The Growth of an Industrial Valley:
Lithgow, New South Wales

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The archaeology of Lithgow reveals some inconsistencies in the spatial patterning and physical fabric of the town. Upon investigation the variations from the expected pattern can be seen to relate to the personalities of the entrepreneurs. Some saw a profitable investment. Others, imbued with a spirit of 'colonial nationalism', saw it as the arsenal of Fortress Australia. Such attitudes affected the choice and the location of specific industries. We cannot see any structural manipulation of space, such as that recently described at Lowell, Massachussetts, 'designed both to serve the needs of industry and to accommodate America's image of itself as an agrarian republic',[1] but perceive instead a quasi-random location of industry, determined by ad hoc alliances and political allegiances which may have their origin quite outside Lithgow itself. The relics of housing similarly exhibit an inconsistent pattern. They are visibly over-represented in certain chronological periods, under-represented in others. Here too, personalities have to be taken into account: some employers had no interest in housing their workers, some had paternalist views and created housing development, others sold land to get some return on a disappointing investment. This paper presents the growth of Lithgow and the creation of its archaeological record within a framework of industrial growth and decline, expressed in a series of phases, pre-industrial (1839-1868), early industrial (1869-1880), expansion (1881-1890), consolidation (1891-1915), limitation of growth and decline (1916-1939). Dr Cremin lectures in history at the University of Sydney.

INTRODUCTION

The key to the town's location lies in the antagonistic attitudes of two men who might, at first glance, seem rather similar: both were named Brown, both were Scottish, from relatively similar backgrounds of small Presbyterian farmers, both came to the colony because of connections formed in their home country and both reached positions of wealth and influence through the manipulation of Australia's burgeoning economy. The difference between them is that the older man, Andrew Brown of Cooerwull, saw himself primarily as a pastoralist and patriarch, running an outback empire from his estate at the mouth of Lithgow's Valley, astride the Great Western Highway.[2] He aspired to lairdship, discreetly symbolised by the building of a seignorial dovecote, more obviously displayed in imposing stone buildings east of the highway, demarcating his territory from that of his neighbour and former employee, Thomas Brown of Esk Bank.

Thomas Brown was 13 years younger than Andrew, whom he met through a connection with John Maxwell, former superintendent of government stock and in the 1830s a landowner at Hartley.[3] Andrew employed Thomas in 1839 to manage the flourmill at Cooerwull and to supervise the building of the first part of Cooerwull House. Thomas then took up land in the Lithgow valley, on the edge of the Cooerwull estate, and on either side of Bells Line of Road, which runs right through the valley. He may have been aware of the potential of the valley's extensive coal measures: it was hard to miss the fact that coal outcropped particularly in the area of Esk Bank. He was certainly quick to capitalise on his investment when the railway line was built in 1869: the railway followed Bells Line of Road, which it joins at Clarence, having up to that point followed the Great Western Highway from Sydney.

With the railway came big-time entrepreneurs who gambled eagerly on the new opportunity: Thomas Sutcliffe Mort, Thomas Saywell and James Rutherford were all men who had already made a fortune and expected to make another in Lithgow. Thomas Brown was ready and waiting: he supplied coal to the railway, sold land where he could, encouraged industry, to which he supplied coal and, astutely, created the nucleus of today's town, by making land available for a hotel, a store, a post office and a courthouse. Andrew Brown, in contrast, did everything in his power to prevent Lithgow from developing. He and his heirs obstinately withheld from sale all the land on the eastern side of the Great Western Highway, which was not surrendered until 1908, forty years after the coming of the railway. The centre of Lithgow is thus located well away from the principal road access and is today reached through twentieth century suburbs.

The patterning of the town can only be understood when it is viewed from the railway. The railway brought money and people, far too many people, for there was already a labour pool of small farmers in the adjacent Hartley Valley, and this pool was greatly augmented by immigration of skilled workers from British mining towns. These workers were never adequately housed, the entrepreneurs displaying in general a total disregard for worker welfare. In time the worker population did increase to the point that it could finance some minor amenities, but Lithgow has been for most of its life a worktown and a man's town, where women and children had literally no place. This was not an inevitable development. Things could have happened otherwise. Had the first entrepreneurs been more concerned with long-term policies; had they provided adequate housing and working conditions, Lithgow could have developed organically and a great deal of suffering been avoided.

As it happened, however, the condition of Lithgow in its early industrial phase, between 1870 and 1880, must have been very similar to the favelas of Brazil today: at the Vale of Clwydd in 1879 'a sort of village or rather hamlet, embosomed in the hills and woods, has here sprung up, the miners' homes in this spot being perhaps less comfortable than picturesque. Their habitations are, for the most part, huts of mud or wood; but some, manifesting an Arab-like independence, apparently prefer to live in tents'.[4]

As time went on, a small population of townsfolk grew up, providing some essential services, such as medicine and banking, or running minor industries, such as breweries or a paint works, or supplying food and drink, but the valley continued to be dominated by heavy industry, coal mining, ironmaking, coppersmelting and large brickworks. Between 1869 and 1890 these industries took up all the space still available in the east and in the northern and southern gullies. Housing was still confined to marginal areas and continued so until the forced sale in 1908 of Cooerwull land opened up the present Extension estate, which doubled the town's residential area. It was doubled again by the opening up of the Cooerwull and Littleton Estates, when the town reached its present dimensions.

The history of Lithgow's settlement is visible in its street layout and in the architecture of individual buildings. The development of the town can be charted within the industrial phases defined earlier. These phases are of unequal length and are unevenly represented in the archaeological record. Each one represents a stage in the maturing of the town which may seem to be an inevitable outcome of the preceding phase, but which was in reality caused by a complex set of factors prime among which was the personality of certain individuals.

PRE-INDUSTRIAL (1839-1868)

The first phase lasts from 1839, when Thomas Brown took up his first land grant, until 1868, when Patrick Higgins brought the railway line down the Great Zig Zag into Lithgow valley. Until then the valley was occupied only by four properties: part of Cooerwull's 664 hectares (1640 acres) on the west, with Esk Bank's 283 hectares (700 acres) immediately adjacent, and on either side of Farmer's Creek. North of Farmer's Creek was a property called the Hermitage made up of 40 hectares (100 acres) purchased from Andrew Brown in 1844, and of an additional 52 hectares (130 acres) along Farmer's Creek purchased in 1865 by the Revd. Colin Stewart for use as a residence and as a base for his far-flung outback ministry. The last and smallest property was of 40 hectares (100 acres) to the south of Esk Bank and belonged to Patrick Sheedy, a small farmer.[5]

The archaeological remains of this phase are rural and residential. Thomas Brown and the Revd. Colin Stewart had built dignified homesteads, civilised but not pretentious. Esk Bank House and some of its outbuildings have survived and are now preserved as the City Museum. The Hermitage survives only in attenuated form, as one wing of a residence at 7 Coalbrook Street.[6] Sheedy's house is not known but it may very well have been the famous house with the outside *pise* oven shown in an etching and a photograph of the 1870s.[7] The boundaries of the four properties are still visible in the present street outline: the eastern edge of the Cooerwull estate is marked by a line between Hassans Wall Road and Sandford Avenue (which also marks the western edge of the Hermitage land). The eastern boundary of the Hermitage is marked by Hepburn Street. The Esk Bank estate boundary ran just south of the line of Pau Street and, to the west, part of the portion boundary survives as Eskbank Street. Sheedy's 40 hectares
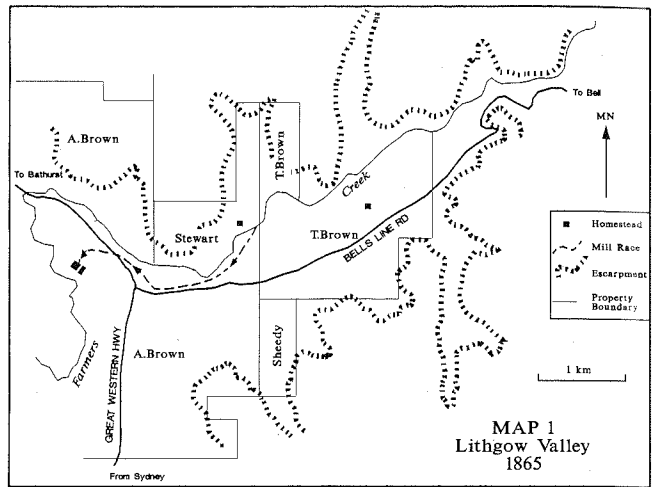

Fig. 1: The pre-industrial settlement of Lithgow.

(100 acres) ended at Shaft Street to the south, the street name recalling the sinking of Higgins' first shaft on that land in 1870. Beyond the valley the remains of the first phase are extensive, including Cooerwull House, its stable square, part of the mill race embankment, and the chimney stack for the flour mill, which was enlarged in 1867 for use as a woollen mill.[8]

The first phase is thus very well represented archaeologically and far better, proportionately, than the two succeeding phases, which last from 1869 to 1880 and 1881 to 1890 respectively. These were periods of major industrial growth and land acquisition which profoundly affected the settlement of the valley but have left relatively few traces in the archaeological record.

EARLY INDUSTRIAL (1869-1880)

The second phase (1869-1880) is now marked principally by the railway line and its industrial sidings.[9] Immediately after the railway was opened in 1869 there was a frantic acquisition of land in order to profit from the coal which was abundant and, in portions of the valley, was easily worked by tunnels or relatively shallow shafts.[10] The first persons to use the coal were, of course, the existing landowners. Andrew Brown had long mined coal for private use and for his mill (converted to steam in 1863), but he never operated commercially. Revd. Colin Stewart allowed coal to be mined from his land by a syndicate of English railway workers (Poole, Woolley and Anderson) first for the use of the railway in 1869, and then as a normal commercial enterprise; this very small mine was initially known as the Hermitage.

Thomas Brown opened two mines at Esk Bank, the first (Eskbank 1) in 1868, about 800 metres north of the line of rail, the second in 1873 just south of the railway. He sold part of Esk Bank's land, north of the railway line, to James Rutherford and his partners, who established the Eskbank Ironworks in 1874. Brown supplied the Ironworks with coal from Eskbank 2 mine, carting the coal over a rail bridge, along the line of Bridge and Tank streets. Simultaneously he supplied coal to the Esk (later Eskbank) Copper Smelter set up by Lewis Lloyd on land immediately adjoining Eskbank 2. The land to the north of Farmer's Creek, adjacent to Esk Bank was acquired by Thomas Sutcliffe Mort, partly as holding paddocks for stock, partly for abattoirs for the Freezing Works, built in 1874-1875. Sheedy's land had been acquired by the railway contractor Patrick Higgins, who up to now had been supplied by the Hermitage and Eskbank 1. He and his partners, who
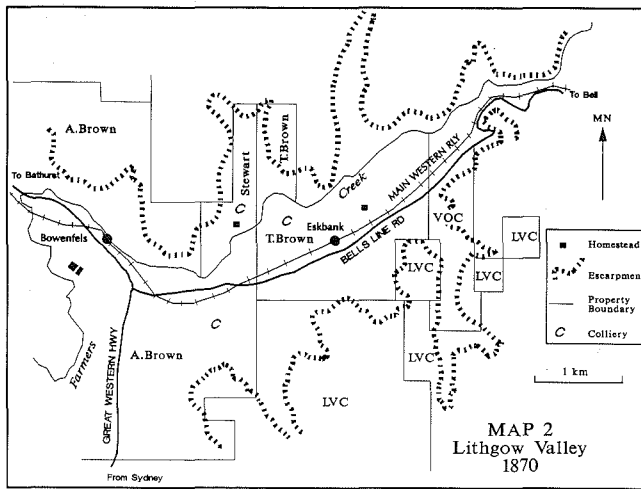
Fig. 2: Early industrial land acquisition in Lithgow valley.

Fig. 3: Diversification of industrial land in the valley: Rutherford is building an ironworks on his land, the Bowenfelds Copper Smelter is being launched on the small triangle of land beside the Hermitage homestead, the Morts Freezing Works has been erected on land belonging to Robert Pitt (Thomas Brown's manager) and connected to the railway by a rail siding.

included Dr W.F. Mackenzie, inspector of coalfields and a major landowner in the adjacent Hartley valley, acquired over 400 hectares (1000 acres) of land south and east of Thomas Brown's land, in parcels interspersed with 121 hectares (300 acres) acquired by Thomas Saywell, a Sydney tobacco merchant, in partnership with John Garsed, a local storekeeper. There was some manoeuvring among the partners in these ventures.

Dr Mackenzie seems to have dropped out and Higgins formed a new company, called the Lithgow Valley Colliery, in 1873. His partners were then Thomas Talbot Wilton, John Busby, Edward Gell and Edward Combes (who had some experience of geology from a stint in the French army). Saywell formed the Vale of Clwydd colliery and, independently, set up the Eagle Copper Smelting Company to smelt copper from Eagle Swamp near Bathurst. The Vale of Clwydd (VOC) company remained much the same size territorially, but the Lithgow Valley Colliery (LVC) increased its holdings considerably by buying out most of Colin Stewart's holdings and extending them to the north and east. It opened a new, large, Hermitage Colliery, in direct competition with the first, small, Hermitage colliery (which had become the Bowenfels Coal Mining and Coppersmelting Company in 1873). The second Hermitage operated until the 1980s whereas the first had gone out of business by 1884, when it was absorbed into the LVC's holdings.

By 1876, therefore, three of the four landholdings of the first phase had been dismembered, and a remarkable array of new industry had sprung up. Some of these ventures were more viable than others. The copper smelters were not a great success, largely because there was not sufficient ore to keep them going. Mort's refrigeration plant was a failure, for technical reasons unconnected with their location or the quality of Lithgow coal. Despite these problems there was every reason to suppose that Lithgow would go on developing as a major centre of industry.

It is thus all the more surprising that none of the entrepreneurs made any attempt to house their workers or to create a viable town centre. They went further and made it impossible for workers to settle by refusing to sell land.[11]

McInnes has charted the pattern of house sales in Lithgow and it makes depressing reading. At first no land was available at all within Lithgow, though lots could be bought cheaply in Hartley valley. Lots made available in the Vale of Clwydd by the VOC company were not bought by individual workers but by speculators. Some lots were made available in the Vale of Clwydd by the VOC in 1870 and 1878 and the LVC made 65 lots available on its land in 1877 but these seem to have been too expensive to be
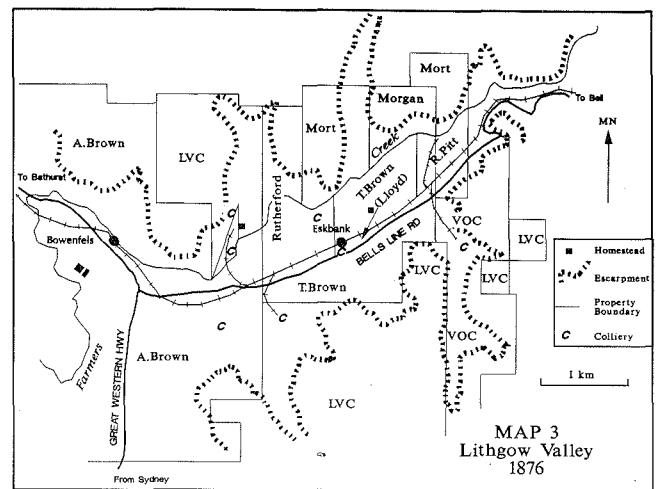
purchased by workers. McInnes suggests that the entrepreneurs did not have enough capital to invest in housing. The only entrepreneur who did build was Rutherford who immediately subdivided 28 hectares (70 acres) into 600 allotments. The net result of all this is that there is very little in the way of housing from this period left in Lithgow. The major archaeological remains are those of industry and even these are scant, because of the constant remodelling and refurbishing of the major plants.

INDUSTRIAL EXPANSION (1881-1890)

The third phase (1881-1890) differs from the second only in that entirely new areas of land were opened up. It resembles it in the optimism of the investors, in the variety of industry and in the lack of interest in worker welfare. Expansion was on the margins of the established industrial centre, to the east all along Farmer's Creek, with first the Zig Zag colliery (1883), then Oakey Park, at the very end of the valley (1885), and last the Vale colliery, facing Oakey Park (1888). The established industries continued to diversify. In 1876 the LVC had opened a Pottery and Brickworks which became an important resource. At the Ironworks Rutherford reopened Eskbank 1 coalmine, which was on his land, and renamed it the Ironworks Colliery. The small Bowenfels Colliery (formerly Hermitage 1) was swallowed up by the LVC in 1884, to form part of the larger Hermitage 2 mine. Lloyd's Eskbank copper smelter was recapitalised and renamed the Burraga Copper Smelter.

The town clung to a small gap between Thomas Brown's land at Eskbank and the western frontier of Andrew Brown's land to the west. Into this town workers came from everywhere, since access by rail was so easy. There was chain migration of British miners, such as the large group that came out from Silverdale, Staffordshire, in 1886. These miners brought with them not only technical skills but also ideas of union solidarity which were soon put into practice. In general the miners won their case, but the fight was long and bitter. The earliest disputes were not over working conditions but over payment. The miners wished to be paid by weight of coal actually extracted, whereas the owners wished to apply a standard formula to each load. Early minutes of the Eskbank miners union survive and give

details of the debate on weighing.[12] Individual weighing was eventually adopted but not until 1898. The iron industry also had problems, right from the start, and these continued to exist during the life of Lithgow as an iron and steel town.

There can be no doubt that the new owners were not concerned about workers' welfare, any more than they were concerned with creating a town centre. This attitude contrasts very much with that of the earlier landowner, Thomas Brown, who had donated a Presbyterian church and made land available cheaply for a School of Arts and for institutional buildings such as the courthouse and post office. Other church buildings were paid for by the congregation, which was mostly of employed miners and other industrial workers. To that extent, Lithgow is very much a town built by the people for the people.

There was not a total dearth of building investment, however. Hotels increased from one in 1874 to four by 1879 to eight by 1888. In 1888 there were three Assembly Halls, the School of Arts, a Jockey Club and six different religious denominations, for a population of 3500.[13] The pubs were splendid, as was one of the churches, St Paul's Church of England, built by Edmund Blacket (replaced in 1930).

The halls are to this day a very striking feature of Lithgow town. Some were religious, but most were of benevolent societies.

Along with a centre, Lithgow was acquiring, for the first time, a set of townsfolk, whose livelihood came from the town, not from its surrounding industries. They were the publicans, professional people and government employees. They resided on the fringes of the valley or in the town itself. Because of the Cooerwull estate's stranglehold on the western half of the valley, large plots of land were almost unavailable, even for the wealthy, so that Lithgow's emerging bourgeoisie was never concentrated in any particular area.

Twenty of these new burghers proudly display themselves in the pages of the *Aldine Centennial History*. They are much of a muchness, self-made men, mostly born outside Australia, who are ending adventurous lives in what is clearly perceived as a town that cannot fail to prosper. Interestingly, though these gentlemen are keen to claim membership of the Masons, the Good Templars, the GUOOF, the RAOB, the IOOF, MU, UAOD, and, always, the Jockey Club, only one of the twenty worthies lists church affiliation; the owner of Tattersalls Hotel was also treasurer of St Patrick's Church. Clearly the self-image is of solid, conscientious but jovial men who have seen the world and know what's what. Their occupations are of some interest: auctioneer, chemist, company director (LVC), paint manufacturer, tailor, bank manager, storekeeper (2), cordial manufacturer, landowner (Cooerwull), soap manufacturer, butcher (2), physician (2), publican (2), brewer, manager (VOC), and builder, constituting a pool of skills and resources in Lithgow which could hardly have been imagined ten years earlier.

Lithgow boomed during the period 1880-1890. It was incorporated as a borough in 1889, Main Street was graded in 1890 and in that year cheap housing land became available on Mort's Estate, north of Farmer's Creek. The population doubled and housing stock, though still inadequate, at least improved in quality.

INDUSTRIAL CONSOLIDATION (1891-1915)

The following two and a half decades, 1891-1915, constitute a fourth phase of consolidation, within the parameters which had by now become clearly defined. The pattern had been set, both spatially and socially, and this phase is
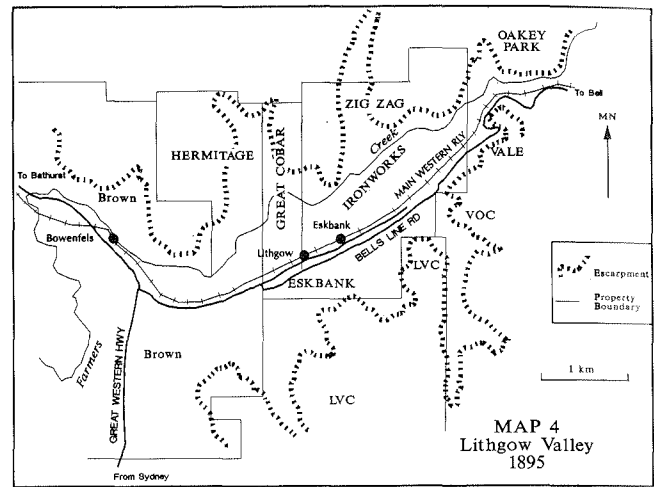

Fig. 4: Consolidation of industrial land in the valley: the collieries have now spread to the eastern end of the valley and into the northern gullies. Thomas Brown's land north of the railway has been acquired by Sandford's Ironworks, while part of the Ironworks land has been sold to the Great Cobar Smelter.

essentially one of building upon the achievements of Phases 2 and 3.

The town was growing and becoming more sophisticated. By 1900 there were nine hotels, three banks, a municipal water supply and gaslights in the main streets. The population increased by a half between 1901 and 1911, from 5628 to 8196 and the pressure on housing was still intolerable, despite the subdivisions in 1895 of the Hermitage and of some of the Ironworks land. A sustained campaign by John Ryan, editor of the Lithgow Mercury, culminated in the forced sale of some land from Andrew Brown's holdings. This released 110 allotments in what is called the Extension Estate, just east of the old town centre, but it hardly satisfied the demand. Rents continued to be high and in 1911 still only 31 per cent of residents owned their dwelling.[14]

In industry there were some failures, notably that of the decorative ceramics at the LVC Pottery, but mostly the outlook was good. The major developments were in the metallurgical industries. A new copper smelter, the Great Cobar, was erected on land east of the Ironworks in 1895. Getting the Great Cobar to settle in Lithgow was the achievement of two men, John Ryan of the Mercury, and the remarkable Joseph Cook, a Silverdale migrant and trade unionist who had a brilliant if bizarre political career, rising to Prime Minister in 1913-1914.[15] In 1895 he was the local State member and Postmaster General but he left the area in 1901, to enter a career in Federal politics, in opposition to Labor.

Cook was, or became, a staunch supporter of the British Empire, displaying an attitude which was perceptively dubbed 'colonial nationalism' by the British writer Richard Jebb.[16] This attitude was shared, enthusiastically, by Lithgow's most prominent industrialist, William Sandford, manager and owner of the Ironworks, the man who created Australia's modern iron and steel industry.[17] Under his management, Lithgow became a steel town, heavily dependent upon government protection and contracts, but nevertheless a notable example of Australian self-sufficiency. Sandford had been much impressed by the Boer War and was also quick to see the consequences for the steel industry. In 1901 he was pointed out that Australia was far too dependent on imported goods.

He was satisfied that, before many years were over, Australians would have to take up arms and defend their shores against a common enemy. Could we make a ton of iron or ship-plate or a pound of powder? We had seen that
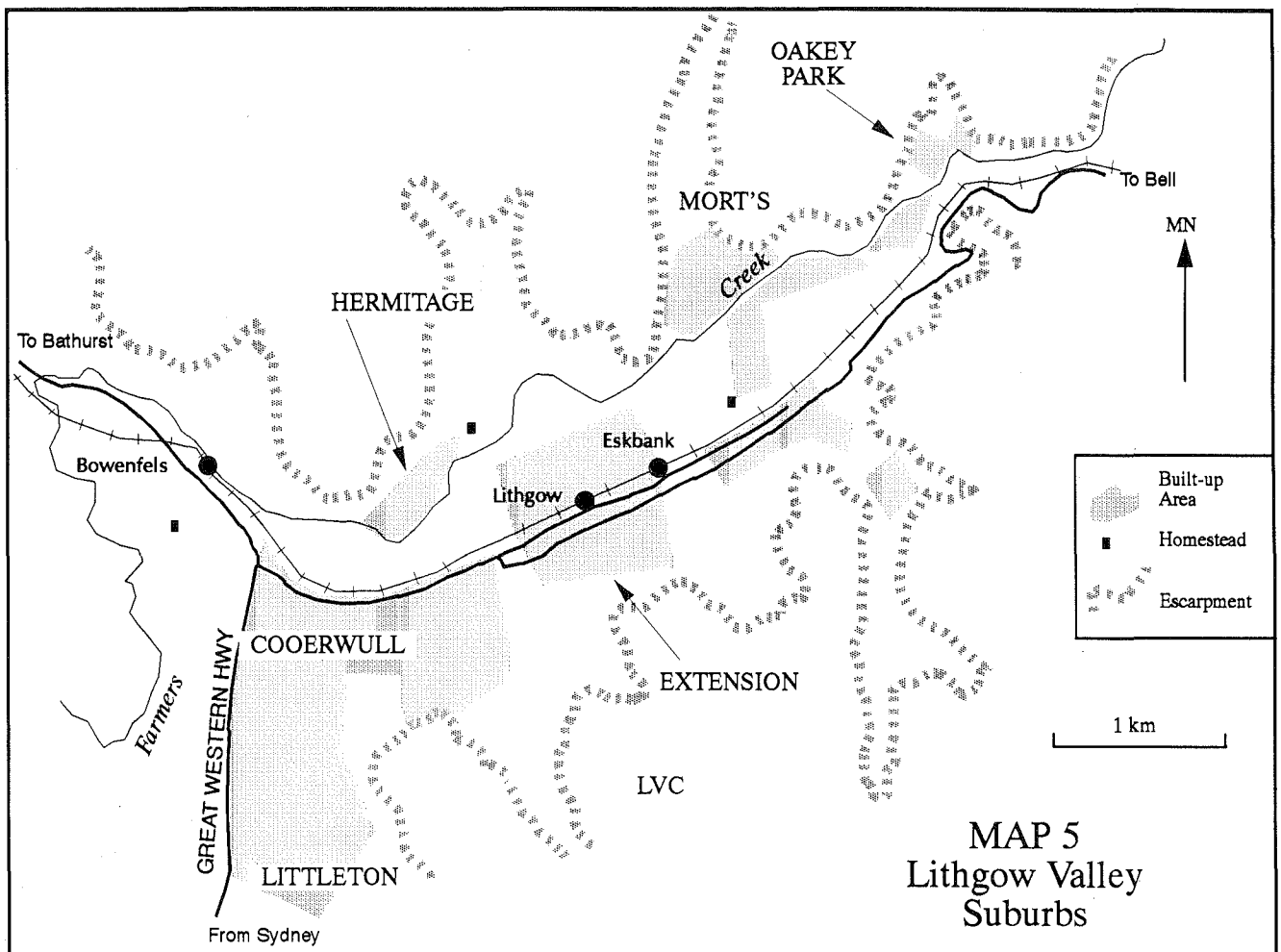
Fig. 5: Development of Lithgow's residential area by the opening of land to the north and west in the period 1890-1915.

Australians were as good fighting men as any in the world, but what was the good of a man without weapons?[18]

Sandford's views on defence rested upon the strategic location of Lithgow in whose potential he had an almost mystic faith. His opinions are echoed in the remarkable plea to have the Australian capital located in the Western district of New South Wales. The West, with Lithgow's seemingly inexhaustible resources of raw material, was seen as the ultimate fortress.

The presence of coal at Lithgow would help to establish the Capital as a self-sustaining centre. The fall to an enemy of Sydney or Melbourne is a remote but not an inconceivable contingency. A Capital in the West, self-sustaining, would be invulnerable, whether viewed as arsenal or fortress.[19]

In fact the resources were far from inexhaustible. Iron ore and limestone (used as a flux) were actually running out. The clay was excellent and there were four brickworks, including Newbold's Silica Brick, but the coal was unsuitable for coking and thus useless for smelting. This sad fact did not really become apparent for a long time.

True, the Vale coke ovens had closed very quickly, but they were so crudely built that was hardly surprising.[20] Two sets of coke ovens were built at Oakey Park and this coke was used in the Blast Furnace which Sandford built in 1906-1907. The Blast Furnace bankrupted him, but he had nevertheless achieved his dream of smelting iron from native ores. In 1908 his wishes for a strategic centre in Lithgow were realised by the acquisition of land from the Brown estate for a Small Arms Factory. It is probably not a coincidence that Joseph Cook was then Minister for Defence.

The Small Arms Factory was to save Lithgow from the impending economic catastrophe. In the 1910s, as throughout the earlier period, entrepreneurs were undercapitalised and the workers' conditions were poor. Dissatisfaction was most noticeable at the Iron and Steel Works, where the Hoskins Brothers, who had succeeded Sandford, were trying to bring in new work and pay systems. In Sandford's time the workers had been paid in a rather erratic system of piece work. Sandford's views on this are worth quoting, as examples of his management style:

"The problem of capital and labour was a great one, of whether men should get the proportion of what they earned. He had taken a certain position in Lithgow and it was not a question of whether a man got two, three or five pounds per week, but what he earned. That was the question we ought to go into and that can only be done by an Accountant. As far as he was concerned, his Accountant would answer any question that the men working for him chose to ask". (1901)

Mr Sandford declared that individual effort, on the part of workmen and employees generally, should be more fully rewarded, and said he favoured the south Staffordshire system — contract piece work, with sliding scales of pay according to the amount secured for the product — rather than set wages. (1922)[21]

The Hoskins were appalled by this system, which actually had not worked too badly, in that there were relatively few strikes at the Ironworks. The new regime was confrontational and disputes became frequent, culminating in the nine-month long strike of 1911.[22] However, both Sandford and the Hoskins did make land and houses
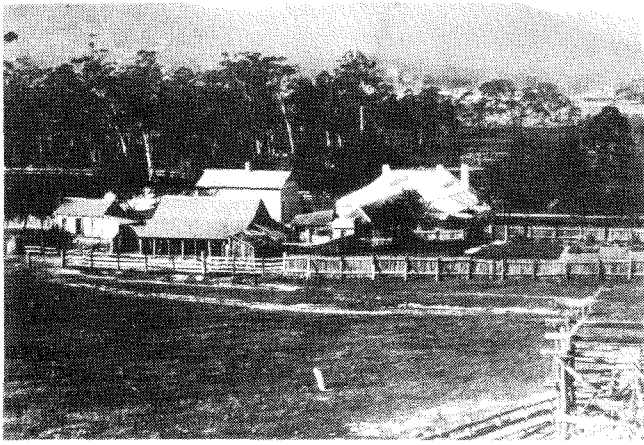
Fig. 6: The Hermitage homestead c.1880 with the shaft of Hermitage No.1 mine at the bottom. This view. taken from due north, shows how much open space still existed in industrial Lithgow: the only two visible structures are the 3-arch rail bridge (now opening onto Albert Street) at right of centre, and the gothic-style house (now 24 Lithgow Street) built by Edward Gell, the LVC manager. (Photo: Museum of Applied Arts and Sciences)

available for the workers, and the Hoskins donated a library and a church to the town. In that respect the owners in the fourth phase differed very much from those of the second and third phases.

The fourth phase is the best represented in the archaeological record. Most of the older buildings in the town centre and the little that is left on the industrial sites belong to this phase. The major relic is, fittingly, the Blast Furnace site, and its reservoir, Lake Pillans, but there are also the Vale coke ovens, most of the Oakey Park colliery, the Zig Zag Brewery, the few structures left on the LVC and Hermitage collieries, part of the Small Arms Factory, and a great deal of the workers' housing.[23]

The reason for this high retention rate, which was much higher until the wave of demolitions in the 1970s-1980s, is that Lithgow's industry slumped after the First World War. During the war it was sustained, as Cook and Sandford had foreseen, by the steel and coal industries, the arms manufacture and, remarkably, by the Cooerwull Tweed Mills, still going strong and producing cloth for the military.

LIMITATIONS OF GROWTH AND DECLINE (1916-1939)

Once the war was over the economic reality became very plain. The only new industry was the State Coal Mine, which worked briefly in 1916-1917 but did not really get going until 1920. Charles Hoskins opened the Steelworks Colliery in 1926 after building coke ovens for the blast furnace in 1915-1916, but he had already bought into the Illawarra, where the entire Lithgow plant was transferred in 1929-1932. In the 1930s, during the Depression, only the collieries operated and even then sporadically. Zig Zag closed in 1933 and Oakey Park in 1939.[24]

The archaeology of the inter-war period is represented by parts of the State Coal Mine and by the Hoskins coke ovens, of which extensive foundations survive along the railway east of Lake Pillans, and by some fine housing in the areas around the Small Arms Factory, in the Cooerwull and Littleton Estates. The archaeological remains of the Depression are of public works, such as kerbing and guttering and the landscaping of the Glanmire Reserve, which occupies the land through which Andrew Brown's mill race had run a hundred years earlier.

The population had peaked in 1929 to a total of 18,000 persons, making Lithgow the fourth largest town in New South Wales, after Sydney, Newcastle and Broken Hill. These people were still not adequately housed and there were very few public amenities. Such open space as there was rapidly turned into shantytowns as the homeless unemployed gathered.[25] The solidarity of the people of Lithgow during these hard times is remarkable and has done a lot to foster a particular image of 'the spirit of Lithgow', compounded of resentment and the will to battle on. The resentment is on the whole justified, while Lithgow could probably never absorb the available pool of labour, the workers were certainly hard done by in terms of living conditions. Had adequate housing been made accessible in the early stages the hardship of the Depression would have been lessened, at least for the local people.

The Second World War aggravated the housing situation, even though it created employment at the SAF and at the collieries.[26] The housing which had run down completely in the 1930s simply could not accommodate the incoming labour force, and housing was never really adequate until the 1950s, at which time major changes in coalmining methods created many redundancies. Five collieries closed between 1957 and 1963 (Cobar, Eskbank, VOC, State and Steelworks).

LITHGOW TODAY

Lithgow has changed very considerably since the 1950s. It is now being absorbed into the western fringes of the Sydney megalopolis. Heavy processing industry is long gone and has been replaced by light manufacturing industry. Property prices are rising and rents are high. As the town gentrifies, a positive symbolic value is for the first time being placed on the industrial heritage. Till now the attitude of the people of Lithgow has been, very understandably, that the industrial heritage represented a period of oppression and degrading work from which they wished to dissociate themselves. There was a wave of municipal destruction in the 1970s and early 1980s which swept away the Zig Zag Colliery winding house, the Scenic Brickworks chimney and almost all of the LVC complex. The Blast Furnace engine house survived largely through civic inertia. The loading areas for the Hoskins coke ovens and the Hermitage Colliery buildings have recently been quite unnecessarily vandalised.

In contrast some sites are now receiving long-overdue attention, to some extent because they have some tourist potential. As part of city conservation programmes, three sites are being presented to the public. The Blast Furnace site has been landscaped, the Oakey Park wooden head frame is being stabilised and landscaped, and plans are in hand to make the State Coal Mine into an industrial museum. Both the coal mines are in areas of great natural beauty and the Blast Furnace engine house has a distinctively monumental quality. The three sites are thus essentially perceived as aesthetic items and are being so treated. This style of presentation reflects not only the vision of our own time, but also the message that the past is now safe to handle.

A particular message for the archaeologist is that these remains have survived partly by accident; but their preservation is coming about through a historical process which is clearly displayed in the remodelling of the industrial past. The structures reflect Lithgow's chaotic, unplanned growth and decline but their deliberate preservation reflects Lithgow's integration into a metropolitan culture. The artefacts of preservation (signage, landscaping) are thus powerful archaeological markers in their own right.

NOTES

1. Beaudry 1989.
2. Jack 1987 (I am indebted to Ian Jack for the use of his comprehensive research library on Lithgow).
3. McKenzie 1969.
4. *New South Wales Railway Commissioner's Railway Guide to New South Wales* 1879:69.
5. *The Official Post Office Directory of New South Wales* 1867.
6. Cremin (ed.) 1987:67-68.
7. Evans 1980:4, 10, 57.
8. Jack 1987:28-30.
9. Cargill 1977.
10. Information from *Mackay 1870 Visit to Sydney,* p.15; *The Illustrated Sydney News,* 27 September 1873, p.6; *Town and Country Journal,* 7 February 1874; *NSW Dept of Mines Report of Examiner of Coalfields* 1869, 1872, 1873; NSW Dept of Mines Geological Map of the Districts of Hartley, Bowenfels, Wallerawang and Rydal 1875.
11. McInnes 1972:40-50.
12. Hartley District Miners Mutual Protective Association. Eskbank Colliery Miner's Lodge. Minute Book 1886-1910 (ML MSS 1692);Downey 1972:36-39.
13. *The Australian Handbook 1888.*
14. McInnes 1972:89-107.
15. Murdoch 1979.
16. Eddy & Schreuder (eds) 1988.
17. Cremin & Jack 1986:12-17; Jack 1988.
18. *Lithgow Mercury* 19 January 1901 and *Sandford Papers* in the Mitchell Library, Sydney (ML MSS 1556/2).
19. Machattie 1904:7.
20. Powell 1982.
21. *Lithgow Mercury* 19 January 1901 and 20 November 1922; also in *Sandford Papers* (ML MSS 1556/2).
22. Murray & White 1982; Hoskins 1969.
23. Cremin (ed.) 1987.
24. Cargill 1977:1.
25. Macpherson 1976.
26. Dobson & Howes 1943.
27. Cremin 1988; Cremin and Jack 1990.

Fig. 7: An aerial view of the Hermitage in the 1980s, from due west. The Hermitage colliery is at the left, and beyond it the still sparsely inhabited area of McKellar's Paddock. The Hermitage homestead (now 7 Coalbrook Street) is between the colliery and Farmers Creek, which separates the Hermitage Estate from the open space of the Glanmire Reserve and the vacant land of the former Ironworks Estate. (Photo: NSW Mining Museum)

BIBLIOGRAPHY

BEAUDRY, M.C. 1989, 'The Lowell Boott Mills Complex and Its Housing: Material Expressions of Corporate Ideology', *Historical Archaeology* 23.1:19-32.

CARGILL, A. 1977, *Railway Stations and Industrial Sidings in the Lithgow Valley*, Lithgow District Historical Society, Lithgow.

CREMIN, A. (ed.) 1987, *Survey of Historical Sites: Lithgow Area*, NSW Heritage Council Sydney.

CREMIN, A. 1988, 'The Blast Furnace at Lithgow, NSW, and the Presentation of Ironmaking Sites', in *Fourth National Conference on Engineering Heritage* pp.52-58, Institution of Engineers Canberra.

CREMIN, A. & JACK, R.I. 1986, *Lithgow Blast Furnace Site: Archaeological Survey*, unpublished report Council of the City of Greater Lithgow.

CREMIN, A. & JACK, R.I. (in press) 'Australia's First Modern Blast Furnace, Lithgow, New South Wales', in *TICCIH Industrial Heritage* — Austria 1987, Transactions 2, 1990, pp.56-61.

DOBSON, H. & HOWES, H.E. 1943, *Lithgow 1942: A Survey of the Life of the Town*, Department of Labour and National Service (Industrial Welfare Division).

DOWNEY, R.W. 1972, *Lithgow as an Industrial Centre: History of Industry in Lithgow, 1870-1912*, unpublished B.Econ. thesis University of Sydney.

EDDY, J. & SCHREUDER, D. (eds) 1988, *The Rise of Colonial Nationalism*, Allen & Unwin, Sydney.

EVANS, I. 1980, *The Lithgow Pottery*, Flannel Flower Press, Sydney.

HOSKINS, C. 1969, *The Hoskins Saga*, Sydney.

JACK, R.I. 1987a, 'Andrew Brown Sites', in Cremin, A. (ed.) *Survey of Historical Sites: Lithgow Area*, pp.25-45.

JACK, R.I. 1987b, 'Andrew Brown, Laird of Cooerwull', *Journal of Royal Australian Historical Society* 73:173-186.

JACK, R.I. 1988, *William Sandford, A Flawed Ironmaster in Fourth National Conference on Engineering Heritage* pp.47-51, Institution of Engineers, Canberra.

MACHATTIE, T.A. 1904, *The Federal Capital: The Case for the West, Revised Statement*, Western Federal Capital League, Bathurst.

MACKAY, A. 1870, *Visit to Sydney and the Cudgegong Diamond Mines*, Sydney.

MACPHERSON, P.J. 1976, *Unemployment and Attempts at its Relief in Lithgow during the Great Depression: 1929-1933*, Lithgow District Historical Society.

McINNES, R.J. 1972, *Lithgow, 1869-1930: an Outline Economic History of the Town*, unpublished B.Comm. thesis, University of NSW.

McKENZIE, E.J. 1969, *Thomas Brown, Founder of Lithgow, and his Home*, Esk Bank, Lithgow.

MURDOCH, J. 1979, Sir Joe: a Biographical Sketch of Sir Joseph Cook, *A Silverdale Historical Publication*, Stoke-on-Trent.

MURRAY, R. & WHITE, K. 1982, *The Ironworkers: a History of the Federated Ironworkers' Association of Australia*, Sydney.

POWELL, C. 1982, 'Vale Coke Ovens, Lithgow, New South Wales', in *Australian Archaeology* 15:67-75.