company adopted a policy of periodic releases for auction sale followed by sale by negotiation for lots not sold at auction. It also offered leases of particular sites, presumably those judged to have exceptional commercial value. Early in the present century the Company embarked on large scale selling of its remaining residential lands in Newcastle and Hamilton. This acceleration was prompted by increasing municipal rates and the Federal Land Tax of 1912. There were releases at the Junction in 1908, at Cooks Hill from 1912, at Shepherds Hill from 1915 and at Bar Beach in 1924. From 1914 onwards the Company was selling its Hamilton Garden Suburb Estate of 300 acres and it was able to take advantage of the enormous rate of population growth resulting from the development of the steelworks.

2.4.5.3 Railways Open up the Hinterland

A network of private colliery steam railways (from 1857) and the Great Northern Railway (first section, 1858) permitted the rapid development of the Borehole mines and their associated townships in the following decade. Minmi (1856), Waratah (1856), Wallsend (1859), Plattsburg (1861), Lambton (1863) and New Lambton (1867) joined the older centres of Merewether (1849) and Hamilton (1849) to create Newcastle's first ring of colliery towns.

The layout of these private townships was a matter for the proprietors, usually the mining companies which sold off their land subject to their coal and transport needs and the demand for commercial and residential sites.

Wallsend

Wallsend began as two mining towns separated by the Newcastle-Wallsend Coal Company's railway, Wallsend on the south and Plattsburg on the north (Map 8). The former developed first and the two towns were linked by Nelson Street.

Waratah

Waratah began as a railway navvies tent town in 1856 when the Great Northern Railway was being put through a large hill near Thomas Groves' farm. Coal was discovered and the enterprising Groves opened a hotel, sold land for home sites and became a pioneer of the Waratah Coal Company, in 1862. The Company built up an estate of 1,467 acres which became the town of Waratah.

Lambton

Lambton was the creation of the Scottish Australian Mining Company which developed a colliery on 1,280 acres in 1862. In the September of that year 25 acres were cleared for a town site and this area was later extended to the northern boundary of the Company's estate, thereby encompassing the Newcastle to Wallsend Road. The first land sale, of 90 lots, was held in June 1864.

Merewether

Merewether takes its name from the Merewether Estate, originally the property of A.W. Scott and James Mitchell but passing into the possession of E.C. Merewether through his marriage to Augusta Mitchell in 1860. (Map 9) In the 1840s Mitchell began to build a copper smelter on Burwood Beach and coal mines, potteries and a railway followed, creating a need for a town in the area. However, Mitchell and his heirs refused to sell portions of their estate until 1910 so that Merewether, like Minmi, began as a leasehold town.

It took shape around Mitchell Street which was the gravelled drive to the Merewether's house and first known as "The Red Road". Though the area was incorporated in 1885 the streets were not dedicated to the Council until the lots were sold - if they were leased from the Estate, they remained in its hands.

Cooks Hill and Hamilton

Cooks Hill and Hamilton resulted from the A.A. Company's coal mines in the two localities. The first houses in Cooks Hill were a row of colliers' huts near the present Brooks Street (Map 10) Land sales in Cooks Hill began in 1854 when many lots were sold in Darby Street. Hamilton began similarly with Company owned slab huts on the high ground close to "D" and "E" pits. Known as "The Borehole", this settlement became part of Pit Town where the first land sales occurred in 1857. The small lots near the pits appear to have been the sites of the Company's slab huts.

Minmi

Minmi began as a cattle station in the 1830s but coal was produced there from about 1850, first by John Eales, who built the Minmi-Hexham railway, and then by J. & A. Brown: their successors, Coal and Allied Industries, still own land there.

Minmi was a private town and only the school site, the Masonic Lodge site, the court house site and one or two of the church sites were permanently alienated by the Browns. The most permanent title available to residents was a lease and so there was always a possibility of an eviction by the proprietors. Although other coalfields landowners applied similar leasehold policies at Merewether and Stockton, no one persevered with them as long as the Browns.

In the absence of any town plan, Minmi developed around the roads leading to Maitland, Wallsend and West Wallsend and they were the main streets. (Map 11) After flourishing in the early 1860s, the town virtually closed between 1865 and 1870, then grew to about 5,000 in 1895 before declining rapidly from 1913.

According to the census of 1911 there were 1708 living in Minmi and this figure was reduced to 832 at the next census in 1921. A decade later the police estimated that there were 472 residents in the district, a total very similar in 1950. The sharp decline between 1921 and 1931 may be attributed to the closure in 1925 of the last Minmi mine.

Being entirely in the hands of the coal owners, the town had no form of local government before 1938.

Hexham

Hexham had a curious development, beginning in one location and moving to another. Locating at first in the Ironbark Creek area where the Church of England was built c.1849, the village moved to the north in response to the development of coal shipments from the banks of the Hunter River, close to the junction of the Minmi to Hexham railway. Thus by 1880 it was described as "a postal town of 160 people ten miles north of Newcastle in the centre of an agricultural and grazing country where the Messrs. Brown ship coal from their Minmi mines". In 1891 it received a considerable boost when the Brown Brothers transferred their Minmi engineering works to Hexham.

New Lambton

Five years after Lambton was pioneered, James and Alexander Brown opened a new mine adjacent to the Lambton Colliery, calling it New Lambton. The first sod on the site (between Oxford Street and St. James Road) was turned early in 1868 and a railway line built across what is now New Lambton Park and Royal Street. By September 1869 there were about 100 houses, three stores, two churches and several hotels on the New Lambton Estate.

Jesmond

Originally known as Dark Creek, Jesmond sits on land grants to William Steel (80 acres) and Daniel Jones (50 acres) about half a mile north west of Lambton. Jones' eastern boundary was George Street and his land extended to the west to meet Steel's boundary. The village developed around Steel's steam saw mills and residents also found employment in local orchards, stone quarries and the Lambton mines. By 1883 there were 600 residents, two

churches and a school. In the 1880s John Campion opened soap works at Jesmond and by 1907 it was well known in N.S.W. as the source of "Cat" brand pumice sand soap.

By far the largest development in the area was the Woolworths shopping centre, which opened in 1964, the first regional shopping centre to be established in the Newcastle area.

2.4.5.4 Twentieth Century Subdivisions

Early this century the Garden Suburb idea influenced large subdivisions at Hamilton, Stockton, Birmingham Gardens and Kotara.

Hamilton

The A.A. Company's plan for developing 121 hectares in Hamilton was prepared by John Sulman and John Hennessy in 1912 and sales began in 1914. (Map 12) There were 1,300 residents by 1921: 5,300 by 1933: red brick bungalows with tiles roofs predominated.

North Stockton

At North Stockton a government owned garden suburb was planned in 1918 for 400 houses: according to J.C. Docherty, only 61 were built but the plan provided for "ample recreational space and an imaginative layout." (Map 13)

Birmingham Gardens

The Birmingham Gardens project of 785 lots was offered in December 1922 and by 1924, 600 lots had been sold. However, an anticipated railway station in the locality did not eventuate and few houses were constructed until after World War II. (Map 14)

Kotara

Kotara, a project of the Scottish Australian Mining Company, was intended to create "a garden suburb" and a covenant intended to achieve high quality housing applied to all lots sold. Of 191 lots offered in 1925, 178 were sold but by 1932 only 14 houses had been built. There were still only 52 by 1940 but Kotara developed rapidly after 1947.

Tarro-Beresfield

Often described as twin towns, Tarro and Beresfield are relatively modern creations, the first residential subdivision in the area occurring in the 1920s. Granted originally to Edward Sparke, who received 2,000 acres at Hexham-Tarro in 1825, the district remained rural until a subdivision named "Beresford" was offered for sale in the 1920s. Described as a "Newcastle extension" and "a new model suburb", it was a short walk away from the proposed railway station to be known as Beresford. (Map 15) However, to avoid confusion with another Beresford elsewhere the Railways Department called its station Beresfield. Development was slow until after the Second World War when Tarro and Beresfield began to attract Newcastle workers looking for cheap land. Originally part of the Lower Hunter Shire, they became part of the City of Newcastle in 1938.

2.4.6 Transport

2.4.6.1 Shipping

As a penal colony Newcastle relied on small sailing ships for transport and communication with Sydney, and sail continued to play a major role in the development of the coal industry right up until World War I. In the 1920s Newcastle became one of the last ports of call for large sailing ships in commercial use. The "mosquito fleet", a collection of small sailing craft engaged in the coal trade to Sydney and some other colonial ports, was a distinctive feature of Newcastle's maritime history.

In 1831 when the first steamship came to Australia, it began to serve the Hunter Valley through the port of Newcastle. Used at first for passengers and more valuable freight, steam navigation gradually took over from sail and for several decades Morpeth was the principal port of the region with Newcastle playing a secondary role. However, in the second half of the last century Newcastle was rapidly developed into a busy coal port serving the Australian colonies and the Pacific rim countries. (Map 16)

From a dangerous river estuary, a port capable of handling 4,000 ships a year by 1900 was gradually created by huge expenditures on breakwaters, light houses, dredging and wharfage facilities. In boom periods or when industrial disputes caused a build up of shipping, there could be as many as 100 vessels in port at one time in the late nineteenth century.

A port as busy as this required all the usual service industries including shipbuilding and repair facilities, sailmaking, ships chandlering, butchering, biscuit making, hotels and boarding houses for sailors, seamen's missions, consular services and shipping agencies. As one observer summed up Newcastle in 1866: "It was essentially a seaport and a coally seaport ... every third house sells slops or ropes or blocks or some of the many other articles required by those who go down to the sea in ships."

In the present century the number of ships calling at Newcastle has greatly diminished but their size has been increased to a degree thought inconceivable only a few years ago. Thus coal exports have increased to over 47 million tonnes a year and the mining industry depends on shipping as it has since 1801. Nevertheless, larger, faster vessels and quick turnarounds have reduced the demand for shipping services and the waterfront areas of Newcastle no longer have such intimate connections with sailors and ships.

Apart from the coal trade, the port has played a vital role in the development of metals smelting from copper in the 1850s, silver lead in the 1890s, iron from 1915 and aluminium from the 1960s. Various manufacturing industries have also been served by, and left the imprint of the special needs on, the port.

Physical Evidence The Port of Newcastle

2.4.6.2 Railways

Colliery 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'etre. However, railways were also influential and their location helped to shape the city. (Map 17) When the A.A. 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 2,000 acre grant included only enough harbour land for its coal loading plant and associated offices, workshops, etc.

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 A.A. 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 A.A. 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.

As coal mining in the inner city began to peter out at the end of the last century, the colliery railways became redundant and they were taken up. The closure of the A.A. Company's sea pit at Hamilton colliery in 1920 allowed the closure of its railways and a more logical arrangement of King Street.

The rail bridge across Hunter Street was also demolished (1923) and the Government resumed from the Company its water frontage between Merewether and Brown Streets.

The Newcastle Coal and Copper Company's line between Burwood and Newcastle lasted a good deal longer, to the chagrin of motorists using King and Hunter Streets, not closing until about 1950.

One important result of the demolition of the Newcastle Coal and Copper Company and A.A. Company Hamilton lines was the freeing of the site of the future Civic Park. Here the lines had approached each other and there was a signalman's cottage within a stone's throw of the Newcastle City Hall, the centre of local government administration.

Physical Evidence

Railway routes still evident in many locations.

The Great Northern Railway

The Great Northern Railway began as a private venture but it was soon taken over by the N.S.W. Government which opened a line between East Maitland and Newcastle West in 1857. When it was carried on to Watt Street at the eastern end of the city a year later the line was linked to deep water and oceangoing ships. However, in the process, it cut off Newcastle from its harbour frontage (Map 18) and created a railway corridor on the northern side of the city. This narrow strip of land was widened by reclamation to provide sites for various government buildings of which the most important was the railway workshops at Honeysuckle Point.

Though less obtrusive than the private railways had been, alterations to the lines and facilities on the Great Northern Railway also had a significant effect on the shape of the city. In 1929 Civic Station was opened to provide access to the City Hall and Civic Theatre and seven years later the main lines in the vicinity of Scott Street were moved to the north, making it possible to widen that street and improving the flow of traffic along it. Also with beneficial, if long term, effects was the gradual winding down of the railway workshops at Honeysuckle Point. When the Cardiff workshops were opened in 1928 the older facility was transformed into a permanent way components shop until its functions were also transferred to Cardiff in 1978. This left the way open for redevelopment of various sites on the northern side of Hunter Street, a process that is still continuing.

Using the Great Northern Railway to link their collieries to the port were the private railways of the Wallsend, Lambton, New Lambton and Waratah Coal Companies. (Map 17) In the nineteenth century they were essential to the communities they served but they were also barriers to other traffic. With the closure of the mines they became available for residential or road development.

Physical Evidence

The railway system and sites of former rail facilities

2.4.6.3 Road Transport

Road transport was confined to the area between the Cottage Creek and the coast in the convict settlement period: there was nowhere else to go except to a group of farms at Patersons and Wallis Plains and they were more easily reached by river. With the opening of the Hunter Valley to free settlers in 1821 the need for road transport increased but the Hexham Swamps were a formidable barrier to drays and waggons bound for the interior of the Hunter Valley. Nevertheless a track was created across the swamps to Hexham (first situated on Ironbark Creek) and thence to East Maitland via Tarro. Now known as Maitland Road, this thoroughfare has tended to control urban development in the north western section of the study area.

The first road to the south was Lake Macquarie Road which, in its early section, bears some relation to Darby Street. From The Junction it proceeded via what is now Macquarie Street over the Glebe Hill to the Lake. It appears to have been pioneered by the missionary to the Aborigines, L.E. Threlkeld, who started a mission at Belmont in 1825.

The main road west of Newcastle came into being when the Wallsend Coal Company began to develop its estate in 1859. Initially access to the site of Wallsend was obtained by means of the Great Northern Railway to Waratah and then by three and a half miles of primitive track through "rough undulating country" but that was a roundabout route. Accordingly, a more direct track was made through what would be Lambton when the colliery of that name was pioneered in 1863. This became the Newcastle-Wallsend Road.

Within this road network Novocastrians struggled to develop the townships that now form the study area. Until municipal councils were formed these roads were in a deplorable condition and even after incorporation their improvement was a slow process.

One of the most important transport developments was the construction of the Great Northern Highway between Sydney and Newcastle. Until 1925 the shortest available route between the two biggest cities in the state was the road via Parramatta, Wisemans Ferry, Gosford, Wyong and Catherine Hill Bay, a journey of 155 miles over several heavy gradients. By 1930 the development of the route via Berowra, with a ferry across the Hawkesbury, had reduced the distance to 105 miles with improved gradients. The continuation of this road to the north of Newcastle to become the Pacific Highway completed a main road system which would exert a powerful influence on the commercial and industrial development of the study area.

Physical Evidence

The roadways

2.4.6.4 Trams

The Newcastle tramway system, which began with a service between Wallsend and Newcastle in 1887, was developed into a comprehensive urban network. (Map 19) Stretching from West Wallsend in the west to Parnell Place at Newcastle Beach, it also served Merewether to the south and Mayfield to the north. Commencing with steam trams, it was converted to electric trams in the 1920s. Motor buses replaced the trams in the 1950s.

Physical Evidence

Tramway routes are visible in various locations. The bus depot in Parnell Place was a tramway depot as was the Hamilton bus depot.

2.4.6.5 Air Transport

The Newcastle Aero Club established an aerodrome at District Park, Broadmeadow in 1930 and this became the Newcastle aerodrome two years later. By 1937 the limited size of this facility and the increasing size of aircraft caused Sydney-Brisbane services to fly over Newcastle and it was necessary to find a new aerodrome. The development of Williamtown as

an R.A.A.F. base during World War II led in 1948 to its nomination as the principal Newcastle airport. Aeropelican, the commuter airport, was started at Belmont in 1971 by D.L. Hilder.

Physical Evidence

The existing airports: the former aerodrome at District Park, Broadmeadow.

2.4 Pattern of Settlement

2.4.7 Migration

As Newcastle was re-established in 1804 to provide a place of exile for convicts involved in the Castle Hill Rebellion, its population was half Irish in the early years. Until the convict system was de-constructed the Irish presence remained strong but by 1856 it had diminished sharply. Coming from a country which was less industrialised than England, the Irish in the Hunter Valley gravitated to the farming centres, leaving Newcastle to the English and Scottish, many of whom had coal mining experience before migration.

Because of its dominance by coalmining, Newcastle continued to attract British migrants right through the last century and the growth of heavy industry after 1913 confirmed this trend. By 1891 about one third of Newcastle's population were British born compared to about one quarter in New South Wales as a whole. Many of these British migrants were from the north of England and Wales and the Welsh were six times more common in Newcastle than in New South Wales in the 1890s. The Newcastle and District Cambrian Society was formed in 1886. The British continued to dominate migrant arrivals in Newcastle until the 1960s when for the first time non-British migrants became significant in numbers.

Physical Evidence

Baptist and other non-conformist churches and chapels, cemetery headstones, the names of localities, streets and houses of British origin.

2.5.1 Pastoralism

The first stock to graze in the study area belonged to the Government. Sheep were kept during the convict settlement period but they did not flourish in the vicinity of Newcastle because of its poor soils and coastal climate. Cattle were better suited to the conditions and as the town developed local butchers usually kept small herds on its outskirts. Bullock Island, the first name given to Carrington, is a reflection of this practice and cattle were also kept on the Glebe land south of Newcastle. Minmi was originally used as a cattle station by A.W. Scott. The Pasturage Reserve or Common, portions of which remain as parkland, was created for the use of local cattle and cattle awaiting shipment through the Port.

Physical Evidence

The sections of the Pasturage Reserve in public hands.

2.5.2 Agriculture

In the convict settlement period the Government established two farms close to Newcastle, one where the James Fletcher Hospital now stands and another in Hunter Street West. Governor Macquarie visited the latter farm in 1818, reporting that it was "about one mile" from Newcastle and that he "found the farm in very good order with a neat cottage on it." Cottage Creek takes its name from this building.

When the Hunter Valley was opened to free settlers, farming commenced on several land grants along the south bank of the river and other islands of the estuary. John Laurio Platt took up 2,000 acres at Iron Bark Hill in 1822 and A.W. Scott received a similar grant on Ash Island in 1829. Many farms were also established in the Hexham, Tarro, Beresfield area.

Taking advantage of river transport, these early farmers produced grain, fruit, vegetables, butter and meat for the Sydney market. After subdivision of Dempsey, Mosquito and Ash Islands from the 1840s, small mixed farms were established there to cater for the population of Newcastle. Market gardening was practised in several locations, especially by the Chinese and orcharding also became common. The Chinese gardens flourished in Mayfield, Fern Bay, Cooks Hill and Jesmond and Waratah was an orcharding-grape growing centre late last century.

As the wooded hills west of Newcastle did not suit agriculture and the extensive Hexham swamps defied it, the study area has been relatively free of its influence.

Physical Evidence

Little remains of these early farms because of the reclamation of the river islands to form the Kooragang industrial area and the expansion of heavy industry along the south arm of the Hunter River. There are some remnants of farm buildings on Ash Island.

2.5.3 Fishing

Fishing for local consumption along the coast and lakes of the Hunter region has been continuous since the first settlement. However, the growth of the industry and its concentration in certain areas had to await methods of preservation. There is no evidence of salting, smoking or drying fish until Chinese fishermen began to work Lake Macquarie and Port Stephens early in the second half of the last century. They appear to have been preserving fish for sale to their compatriots in Australia but the total absence of records makes it difficult to investigate their activities.

The development of steamer services on the rivers of the region after 1831 facilitated the shipment of perishable commodities but it is doubtful whether a fresh fish trade would have been viable until ice became available in Newcastle in 1884. Thereafter, the market for commercial fishermen was greatly expanded and it became possible to fish outlying waters, such as the Myall Lakes, in order to supply the urban centres.

Fishermen have tended to live at Carrington and Stockton and on the river islands, storing their boats in the same areas. The estuary is the source of most fish caught locally but deep sea fishing is also carried out from Newcastle.

Fish marketing has centred on the original Municipal Markets at Market Street, Newcastle, then at the Western Markets (now the Palais), then in the Steel Street Municipal Markets. It is currently conducted at the Wharf Road depot of the Newcastle District Fishermen's Cooperative.

Fourteen major species of fish, crustaceans and molluscs form the Hunter River resource base with prawns as the most valuable catch. Oysters were taken from the early days of the settlement and by the 1860s there were fears that the banks in the estuary would be destroyed by harvesting for consumption and for lime burning. Government regulations were introduced and oyster farming began under the protection of the Oyster-Beds Act of 1868.

Physical Evidence

Market Street marks the site of the nineteenth century fish market. A boat harbour still exists at North Stockton.

2.5.4 Mining

Of the many types of mining only coal, clay and stone extraction have been important in the study area: coal has been dominating in its importance, clay has been the basis of brick and pipe manufacture but stone has had little significance because of its softness.

2.5.4.1 The Coal Industry

The first coal mine in Australia was opened at Colliers Point (now the site of Fort Scratchley) at the mouth of the Hunter River in 1801. From then until 1831 the Colonial Government operated several small mines in the same vicinity, using convict labour and primitive methods to exploit the upper seams of the Newcastle coal measures, principally the Dudley Seam and the Yard Seam. The output of these collieries was very small (averaging about 3,000 tonnes per annum in the 1820s) and they are significant only in heritage terms as the first coal mines (the first mines, if stone quarries be excluded) in a continent famous for its mines.

Coalmining entered a new phase when the Australian Agricultural Company entered the industry as a result of an 1828 agreement with the British Government. Opening its first colliery on a two thousand acre grant on the southern shore of the harbour at Newcastle in 1830, the Company employed steam engines and an elementary railway system to create an industry capable of supplying the steamships which were to play a key role in the developing economy of the eastern colonies.

The discovery by the Company in 1848 at Hamilton of the famous Borehole Seam, the richest seam of the Newcastle coal measures, ushered in a new era for the industry. Tapped by all the leading northern producers in the second half of the last century, this seam yielded over 140 million tons in its first century. Borehole coal fuelled steamships, gas plants, railways, smelters, factory engines and domestic fires in many parts of Australia, the Pacific Islands, North and South America and in parts of Asia. Its quality and accessibility made the Newcastle coalfield, within ten miles of the port, the heart of the industry until about 1900.

The Borehole Seam was exploited at all the main coal towns of the Newcastle area, namely Charlestown, Hamilton, Lambton, Merewether, New Lambton, Stockton, West Wallsend and Wallsend. The pervasive influence of this industry is revealed by an examination of *The Newcastle Directory and Almanc for the Year 1880* which lists 19 towns in the study area of which only one, Wickham, is not described as dependant on coal mining and it became a coalmining centre shortly afterwards.

By the turn of the century many of the Borehole Seam mines in the study area were becoming exhausted and began to close. The sudden, complete closure of a colliery was rare though this occurred at Stockton in 1907. The common pattern was a piecemeal process with sections closing and the work force being reduced accordingly. Thus the employment of miners within the study area fell by 1,000 between 1905 and 1910. According to J.C. Docherty's *Newcastle: The Making of an Australian City*, Newcastle suffered a net loss of about 10,000 people between 1901 and 1911 as miners and their families moved to the new Cessnock coal field. Newcastle as defined by this study was ceasing to be a coal mining area. However, some small collieries have continued to operate within the study area until the present.

Physical Evidence

Of the many coal mines in the study area, few signs remain. Subsidence has occurred throughout the city and in the Merewether area and it is still possible to see the remains of mining tunnels. The base of Fort Scratchley is arguably the first mine site in Australia.

2.5.4.2 Quarrying

From 1816 the quarrying of sandstone was carried on around the base of the Fort Scratchley site. The stone extracted was used for building the first Christchurch and the gaol. This stone proved unsuitable for this purpose, wearing away very rapidly but quarrying was continued for use on the Nobbys Breakwater between 1818 and about 1850. Nobbys Island was also quarried between about 1840 and 1850 for the breakwater.

Stone quarrying then moved away from the coast to Lambton and Waratah where better quality stone was obtained. In 1880 H. Pilkington had several men getting building stone at Lambton and there were several quarries in the Waratah municipality where the Government was extracting thousands of tons for use on the harbour breakwaters.

Physical Evidence

Many stone quarries may be seen in the Lambton, Waratah area. The shape of Nobbys and the Fort Scratchley site testify to forty years of quarrying.

2.5.4.3 Clay Mining

Lying under much of Newcastle, particularly from Cooks Hill to Adamstown and Waratah, was a thick layer of clay well suited to the manufacture of bricks, fire bricks, tiles, drainpipes and a range of pots for household purposes. This was first exploited by Page's Pottery which was established at Burwood in 1846 for the manufacture of bottles, jars and the stronger kinds of delft, which were reported to be good quality and to sell readily in the district. The proprietor was expecting to receive from England appliances which would widen his range of products and this suggests that the business was profitable. Although it was to change hands before 1849, when Samuel Welham was the proprietor, this type of industry appeared to have been established on a firm basis. The locality soon became known as "the potteries" and there were some exports to New Zealand, three crates of earthenware valued at £23 going there in 1847, as well as shipments to Sydney. Thus at the mid-century mark a local newspaper correspondent remarked "our pottery is notorious for its manufacture".

Turton's pottery at Waratah began production about 1856 and by 1872 was the district's leading manufacturer of pipes, tiles and bricks. Pipe production continued at the Junction where the Hughes family did not close down until the 1970s.

Physical evidence

Signs of clay extraction may be seen in the Mosbri Crescent area.

2.5.5 Industry

2.5.5.1 The Development of Manufacturing and Processing

Manufacturing in Newcastle began in the convict settlement when lime, salt and a variety of building materials were made by convicts. These activities ended in the early 1829s and they were slow to restart because of the stagnant state of the town. However, salt making was tried close to the Fort Scratchley site in the late 1820s and again by the A.A. Company on the foreshore portion of its grant in the next decade. A.W. Scott established another salt works at Stockton in 1836 and brickmaking and potteries were next to appear (1840s), mainly in the Junction area where suitable clay was found in association with the coal seams being exploited there. Engineering also began in a small way in the first half of the century when the A.A. Company established a workshop at the eastern end of its grant to service its collieries and A.W. Scott set up an engine works at Stockton in the 1840s.

Timber yards and joineries were to flourish around the port (John Ash and 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 1850s 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 C.B.D. There were also civil and mining engineers but they were usually involved in a consulting role only.

In the other towns, too, there was work for engineers and foundrymen. J. & A. Brown had a large works at Minmi which was moved to Hexham in the 1890s, and Morison and Bearby had a highly successful general engineering works at Carrington. In Wickham, the Goninan Brothers pioneered the large concern that now continues at Georgetown. In 1879 Wallsend had a foundry where "heavy and extensive castings are often successfully made for the different colliery works in the vicinity". The largest engineering works was at Wickham where Hudson Bros. produced a wide range of railway rolling stock: there Henry Lawson worked as an apprentice for about six months in the 1880s.

Physical Evidence

Various sites, e.g. the Foundry Street, Wickham site of the Hudson Brothers factory; Rodgers Engineering site, now the Newcastle Town Hall site.

2.5.5.2 Brickworks and Potteries

The presence of suitable clays, often found in association with coal deposits, has supported a long history of the manufacture of bricks, earthen pipes and domestic pottery in the lower Hunter Valley. Pioneered at Irrawang, north of Raymond Terrace in the 1830s, this industry flourished at Burwood and Waratah in Newcastle. Producing continuously for local consumers, these factories also supplied northern New South Wales in the late nineteenth century via the Great Northern Railway.

Physical Evidence

Various sites, including Hughes site in Railway Street, The Junction

2.5.5.3 Soap and Candles

Soap and candles were manufactured on a small scale in the Wickham-Tighes Hill district from the 1860s and this culminated in the construction of a very large factory, possibly the biggest in Australia, at Port Waratah. It continued to produce soap until after the first World War.

Physical Evidence

The main site is in George Street, Waratah, where archaeological evidence of the Sydney Soap and Candle Company works is known to exist.

2.5.5.4 Shipbuilding

Shipbuilding is another of the traditional industries of the Hunter Region. Based initially on the abundant timbers of the valley of the Williams River, shipbuilding began in the Newcastle convict settlement but its commercial origins may be traced to Clarencetown where William Lowe built many vessels, the most famous being William IV, launched in 1831. Stockton, too, was important in wooden shipbuilding until the 1880s but no Hunter Region shipbuilder made the transition to iron/steel ships until a State Dockyard was opened at Walsh Island in 1914. Functioning discontinuously as a shipyard, it became a general engineering works until its closure in 1933. The second State Dockyard also built ships for the war effort from 1942 and the B.H.P. Company was active in small ship construction at this time. However, large steel ship construction has never been viable in peacetime conditions in the Hunter Region and this dockyard ceased to build ships in 1983. Small ships continue to be built in whole or in sections in parts of the study area.

Physical Evidence

Various sites including Callen Bros. Yard at Stockton and the Walsh Island State Dockyard (now part of Kooragang Island). The second State Dockyard at Carrington still exists.

2.5.5.5 Smelting

Copper smelting began at Burwood Beach (originally Smelters Beach) south of Newcastle in 1851 and continued there intermittently until early this century. Copper was also smelted at Port Waratah on the site of the B.H.P. Steelworks from 1866 and at Georgetown where Goninans works now stand. Processing ore from South Australia and New Zealand as well as N.S.W., these works were affected by falling world copper prices and by the 1890s copper smelting had almost disappeared from the Hunter Region. Tin smelting had also been tried briefly at Stockton in the 1879s but the long cherished ambitions of Novocastrians for a large scale metal works were nourished by developments in silver-lead mining in the last decade of the century. Broken Hill mining companies in search of economies looked to Newcastle for suitable smelting sites and in 1896 the Sulphide Corporation began operations at Cockle Creek, importing ore through its own wharf at Carrington.

In 1912 the B.H.P. Company began to construct a large iron and steel plant at Port Waratah: it opened in 1915 and rapidly expanded, causing an employment and housing boom in Newcastle. After the end of World War I, in difficult trading conditions, the Company created a network of steel consumers, usually encouraging other companies to open plants in Newcastle. In most cases these plants were eventually taken over by the B.H.P. Among these were the Commonwealth Steel Company (formed 1919) to manufacture railway components and other special steel products, the Australian Wire Rope Works Ltd. (opened 1924) for making wire cords and ropes, especially for mining purposes, Lysaght Bros. and Co. (opened 1921) producing galvanised iron and Stewart and Lloyds (Australia) Pty. Ltd. (established in 1929), producers of steel pipes.

Physical Evidence

Sites include Burwood Beach, Goninans Plant at Broadmeadow (once English and Australian Copper Company site) and the B.H.P. Steelworks.

2.5.5.6 Food Processing

Flour milling began in 1821 when the Government built a wind-powered mill on Obelisk Hill. There were no further developments until the 1820s when J.L. Platt tried to establish a mill on Ironbark Hill and James Steel built a steam-powered mill in King Street. The first really successful mill appears to have been the Newcastle Roller Flour Mills, in Hudson Street Hamilton, c.1890.

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 Woods Castlemaine Brewery. 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 1879s. Expansion of his market to Sydney saw the enterprise grow further and the firm shifted some of its manufacturing activities to Sydney after the completion of the Sydney-Newcastle railway in 1889 and ceased manufacturing in Newcastle in 1914.

From a small wine and spirit merchants business in the 1850s, 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 A.A. Company. Assisted, as Arnotts 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.

There were other food processors, notably the Dangar Brothers' meat cannery established at Wickham in the 1840s (one of Australia' first), and Samuel Dark's ice works (1912) on A.A. Company land at Honeysuckle Point but these were not on as large a scale as Arnott's and Wood's businesses.

Physical Evidence

Obelisk Hill, site of the first flour mill.

Portion of the McIntosh mill

Platt's flour mill site, Mayfield.

Brewery buildings in Hunter and Parry Street.

2.5.6 Commerce

Beginning in the convict settlement where some convicts became retailers, Newcastle stagnated in the 1820s but began to revive in the next decade as the Australian Agricultural Company's mines increased their output. Commercial development lagged behind that of Maitland until the Great Northern Railway extended into the Hunter Valley and mining villages were created in Newcastle's hinterland.

2.5.6.1 The Central Business District

In a sense all suburban development was supportive of the emerging C.B.D. as each new colliery village contributed something to the commerce of Newcastle. As transport systems developed, people began to travel for business and pleasure to the older town which also benefited from the spending of ships' captains and their sailors.

In the beginning passenger travel by railway was limited to special occasions but miners from the outlying towns often visited Newcastle to shop on alternate Saturdays when they were paid. Horse-drawn bus services also developed in this period but roads were so rough that their scope was limited. Then, from 1887, steam trams greatly increased the accessibility of Newcastle and its business people claimed regular customers from all parts of the Lower Hunter Valley. Moreover, gradually improving roads encouraged horse-drawn bus services and by the 1920s these services had been motorised. The electrification of trams (1923) was the next big innovation and each improvement facilitated suburban support for the C.B.D.

Although the growth of population in the Lower Hunter Valley contributed to the prosperity of the original shopping centre at the eastern end of Hunter Street, its effect on the opposite end was more dramatic. With the eastern end already built up and the railways occupying the northern side of the 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 municipalities) in 1911.

At the eastern end were the largest retail stores, including Winns (1878), Scotts (1890) and Mackies (1896) as well as the principal professional firms such as bankers and lawyers. However, Lights furniture store moved from Carrington to Hunter Street West in 1894 and Marcus Clarks 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. From 1438 members in 1911, it expanded until by 1930 there were nearly nine thousand 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 N.S.W.) 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 C.B.D. 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.

Physical Evidence

Commercial buildings in the C.B.D.

2.5.6.2 Suburban Commerce

In the 1869s embryonic shopping centres developed in the mining villages of Wallsend, Minmi, Waratah and Lambton. Designed to cater for the basic food and clothing needs of mining communities, they were dominated by general stores and hotels. By 1879, when the *Newcastle Directory and Almanac* was compiled, Wallsend-Plattsburg, whose shopping centres were contiguous, had 33 stores, 21 hotels, 8 butchers, 8 boot shops, 5 bakers, 5 milliners, 3 tailors, 2 tobacconists and 2 newsagents. Lambton was similarly equipped but it also had a bank, the only one outside Newcastle and it had the only co-operative store. Waratah was not as well developed as the above two and Minmi lagged behind Waratah because its mine had been closed between 1864 and 1870 and its proprietors refused to sell business sites, offering only 30 year leases.

The other emerging towns in the study area had fewer businesses than the mining towns because of their smaller populations or their proximity to Newcastle's shops.

Physical Evidence

Various commercial buildings in each of the town centres.

2.5.6.3 Wholesaling

Just as Maitland had shown the way in the pre-railway age, Newcastle developed a considerable wholesaling sector after 1857. Served by railways and shipping and assisted by the lack of a railway link between Sydney and the northern districts of New South Wales, Newcastle enjoyed a significant advantage over its rivals between 1857 and 1889. 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. Their remaining warehouses constitute an important element in Newcastle's architectural heritage.

Physical Evidence

Warehouses in the C.B.D.

2.5.7 Technology

From the opening of the A.A. Company colliery in 1831 with two steam engines and a form of railway, the Newcastle district has played a key role in industrial technology. In railways, shipping, copper, silver-lead smelting and iron and steelmaking its record has been remarkable in Australian terms and, occasionally, it has made its mark in world terms, e.g. the hydraulic power station of the 1870s, the B.H.P. B.O.S. steel furnaces of 1960s, the present Kooragang Coal loader, the largest in the world.

Physical Evidence

Hydraulic power station, Carrington, Customs House time ball, Railway roundhouse sites at Broadmeadow, Honeysuckle railway yards, etc. etc.

2.5.8 Science

In applied science the study area has made a continuous contribution to Australian industry. It has not been adequately researched.

Example: Walter Filmer's pioneering work with X-rays at Royal Newcastle Hospital, c.1895

Physical Evidence

Various industrial sites.

2.6.1 Government And Administration

The presence of the colonial government in the Hunter Region was initially quite strong because of the powers of the commandant of the Newcastle convict settlement. With a military detachment under his control and the powers vested in him as a magistrate, this officer was entrusted with the implementation of government policy in the lower Hunter until Newcastle ceased to be a penal settlement. The post of Commandant was abolished and the first police magistrate appointed to replace him in 1827. The police magistrates, assisted by justices of the peace, sat in courts of petty sessions and acted as representatives of the government. Serious offences were tried before circuit courts which also provided the settlers with an opportunity to present lists of grievances to the Governor. Initially these met in Newcastle but in 1829 East Maitland took over this role, a sign of the emergence of that district as the dominant service centre of the region. At first these courts were held in business premises, normally hotels, but in time the government began to construct court houses in the larger towns.

Newcastle's first court house, the Sessions House, built about 1821, was replaced in 1838 by a new building on the present site of the Newcastle Post Office. The existing Newcastle Court House was built in 1890.

When a partly elective Legislative Council was created in 1843, D'Arcy Wentworth was elected to represent the towns of East Maitland, West Maitland and Newcastle

In 1845 district councils, the first forms of local government, were set up in New South Wales. Appointed to the first Newcastle District Council were A.W. Scott (Warden) and George Brooks, William Brooks, L.E. Threlkeld, Simon Kemp and Henry Boyce.

2.6.1.1 Newcastle as an Administration Centre

Maitland overtook Newcastle in the 1830s and administrative functions tended to be concentrated in the former town for about 30 years, e.g. 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 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 A.A. Company. Indicative of this problem was the Hunter District Water Board's search for an adequate site for its offices. First located in a rented building in Bolton Street, the Board then added a wing to the Customs House and was located there until 1916. However, it was then forced to buy the Hunter Street West site it still occupies as the Government could not provide a suitable allotment for the Board's use.

Physical Evidence Various government buildings

2.6.1.2 The Development of Local Government

In 1858 New South Wales legislated to allow the formation of municipalities in urban centres prepared to petition for them. The Newcastle Council, first in the study area, was formed in 1859 to govern the area now regarded as the Central Business District. As other emerging towns followed suit, what is now the Newcastle local government area came to be governed by twelve local councils. Hamilton, Lambton, Waratah, Wickham, Wallsend and Plattsburg (now part of Wallsend) were incorporated between 1871 and 1876 and between 1885 and 1889 five more municipalities were established, namely, Adamstown, Merewether, Carrington, Stockton and New Lambton.

Called into existence by their residents because of the urgent need to construct roads and provide such amenities as drains, water supplies, sewerage schemes, street lighting, control of nuisances, etc., the new councils faced great difficulties and considerable opposition. However, they struggled on, often handicapped by inadequate funds and with little assistance from governments, to improve urban amenities.

By 1901 it was evident that there were too many municipalities in the Newcastle area, especially as they had tended to merge as the population of the city grew but it was not until 1938 that the movement to create a larger Newcastle local government area succeeded. The result was Greater Newcastle, the subject of the present study. The new municipality subsumed eleven smaller ones (Wallsend and Plattsburg had amalgamated) and took in parts of two shires. It took over the assets and debts of the constituent councils and their staffs. Greater Newcastle covered thirty eight square miles inhabited by 120,000 people and it was regarded with suspicion in some circles.

As F.A. Larcombe has shown in *The Development of Local Government in New South Wales* (1961), this was the first attempt at metropolitan government in the state and it has been a marked success:

the record of Newcastle has been one of substantial progress. The new authority has, in the main, achieved the purpose for which it was constituted by providing an improved and co-ordinated service throughout the area with financial results satisfactory to the district as a whole.

In the 1950s Greater Newcastle acquired two further local government agencies, the Northumberland County Council and Shortland County Council. The Local Government Act of 1919 had permitted municipal co-operation in the form of county councils but they had been slow to develop. The Northumberland County Council, with headquarters in Newcastle, was a town planning agency which tried to develop a plan for the several constituent local government areas. Shortland County Council took over the role of electricity supply, a task that cried out for a co-ordinated approach.

Physical Evidence

Former council chambers in Stockton, Carrington, Newcastle, Lambton, Wickham, Wallsend and Waratah. The remains of the Newcastle Abattoirs at Warabrook.

2.6.2 Law And Order

The maintenance of law and order has represented particular problems in two aspects of the life of the city. In charge of a penal colony, with over a thousand convicts at its peak, the Newcastle commandants had to maintain law and order with no more than a handful of free officials: it was a large gaol mainly administered by serving convicts.

The other distinctive law and order problem has arisen from the area's key industry, coalmining. With large scale industrial disputes a feature of its history, the police and army have been called on to intervene on many occasions. While coal was the nation's key fuel, such disputes had grave political and economic consequences. The police were involved on innumerable occasions, the army less frequently.

Physical Evidence

Lambton police residence
Wallsend police station
Minmi court house and police station
Fort Scratchley, regarded by unionists as repressive
Newcastle Police Station where miner's leaders were charged in 1909
Clara Street, Tighes Hill, scene of riots against evictions by police during the great depression
The Star Hotel, scene of riots over its closure in 1979.

2.6.3 Defence

Newcastle's association with the army goes back to the units of the N.S.W. Corps stationed in the convict settlement from 1804. Various other British Regiments were stationed in the city until the 1850s when the Watt Street Barracks were turned over to other uses. Thereafter, colonial army units visited Newcastle, particularly during prolonged industrial disputes (1861, 1879, 1888) and from 1855 a detachment of the N.S.W. Artillery was permanently stationed in the city to defend it in case of war in Europe.

Four 80-pdr. guns were erected in 1878 and transferred to Fort Scratchley when it was completed in 1882. In addition, from the 1850s onwards there were various volunteer military units in the city: in 1880 these consisted of the Volunteer Artillery, the Volunteer Infantry and the Naval Brigade.

In the 1890s Shepherds Hill was fortified and just before World War I Fort Wallace was constructed at North Stockton.

In that war, the city did not come under attack but it was active in the recruitment and training of troops, the showground being used as an army depot. Drill halls also existed in King Street and adjacent to the pilot station. Adamstown had a rifle range which was later replaced by one at Fern Bay. Novocastrians took a particular interest in the 30th Infantry Battalion, Newcastle's Own.

The shocking loss of life at Gallipoli had a traumatic effect on the people at home and war memorials began to appear soon afterwards. The memorial outside the Newcastle Post Office was one of the earliest in Australia, being erected within a year of the assault by Anzacs in April 1915.

In preparation for World War II, Fort Wallace was developed into the key fortress of the region to defend the Port and its industrial hinterland from attack by enemy ships. (Map 20) Radar Unit 131 based on Ash Island and fortifications around the harbour entrance were linked to a communications centre at New Lambton Public School and the Williamtown Air Force Base. King Edward Park became an army base and various private houses were taken over by the armed forces. The city was attacked by shellfire from a Japanese submarine in June 1942. In this conflict the city was most closely linked to two infantry battalions, the 2nd and the 35th.

After the end of the war, the military installations were wound down and the surviving forts were closed up or turned into museums.

The memorials to the fallen of World War II tended to be more varied than earlier memorials. The major Newcastle memorial was the Civic Centre, a combined art gallery, conservatorium and public library opened in 1957. In some smaller centres, the war memorial was no more elaborate than the addition of names to the World War I memorial.

Neither the Korean nor Vietnam conflicts had much impact on the life of the city. However, there have been moves recently to recognise their importance to those who served and the relatives of the fallen.

Physical Evidence

Fort Wallace
Fort Scratchley
Army residence, Shepherds Hill
New Lambton Public School
Fortification ruins at Nobbys, Shepherds Hill
Radar Station buildings, Ash Island

2.6.4 Communications

The first newspaper in Newcastle was the *Northern Times and Newcastle Telegraph* which began publication in 1857. Newspaper production has been continuous since then.

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. 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.

The A.B.C. began broadcasting from a studio in 1930 (2NC) and the first commercial radio station in the study area was Station 2KO which opened in 1931.

Television began in Newcastle when N.B.N. began operations in its present studios in Mosbri Crescent in 1962.

Physical Evidence

Ex A.B.C. studios in Newcomen Street 2HD Studios at Hexham Original Telegraph Office in Hunter Street Post Offices

2.6.5 Utilities

2.6.5.1 Gas

The first utility to be available to residents of the study area was gas made and reticulated by the Newcastle Gas and Coke Company which was formed in 1866. From a site in Parry Street (acquired in 1869) the Company was supplying the inner city, Hamilton and Wickham by 1879 and it gradually increased its distribution system to include all the main suburbs of Newcastle, except Wallsend which was supplied by the Wallsend and Plattsburg Gas Company from 1883. As late as 1897 the streets of Wallsend, Hamilton, Wickham, Waratah, Carrington and Plattsburg were lit by gas.

2.6.5.2 Water

Until 1887 Newcastle and its suburbs depended on wells and tanks for its water supply: by then its population was approaching 50,000 and a regular supply of good quality water was a matter of urgency. The Walka Waterworks on the Hunter River at Oakhampton began to provide water to Newcastle in 1887 and reticulation began to the surrounding towns soon afterwards. The first reservoir was constructed on the Hill in Tyrrell Street. Originally administered by the local municipalities, the system was vested in the Hunter District Water Supply and Sewerage Board in 1892.

2.6.5.3 Sewerage

The need for a sewerage system was so pressing that the Newcastle Council started its own system in the 1880s, disposing of its waste in the harbour without due regard to the influence of tides. This unsatisfactory venture was superseded by the Water Board which began to implement a sewerage system for the region in 1898. By 1907 it was ready to connect parts of Newcastle, Merewether and Hamilton. The first sewage pumping station was built near the intersection of Hunter and Brown Streets in 1910. For the dates of connection of other areas and the location of outfalls, see J. Armstrong, *Pipelines and People*.

Physical Examples

Underground brick tanks and cesspits survive in many places.
Reservoirs in Tyrrell Street, Waratah, New Lambton, Shepherds Hill, North Lambton.
Water Board offices in Scott Street and Hunter Street West.

2.6.5.4 Electricity

Lambton Municipal Council was first to establish an electricity supply works: installed in 1890, It was idle by 1900 because the Council was in debt. The Newcastle Council installed a plant in Tyrrell Street in 1891 and began to light the city streets: by 1897 all the streets of Newcastle municipality and the wharves at Carrington were lit by electricity. The Railways Department also produced electricity, at first for its own purposes, and in 1915 it began to generate at the Zaara Street site which remained in use until 1976. The council continued to supply electricity until the creation of Shortland County Council in 1957.

Physical Evidence

Nesca House Sydney Street site Railways site Zaara Street Power Station site.

2.7.1 Housing

2.7.1.1 The Inner City

For the first two decades there were two distinct standards of housing: government and private. Most of the Government structures were constructed of timber, brick or stone but they were poorly built and nothing survives from that period. The privately owned buildings were less substantial of material and method of construction and if any survive it is only as archaeological relics.

From the 1820s onwards privately built houses improved greatly as "Claremont" shows but population growth was slow and few residents were wealthy enough to build to that standard. When the pace of development quickened after 1850, landowners in the inner city area were quick to capitalise by building as many small, cheap accommodations as possible on their lots: these did not survive the late nineteenth century rebuilding phase.

Wealthy professionals and merchants usually built large houses on the Hill but in the second half of the last century they began to move out to Hamilton and Waratah-Mayfield to villas, substantial houses in large gardens. Late last century Newcastle East became available for housing after the wind-blown sand problem was overcome. Terraces of two and three storey townhouses were erected there, some of them to be used as boarding houses because of their proximity to the railway and the sea. By the 1950s this area had fallen from grace, as far as the middle classes were concerned, falling into decay. Since the 1970s, it has been redeveloped.

After the steelworks opened there was a rush to develop housing in the Mayfield area for workers and the grounds of the villas were subdivided for cheaper housing. As J.C. Docherty has shown, in the second decade of this century Hamilton and Waratah accounted for more than half of new buildings and one fifth went to Wickham and Stockton: by 1921, 80% of the city's suburban housing was of timber construction with four or five rooms.

There were several housing developments inspired by the "garden suburb" concept between 1910 and 1919. The A.A. Company launched its Sulman designed Hamilton Garden Suburb in 1910, with a middle class model of brick and tile houses in mind and by 1933 its goal of 5,000 residents had been achieved. (Map 12) The Government's estate at North Stockton proceeded from 1919 (Map 13) and the Newcastle Wallsend Company launched Birmingham Gardens in 1922. (Map 14) The Scottish Australian Mining Company followed with its Kotara subdivision in 1925. For the details of these projects, see J. Docherty, *Newcastle, the Making of an Australian City*, Chapter 4.

2.7.1.2 Housing in the Outer Areas

The earliest houses in the mining towns were usually built by the coal companies to serve the nucleus of their work forces. They were simple structures, often of slab construction. At Stockton, Merewether and Minmi, the owners initially refused to sell land, forcing residents into leaseholds with the corollary that houses were often makeshift. In the other centres land was sold, promoting better housing and more prosperous towns. In all the mining towns managers' residences were built, usually of brick or stone and very superior to other housing, reflecting the high status of their occupants.

Physical Examples

For managers' houses, see Lambton Lodge, New Lambton and The Ridge, Merewether. The Hamilton A.A. Company house in Denison Steet.

2.7.2 Social Institutions

The first social institution to appear was the Newcastle Mechanics Institute, founded in 1835, only two years after its Sydney counterpart. The first friendly society, the Loyal Union Lodge, was founded in 1842 and by 1880 there were about one hundred organisations of this type in the study area. They included Masonic Lodges at Newcastle, Wallsend and Minmi, the Independent Order of Oddfellows, the United Ancient Order of Druids, the Loyal Orange Institution, the Sons of Temperance, the Daughters of Temperance and many more.

The trade union, destined to be, perhaps, the most influential institution in the city, began at the colliery level in the 1850s and became a district organisation in 1860. At that stage there were miners' unions at Merewether, Hamilton, Wallsend, Minmi and Tomago and new lodges, as they were known, appeared with each new mine. Usually meeting in hotels and at the mines, the lodges did not acquire buildings of their own until the present century. The first trades hall, a meeting place for all unions, was built in Hunter Street West in 1895.

Other industries also produced their own unions (e.g. railways, engineering, copper smelters) but only the railways established a social-educational offshoot with physical representation: the Railways Institute buildings in Newcastle.

From the 1860s schools of arts and mechanics institutes began to proliferate, partly as a result of the availability of government subsidies. Intended to have a significant educational function, they were more important as centres of entertainment, providing games (especially billiards, chess, etc.) and acting as community halls. They also maintained libraries. The Red Cross was active in Newcastle from World War I onwards and the C.W.A., though never strong in the city, had a Newcastle branch (1929) and a Wallsend Branch (1936). It also had a C.W.A. hostel for country women staying in Newcastle.

The strength of the co-operative movement among coal mining communities provided another echelon of social activity. Introduced from the United Kingdom, the movement produced a co-operative mine in 1861 and dozens of retail co-operatives came later, some of them in the study area. Funded in 1898, the Newcastle and Suburban Co-operative Society ("The Store" as it was known) had 95,000 members by 1978. By the 1960s it encompassed eleven suburban branches and seven service stations and it was operating eighty motor vehicles and eighty five horse drawn vehicles. It also operated a health fund for members. These co-operatives were more than commercial organisations, depending for their success on loyalty to the movement which inspired them. The retail co-operatives did not survive the advent of competitive regional shopping centres.

In the present century the gap caused by the virtual disappearance of the friendly societies has been partly filled by service clubs. Rotary came to Newcastle in 1923, Apex in 1939, Lions Club in 1955.

Physical Evidence

Masonic Halls survive in Cardiff, Newcastle, Wallsend and New Lambton

The Trades Hall, Newcastle West, now part of the Art School

The Railway Institute, Newcastle West

The Co-operative Store building, Newcastle West.

The Co-operative Store service station, Newcastle West

The Co-operative Store bakery complex, Hamilton North

Newcastle School of Arts, Hunter Street

Lambton Miners and Mechanics Institute, Lambton.

Hamilton Mechanics Institute, Hamilton.

2.7.3 Ethnic Influences

The population of the study area was strongly British throughout the last century and the recruitment of steelworkers after 1915 tended to strengthen this characteristic. However, after World War II assisted immigration brought an influx of continental Europeans to the city, particularly Italians, Poles and Germans. Their presence has affected the industrial, religious and social life of the region. More recent arrivals from Asia and the Pacific Islands have not had as much effect, as yet, but Vietnamese, Chinese, Thai and Indian restaurants have made their appearance in several areas.

Physical Evidence

Hamilton's Italian businesses Greek Orthodox churches, Hamilton Polish Association Centre, Broadmeadow

2.7.4 Cultural Sites

Although much of the mythology of the Awabakal Aborigines has been lost, the records of Missionary Threlkeld suggest that Nobbies Island and the cliffs near the Newcastle beaches had special significance for them. Governor Macquarie's *Journal of his Tours* indicates that corroborees were performed on the hill at the top of Watt Street but whether this was to please the Governor or because it was a ceremonial site is not known.

In the early period of white settlement the hotels played a leading role in cultural life, partly because they had the only large meeting places but in the second half of the last century, as church halls, lodge halls and schools of arts/mechanics institutes proliferated, their functions narrowed. The strong musical life of the city, centred around bands, choirs and concerts, shifted to these halls which were accessible and cheap and did not carry alcoholic associations in an era strongly influenced by the Temperance Movement.

Of particular importance, also, were the parks which were considered essential to town life in the last century. In 1880 Newcastle had its Reserve (later King Edward Park), Carrington had 50 acres set aside as a recreation reserve, Wickham had a reserve at Islington of 11 acres already being planted and there was the Botanic Gardens site at Waratah in an early stage of development. The main push for parks came later in that century. By 1900 Adamstown professed three reserves; Carrington, several parks; Islington and Tighes Hill, several "recreative spots"; Hamilton, a pretty park; Lambton, a fine park of 33 acres; Merewether, several recreation reserves; Stockton, several recreation reserves; Wallsend, two parks and Waratah, parks, recreation reserves and the Botanic Gardens.

These open spaces were used for the typical sporting activities and for less formal occasions such as picnics. Of particular significance for the mining communities were the places used for miners' aggregate meetings which several thousand would attend to discuss union business. In the early days these occurred in convenient paddocks, e.g. Arnott's Paddock at Newcastle West or Groves Paddock at Waratah but subsequently at sporting venues or parks.

King Edward Park in Newcastle was the venue for some truly historic occasions like the celebrations for the end of World War II but Newcastle Beach and nearby Shortland Park were chosen for the city's 150th Anniversary function.

Physical Evidence

Of the early hotels only sites survive

For the mechanics institutes/schools of arts, see Social Institutions theme.

Of the parks, the most significant are King Edward Park, Wallsend Park, Centennial Park and Lambton Park.