COAL MINING IN NEWCASTLE, 1801-1900

J.W. TURNER

Newcastle History Monographs No.9

NEWCASTLE REGION PUBLIC LIBRARY



THE COUNCIL OF THE CITY OF NEWCASTLE, NEW SOUTH WALES, AUSTRALIA 1982 TURNER, John William, 1933— Coal mining in Newcastle, 1801-1900. Newcastle, Newcastle Region Public Library, 1982.

179 pp., illus., maps, 23cm.

(Newcastle history monographs, no.9)
Ser. ISBN 0 9599385 9 1
Newcastle Region Public Library
Coal mining — Newcastle Coal District
Coal mines — Newcastle Coal District
Australian Agricultural Company

The Author

J.W. Turner, M.A., Ph.D., Dip.Ed., is Senior Lecturer in the Department of Community Programmes, University of Newcastle, and is one of the editors of this series. He is the author of three earlier items in this series and various articles relating to the history of Newcastle. In 1977 ne submitted a Ph.D thesis entitled Coalmining and Manufacturing in Newcastle, 1797-1900, on which this and monograph no.8 are based.

ACKNOWLEDGEMENTS

When in 1962, I began the study that led eventually to this book, the University of Sydney was my employer and I will always be grateful for the opportunities it provided for historical research. However, from 1972 it was the support of the University of Newcastle that made possible the completion of the work. Professor A. G. L. Shaw gave generous encouragement over the years and Professor R. A. Gollan's 'The Coal miners of New South Wales' contributed greatly to my understanding of the coal industry. Inspiration came, too, from Professor G. N. Blainey whose various business histories are a model for all. Associate Professor W. G. McMinn gave guidance in research and was most helpful in the actual writing of the manuscript.

It was one thing however, to write a thesis but its transformation into a book was another matter altogether and it was C. E Smith, the Director of the Newcastle Region Public Library, who made that possible. My thanks go also to E. Flowers, J. E. Murray and D. J. Rowe of the University of Newcastle Library and to many, many other libraries in Australia and the United Kingdom who responded so patiently to my queries over the years.

Without access to the records of the Australian Agricultural Company, now stored in the Archives of Business and Labour at the Australian National University, I doubt whether this work would have been possible and I am most grateful for its support.

J. W. Turner

CONTENTS

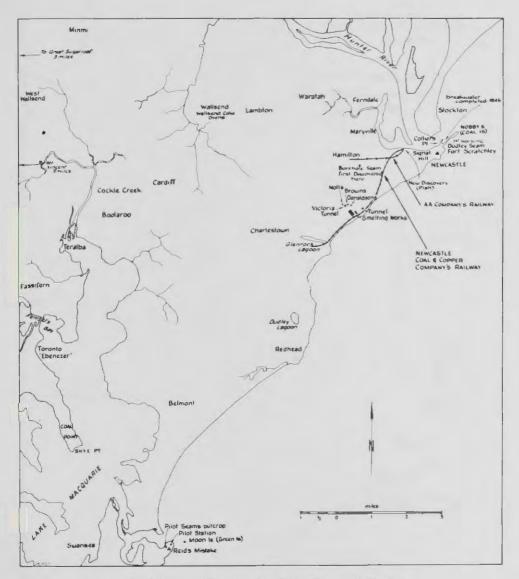
Acknowledgements	. 3
Contents	5
Illustrations, maps, diagram	
Tables	8
Chapter 1 The origins of coal mining, 1797-1821	3
Chapter 2 Government and private monopoly in coal mining, 1822-1847	23
Chapter 3 The development of competition in coal mining, 1848-1866	53
Chapter 4 Towards a regulated industry - the coal vend, 1867-1880	
Chapter 5 Prosperity and depression, 1881-1900	
Chapter 6 Conclusion	
The terms of the 1828 agreement between the Secretary of State for the Colonies and t	he
Australian Agricultural Company	
Notes and references	35
Bibliography10	65
Index I	71

ILLUSTRATIONS

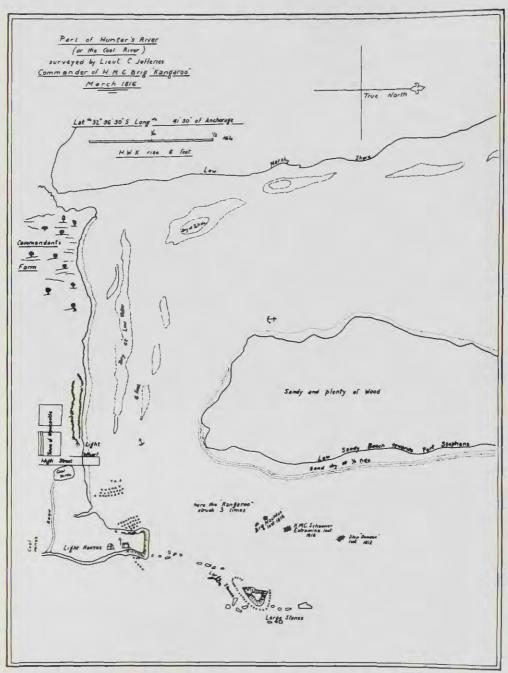
The great coal staiths of the Australian Agricultural Company, Newcastle,
in 1833 · · · · · 34
James Brown
Alexander Brown58
James Fletcher61
Newcastle Harbour, 187374
Edward Christopher Merewether77
Jesse Gregson
Shipping coal at Newcastle, 197397
J. and A. Brown's Minmi Colliery in 188598
Soldiers at New Lambton during the 1888 coal miner's general strike 102
Miners going home from work at a Lambton pit, 1900
The Scottish Australian Mining Company 'B' Pit at Lambton
Burwood Colliery, c 1885
The Newcastle Coal Mining Company's 'A' Pit at Merewether, c1890
The Stockton Colliery in 1887
The A.A. Company's Sea Pit
Wallsend Colliery, 1885
MAPS AND DIAGRAM
Map 1 Early coal industry sites in the Newcastle District9Map 2 Port of Hunter's River surveyed by Lieut. Jefferies in 181610Newcastle coal measures: vertical section11Map 3 Plan showing the position of the collieries in the Newcastle District12

TABLES

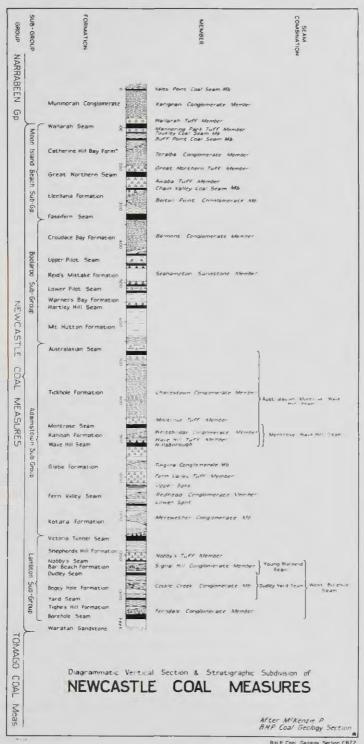
Coal raised at and shipped from Newcastle, 1805-1820	17
Convict population of Newcastle, 1804-1821	19
Output, Newcastle coal mines, 1822-1831	25
Assignments to the A.A. Company's collieries, 1835-1841	39
A.A. Company colliery establishment, 1839-1847	40
Output, Newcastle coal mines, 1848-1866	54
Output, Newcastle coal mines, 1867-1873	76
Allocations to members of the Vend, 1873	86
Output of Newcastle coal mines and the southern and western	
coalfields, 1872-1879	86
Number of employees and productivity in Newcastle	
collieries, 1869, 1875 and 1879	89
Output of Newcastle collieries, 1881-1900	00
The interstate market for Newcastle coal, [1894]	
Distribution of New South Wales coal exports, 1891-1900	
	Assignments to the A.A. Company's collieries, 1835-1841 A.A. Company colliery establishment, 1839-1847 Output, Newcastle coal mines, 1848-1866 Output, Newcastle coal mines, 1867-1873 Allocations to members of the Vend, 1873. Output of Newcastle coal mines and the southern and western coalfields, 1872-1879 Number of employees and productivity in Newcastle collieries, 1869, 1875 and 1879 Output of Newcastle collieries, 1881-1900 The interstate market for Newcastle coal, [1894]



Map 1 Early coal industry sites in the Newcastle District.



Map 2 Part of Hunter's River, or the Coal River, surveyed by Lieut. C. Jefferies, Commander of H.M.G. Brig Kangaroo, March, 1816. Redrawn by D. Bairstow from a copy of the original in P.R.O. London.



BHP Cool Geology Section CB72



Map 3 Plan showing the position of the collieries at work and opening out in the Newcastle District, n.d.
Government Printing Office, Sydney

Chapter 1

THE ORIGINS OF COAL MINING, 1797-1821

Coal for export

News of further discoveries of coal twenty miles south and sixty five miles north of Sydney reached the British Government in 1798 not long before the convict transport Hillsborough was to sail with 600 tons of coal for the Cape Colony and 300 convicts for the settlement in New South Wales. The cost of providing this coal for use on naval vessels and in the forges of the garrison at Capetown was heavy and the possibility of a cheaper source of supply caused the Duke of Portland to enthuse:

I have great pleasure in learning from your letter of 6th July. 1797, that strata of coal have been discovered in various places in the neighbourhood of Botany Bay. I trust this circumstance will afford you constant means of employing a considerable number of the convicts in a manner equally advantageous to the settlement and to the interests of the community at large. As the exportation of coals from hence to the Cape of Good Hope is attended with a very heavy expence to the public. I cannot but think that a great saving may be made by sending them to the Cape from New South Wales in the Government vessels on that station, which are under your command. You will therefore dispatch the Buffalo and Porpoise, loaded with coals, to the Cape as soon as possible after the receipt of this letter, directing them to return with as large a supply of live stock for the use of the settlement as they can conveniently stow.

Concerned about the cost of supplying its colony in New South Wales, the British Government welcomed any development which would provide return cargoes and so lessen the cost of freight. So Portland wrote immediately to Henry Dundas, Secretary of State for War, to make arrangements and directed Lieutenant Governor King to enquire into the needs of the Cape Colony while en route to New South Wales in **Porpoise**.

Portland hoped that the first cargo of 600 tons of coal would arrive at the Cape by Christmas, 1799, thereby saving between £5,000 and £6,000, and it was his keen interest which led to the founding of a settlement at the mouth of the Hunter River in 1801 to obtain coal for export.²

During the 1790s the only interest in exporting had come from outside the colony but from Governor King's appointment there were serious attempts to develop export trades.³

From 1800 onwards there was a conscious and explicit recognition of the need for the colony to establish an export industry not only as the basis for the future prosperity of the colony, but also to correct the prevailing adverse balance of trade resulting from the high propensity to import. This recognition was also manifested during King's governorship in the attempts of both the government and private individuals to find suitable export industries, as shown in numerous specimens of timber, iron ore, coal and wool sent to England for appraisal.

At Governor Hunter's request George Bass confirmed the discovery of coal to the south of Sydney but it was difficult to exploit because it 'was inaccessible, being upon an abrupt dead coast where there is 'no inlet to secure a boat in'. Hunter promised Portland that he would investigate the northern find, which could be reached by sea, and that an experimental shipment to the Cape would be attempted; but time was running out for the Governor and it was left to his successor to try to implement, however tardily, his Lordship's wishes.4

Governor Hunter did not send the Buffalo and Porpoise with coal to the

Cape as the former needed repairs and the latter did not arrive until November, 1800. This ensured that private entrepreneurs would send the first cargoes to Africa and Asia. From 1798 enterprising traders were visiting the Coal River to gouge coal from the cliffs and exposed reefs by the sea shore for sale in Sydney. Given the lack of export commodities it was inevitable that some of this coal would be shipped on returning transports but there is some doubt as to which ship carried the first cargo. Various writers have accepted a letter from Surgeon John Thomson as proof that the first export was made in the snow Hunter in 1799 yet this is unlikely.⁵

Captain Hingston, who had taken the Hillsborough with English coal to the Cape en route to New South Wales, bought a share of the Spanish prize, Nostra Senora de Bethlahem, which was renamed Hunter and sailed for Bengal on 7 October, 1799. Of this vessel Thomson wrote:

We have also some hopes that the coals with which the country abounds will be of much Colonial advantage. A ship lately returned to Bengal loaded with coals, and it gave no small satisfaction to every person interested in the prosperity of the colony to see this first export of it; and I am hopeful from these advantages that New South Wales, however contemptible it may at present appear in the list of our colonies, may yet become an acquisition of value to the mother country.

However, other records indicate that this vessel carried a cargo of spars from New Zealand and there is also Governor King's remark concerning the coal taken in the Earl Cornwallis in 1800: 'I believe this is the first return ever made from New South Wales'. The Hunter may have carried some coal though Hainsworth believes that she did not do so.'

From various Sydney traders and the colonial government, James Tennant master of the Earl Cornwallis, purchased a cargo of Hunter River coal for carriage to Bengal in mid-1801. Simeon Lord and Hugh Meehan had already sent the Anna Josepha to Hunter's River for coal, which they intended to take to the Cape of Good Hope, when the Earl Cornwallis arrived in Sydney, coincidentally on the very day that an official party sailed to survey the Hunter. Thus Tennant was able to buy 150 tons from Lord and Meehan as well as two schooner cargoes from the Government at three pounds per ton. The smaller ships went back for more coal and the Earl Cornwallis eventually accumulated 600 tons. This appears to have influenced Governor King's decision to establish a permanent settlement on the coalfield.⁸

The contribution of Governor King

King had arrived in the colony in April 1800 with the firm intention of exploiting the various coal discoveries made during the reign of his predecessor. The search for a coal seam as close as possible to Sydney was already in progress under the direction of Lieutenant Colonel Paterson who put two men to work late in 1799 at the Hawkesbury, using boring rods which Sir Joseph Banks had pressed the Navy Board to purchase. Floods interrupted the search but not before the drills had been sunk 150 feet into the blue slate and granite-like rock of this site. The search was then moved to the head of the Georges River on the south-west side of Botany Bay where John Platt, perhaps the colony's only miner, was set to work with eleven men. King had confidence in Platt: 'he is very clever,...intelligent and master of his business'. And the governor was hopeful that the search would succeed at this site, which would be easily accessible to vessels lying in Botany Bay. Indeed the desirability of a mine in so convenient a situation prolonged the search for seven months and when it was finally abandoned in favour of the development of Hunter's River Platt was reluctant to give it up.

While the long search went on at Georges River, Governor King referred to the

northern coalfield as the next site to be investigated, but he was not yet convinced of its potential because of the poor quality of the surface coal being collected there and because he had been led to believe that only very small vessels could enter the mouth of the Hunter River. To overcome this problem he had considered establishing a settlement at Port Stephens where smaller vessels bringing coal from Lake Macquarie and/or Newcastle could transfer their cargoes to ocean-going ships.¹⁰

These rivers, which abound with coals, are not accessible for larger vessels than about forty tons. It is true a number of these could load a larger vessel, which may be done at Port Stephens. It is on this idea and from the plots of the disaffected Irish, who were lately sent here for sedition and rebellion, that I have recommended the forming of another settlement at that place with a very small establishment.

To resolve these doubts King sent Lieutenant Colonel Paterson with Lieutenant Grant, commander of the **Lady Nelson**, to survey the Hunter River. They reached Nobby's Island on 14 June and entered the harbour the next morning so that Paterson could examine the coal strata exposed on the cliffs on the southern side of the river. Here he put his colliers to work at Colliers' Point 'where the work can be carried on to any extent and at little expense'.

Shortly afterwards Paterson recommended that a settlement be established at the Hunter principally for the exploitation of the coal and by 4 July the miners were hewing 'a strata [sic] of coals nearly four feet in thickness', lying 'entirely from side to side through the hill' [Signal Hill]. Twenty four tons of this coal, which was highly praised by Platt, was loaded on the schooner **Francis** which also carried Paterson's highly favourable report to the Governor. 12

The first settlement of the Hunter River

Governor King was so impressed by his deputy's account and 'so anxious to hope for great advantages from that river', that he decided to make the settlement there permanent. Despatching his other miner, a corporal and five private soldiers with another young soldier as storekeeper to join the party at the Hunter River he ordered Paterson to establish a permanent mine on the site favoured by his miners. The ready sale of the schooner's small cargo at the high price of three pounds per ton to Captain Tennant must have been particularly encouraging to King who had long been aware of the export potential of coal and of his English superior's desire to see that potential realized 13

In order that the Crown might benefit financially from the natural resources of the Hunter River area, Governor King issued a General Order declaring its coals the exclusive property of the Crown, forbidding vessels to visit it without a licence and establishing the King's dues on coals. Masters intending to call at the new settlement had to obtain a licence, enter recognisances of £50 and provide two other securities of £25 to ensure the observance of the regulations. The licence cost five shillings: 2s.6d. was levied as harbour dues for the Orphan Fund; and for a clearance certificate the mariner had to find another 2s.6d.14

From the proclamation of this order and the establishment of a settlement at Hunter's River, the systematic exploitation of the region's resources may be said to have begun, but it was soon to be interrupted by the withdrawal of the colonising party. However, this decision was not influenced by the unprofitability of coal exports to India in 1801, as Governor King suggested later, for the news that the 1801 cargoes had not been profitable could not have arrived in time to influence the fate of the settlement. After

Corporal Wixstead and his successor Martin Mason had both failed to control the convicts under their command. King recalled the latter who returned to Sydney on 8 December, 1801, not long after the sailing of the Cornwallis and the Hunter. The view that the withdrawal resulted from management problems and was not for commercial reasons is strengthened by King's despatches of 1 March and 5 June 1802 which refer only to the commanding officer's misconduct.

Newcastle established

Two years passed before the Governor was able to re-establish his Hunter River outpost, but mining did not cease altogether. Ships continued to call for coal even though their crews had to double as miners in order to obtain a cargo. Such uncontrolled exploitation of the colliery had damaging effects which were noted by Lieutenant C.A.F.N. Menzies who re-opened the settlement in March 1804 with a party of rebellious Irish convicts and their guards. He recorded that 'the mines have hitherto been dug in a shameful manner. Never have [the coal cutters] been at the trouble of hewing supports, leaving them to fall in anyway'.

The Governor responded by forbidding private parties to mine coal: they were to purchase it from the Crown at ten shillings per ton and pay the dues established by the orders of 24 March, 1804.¹⁶

Mining methods

Throughout Newcastle's period as a penal settlement coal mining remained small scale and primitive. Late in 1801 three miners were digging nine tons of coal per day from a thirty yard 'adit' at Colliers' Point but Surgeon Mason, who was commanding the tiny settlement, planned to increase the output to 190 tons per week by employing more miners. He also suggested such improvements as a slab path for the carriers from the mine and a properly constructed wharf as well as candles for use below ground but there was little time to achieve these aims before the settlement was abandoned.¹⁷

Lieutenant Menzies opened a new mine in what was probably the Dudley Seam and ordered that it be systematically developed to permit further expansion. Additional mines were opened when accumulations of water or the occurrence of faults created problems but it is difficult to establish their exact locations. However, they were all within a mile of Colliers' Point and until 1817 most of the coal would have come from the more accessible Dudley and Nobby's Seams with the former being preferred for its better quality. From the opening in that year of the first shaft mine in the vicinity of the present Watt Street Hospital it was possible to tap the even better coal of the Yard Seam, so called because of its thickness, and it was upon this seam that the industry was largely to depend until the late 1840s. 18 However, the decision to commence shaft mining brought new problems.

More than two years passed before Commandant Wallis reported: 'we have succeeded at last in procuring coals at the shaft after an excessive expenditure of iron, powder and labour'.²⁰

The driving of this 111 feet shaft was not continuous: it was carried on when miners were not producing coal but the great effort it required shows how limited were the resources and technology available. A windlass had to be employed for conveying men and tools into the pit and for raising coal, and though Captain Wallis asked for a horse gin to facilitate the raising of coal in 1817 the windlass was still there seven years later. The ventilation of the new mine also proved more difficult except when southerly breezes prevailed and when fires were lit at the bottom of the shaft the problem was intensified. Primitive oil lamps and candles were employed to light the workings and transport underground was by barrow.²¹

Governor King had suggested that steam engines would be needed to cope with water in the mines but neither he nor his successors pressed the home government for them:

TABLE 119
COAL RAISED AT AND SHIPPED FROM NEWCASTLE 1805-1820

	Tons Raised	Coal Shipped	Value of Coal Shipped*
			£
1805	150	84	42
1806	420	374	187
1807	400	303	303
1808	500	393	196
1809	800	665	332
1810	800	708	354
1811	1400	1341	670
1812	1400	1125	562
1813	1800	1569	784
1814	**2193	2193	1096
1815	1750	1477	738
1816	1450	1257	628
1817	1300	1315	657
1818	1200	1042	533
1819	2250	2012	1016
1820	3915	3053	1545
Totals	21728	18911	9497

^{*}The price of coal at Newcastle wharf was 10s, per ton, but from 1818 masters of private vessels had to pay 12s. 6d. per ton.

perhaps they realised that the scale of mining would not justify such expeditures. Hence the convicts continued to dam the water, bailing it by day and night into drifts, and John Busby found that water was still seriously impeding the miners in 1824. Pumps had been requisitioned but they had not been provided and buckets were still used to raise water from the shaft. Busby claimed to have substantially improved the drainage position by relatively simple means and this suggested that mismanagement severely limited coal output in this period. His report on the transport system at the mine tends to confirm this.²²

In the beginning convicts had to struggle with heavy loads of coal over rocky and sandy terrain to the bay where vessels were loaded and to assist them a slab path had been constructed. A wharf came next and the use of barrows or carts, possibly like those which appear in a painting of convicts at work in Newcastle in 1853. Then, in 1810, Commandant Purcell asked for two one-ton tip carts to facilitate carriage and unloading on to the pier. These were provided but by 1814 their wheels were in such disrepair that coal output was threatened. A request to Sydney for new wheels or a wheelwright was not met but the problem must have been overcome for coal output increased markedly in 1811. Nevertheless the shortage of oxen to haul these carts continued to limit coal production though Busby contended that a slight alteration in the path taken by the coal carts would have eliminated uphill sections of the road and reduced the number of animals required by half. Apparently a combination of military officers and convicted miners was not particularly effective in managing the collieries

[&]quot;This is the amount shipped: the amount raised in 1814 is not known.

of the Crown. Indeed Commandant Mason's comment on John Platt may have been applicable to other chief miners as well: 'Plat [sic] is a good working miner; I believe him to be a good man, but he cannot see much further into the ground than his pick cuts'.²³

Throughout the period of government mining coal was measured and placed on board ship in barrows. The first barrow load was weighed and the number required to load the vessel was counted. This labour was performed by the miners until the end of 1817 but it interfered with production and thereafter it fell to the town gang. Crews were expected to help with the loading and as far as possible it was completed in normal working hours because the convicts had to be paid for extra work. A fleet of small sailing vessels carried the coal and Hainsworth found evidence of at least 230 consignments to Sydney between 1803 and 1821 although the records are incomplete. This is a low estimate as it implies an average cargo of about eighty tons, a figure that is far too large. Private vessels predominated between 1804 and 1808; government and private vessels shared the work from 1809 until 1817 and thereafter government vessels carried almost all the coal to Sydney.²⁴

Mine labour

Primitive as the transport system was, it did not limit the rate of coal production as much as the scarcity of trained miners. That only three were employed in 1801 is understandable but miners were always in short supply and there were times when the supply of coal depended upon two or three men. In 1811 Lieutenant Skottowe wrote to Sydney seeking a miner who was working as a stockman and another commandant pleaded for one more man, saying 'both my miners here are unwell'. Even when the convict population exceeded one thousand there were only eight miners: this raises interesting questions. Perhaps convicted miners disguised their profession in the hope of avoiding being sent to Newcastle or of obtaining more congenial work but their court records would have made this difficult. It seems more likely, as K.M. Dallas has argued, that skilled workers were rarely transported, that:

transportation was for offences that the poor were likely to commit but mercantilist policy was opposed to the loss of skilled labour...For all the years of strife, with seamen, cotton spinners, journeymen of all trades, there is almost no transportation.

As the British coal industry was expanding and miners were in demand they were less likely to be among those convicted of crimes that led to transportation. It was probably this rather than any deliberate withholding of this type of worker by government officials, as Dallas asserts, that was responsible for the relative scarcity of miners in the colony.²⁶

The handful of skilled miners who actually dug the coal enjoyed special privileges in this period. They were expected to cut two and a half tons of coal a day and often finished this task in less than the normal ten hours of labour. Once finished they could rest and, in recognition of the arduous nature of their work and the difficult conditions in the mine, they received double the food rations issued to other convicts in Newcastle.²⁷ As these rations were actually their wages, these pioneers of Australian mining were being paid double the rates of unskilled labour. In fact they were establishing the collier's profession at the top of the wage rate structure of colonial

workmen, a position which they were long to enjoy. Of course they had to work in confined spaces, in hot, wet conditions and in places that were at times badly ventilated. There is evidence, too, that their health suffered because of their occupation but they were twice as well off in material terms as the unskilled workers who assisted them.²⁸

Table 2 — CONVICT POPULATION OF NEWCASTLE 1804-1821

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

For each skilled miner there were several men who bailed out water, wheeled the coal to the shaft in barrows, raised it by windlass and moved it to the wharf. For these workers, who shared in many of the discomforts of mining, there were only the normal rations, viz, eight pounds of wheat and four pounds of salt pork or seven pounds of salt beef per man per week. Fresh meat was rarely issued and the lack of vegetables made scurvy a fairly common complaint in Newcastle. The productivity of free men working in these conditions would not have been high and the performance of convicts serving prison terms for secondary offences must have been particularly low.

The shortage of miners was accentuated by their occasional employment on other tasks and by lack of supplies. They were also used in the quarrying of stone for building purposes and for the southern breakwater which was begun in 1818. Further interruptions occurred because the settlement rarely had enough tools and Commandant Wallis had to take the miners' tools for the ship loaders: he had 260 male convicts without shovels or spades. Indeed the letters of the commandants are largely composed of requests for urgently needed skilled labour and supplies which were often slow to appear; food for the convicts, sheet lead for building, casks to hold lime, baskets for shells, mills for grinding wheat, copper to protect the boats from the worm, iron bolts for the wharf, a ram for the government flock, oil for the miners' lamps, medicines for the sick; the list is endless, 31 That scarce mine labour was squandered in other tasks and rendered unproductive for want of essential materials is a reflection of the low priority placed upon the industry by Governor King's successors. Some coal was necessary for ironworking, and the export trade made occasional demands upon the miners, but wood could be used in place of coal for most other purposes and the governors had many other more compelling needs for resources of labour and capital. That is why production in the penal settlement was so small.

Supply and demand

Total annual shipments of coal from Newcastle first exceeded 800 tons in 1811 and then fluctuated between 1200 and 1800 tons for eight years. Major Morisset boosted output to 3915 tons in 1820 when shipments to Sydney reached 3053 tons and 550 tons were consumed locally. Production in the following year does not appear to have

been recorded but it is unlikely to have been very much more than 4000 tons which may be regarded as the maximum yearly output in this period. However, the evidence presented to J.T. Bigge suggests that if the full complement of miners had been wholly employed in the mines over 6000 tons could have been raised. The gap between potential and actual production may be explained by reference to the market for coal.³²

Though some of the coal reaching Sydney was sold or bartered for stores, most of it was used by the public service. Governor King planned to supply coal instead of firewood to his civil and military officers and to hospitals and barracks. He expected that this would free a large number of wood cutters and carters for agricultural work but this did not occur, probably because coal production was insufficient, so when Macquarie proposed to cancel these allowances he expressed the same hope: 'The article of firewood alone is a very expensive one, employing a great number of government men and cattle that might otherwise be much more usefully employed by assigning them to settlers'.³³

Iron working was essential to the industries of the colony from the earliest days and for this purpose charcoal had been the usual fuel. Hoes, sickles and ploughs were essential tools of eighteenth century agriculture and their manufacture from imported iron was an important part of the work of the Government Foundry. The introduction of the windmill in 1797 led to the casting of wheels and there would also have been other industrial uses. For example, in Newcastle in 1819, the smiths and nailers were producing iron parts for barrows, carts and cranes, axes, hoes, hooks and hinges, fire grates, mauls, quarry axes and picks, chains, wedges, crowbars and a variety of nails. In Sydney the range of products would have been even wider.³⁴

In March 1804 coal from Newcastle was reported superior to charcoal for the forge and far more economical and a few months later the Governor reported 'a sufficiency of coals...are received from thence to supply the blacksmiths...at these settlements'. However, charcoal continued to be used and it is not certain what use of coal was made by the smiths. It is possible that the high phosphorus content iron of the period was capable of being smelted by coal fires, or it may be that coke was being manufactured for the working of iron and steel into agricultural implements but no conclusive evidence has been found. Governor King's reference to coke in 1803 is interesting but does not prove that it was being produced, 'their [the coals] burning into a white ash prevents its being used to advantage in producing tar from the coke'. There is another intriguing reference in an enclosure from the Admiralty regarding the possible export of iron: 'The cinders, or coke of coals from which the tar has been extracted by the usual process of covering the heap with clay and inserting a funnel for carrying off the tar will give the strongest heat.³⁵

Charcoal was still being produced in 1819 for use in the foundry and the Government dockyard was also using up to 2,000 tons of coal per annum but coal does not appear to have been used for the major industrial processes calling for heat such as brickmaking or limeburning. Moreover the first steam engine did not come into use until 1815 and it is unlikely that the pioneering steam engineers would have chosen to use coal: it was

not burned in the earliest steamships.36

Until 1818 private vessels frequently brought cargoes to Sydney for sale by auction or through coal yards. Some would have found its way into the stoves and fireplaces of private dwellings and for part of this period, by a curious anomaly, the Sydney gaol was provided with fuel in this way, but whether many people could afford to buy household fuel at prices in excess of one pound per ton is very doubtful. However, more coal would be needed for this purpose when wood in the vicinity of Sydney became scarcer and more expensive.

The export trade

Though expectations of an export trade were significant in the decision to bring the northern coalfield into production, exports were sporadic in the first half of the century. Shipping records are incomplete but there appear to have been exports in every year from 1801 until 1819, with the single exception of 1802. However, this record is not as impressive as it might seem for the amounts exported were insignificant. In the busiest year, 1815, eight vessels carried away 658 tons, mainly to India and China. Before then annual recorded exports were sometimes as low as eight tons and after that year the demand for coal for export rapidly tapered off, ceasing altogether in the last two years of Newcastle's period as a government settlement.⁵⁸

The cessation of exports in 1820 and 1821 cannot be attributed to lack of shipping. Whereas eight export consignments of coal had occurred in 1815, when only twenty one departing vessels were noticed by Cumpston, there were sixty departures in 1820 and sixty two in 1821. Nor is it likely that a distaste for the coal of the colony made it unacceptable in Asian ports since Robert Campbell, who knew the export trade as well as anyone, planned to establish a coal yard in Sydney partly to supply 'any India bound ships which might prefer coals to ballast'. No certain answer to this question may be offered but perhaps the withdrawal of private vessels from the Hunter River trade in these years was responsible. The superintendent of coal mines attributed this to the Governor's decree that all vessels must be loaded by the convicts and pay the increased price of 12s.6d. per ton f.o.b. However, Macquarie's order prohibiting government officers from engaging in mercantile operations after 1 January, 1818, also may have been influential.³⁹

Apart from speculative shipments to India, a contract had been arranged for an annual exchange of coal for Bengal rum: the amount was insignificant but the bargain elicited a significant comment from an East India Company official. In April 1814 Macquarie belatedly reported that he was shipping 154 tons per annum for use in the government foundry at Calcutta 'where they have been found to answer remarkably well' but two years later the Import Warehouse Keeper at Calcutta commented:40

the existing facility with which Coals are obtainable from the British Possessions in India, as well as in allusion to the considerable supplies that are now exported from England to this country as Dead Weight for ships ... have naturally tended to diminish in Bengal the value which Coals from New Holland originally bore.

Coal mining in Bengal had commenced about 1814 in the Burdwan district and, though production was still small, the availability of local coal made the New South Wales product less valuable. Of greater importance was the growing availability of British coal which was transforming the market in Asian ports. At the turn of the century coal for the Cape Colony was costing the British Government from five to six pounds per ton yet fifteen years later New South Wales coal valued at one pound per ton was involving the East India Company in such losses that it was seeking to terminate the exchange. This rather dramatic change may be attributed to the growing practice of British sailing vessels carrying coal as ballast to the East. In 1819, the first year for which data are available, Britain exported 71,497 tons to her colonies and this total grew steadily each year, reaching 128,092 tons in 1828.41

M. J. E. Steven summed up the export record of coal in the years before 1820 with the judgement that coal was 'an alternative to ballast rather than as an export'.42 Where there is evidence of shipment of coal to meet orders from India, as in the case of Macquarie's arrangements with the East India Company, surely this is an export situation. However, Steven was apparently referring to occasions when shipowners carried coal to Asia on ship's account. In these circumstances coal could be regarded as an alternative to ballast only if the costs were comparable: yet coal cost 10s. at the Newcastle wharf plus loading charges (2s. 6d. after 1818), freight to Port Jackson (say five shillings per ton), the cost of transhipment and finally the export duty of five shillings. Is it possible that ballast, say sand or stone, could not be obtained in Sydney for less than half the cost of coal? If the ship's captain was prepared to pay over 22s. per ton for coal then it must have been with the firm expectation of a satisfactory profit after allowing a freight rate equal to the difference between the cost of coal and the cost of ballast. These early shipments of coal to Asian ports may be regarded as 'exports' but after two decades the hopes of secretaries of state, governors and colonial merchants for a significant export trade in coal remained unfulfilled.

Some colonists who assembled in Sydney in 1819 to voice their grievances against the Government asserted that New South Wales would have exported much more cedar and coal:43

were it not for the restrictions upon our navigation and the entire monopoly of coal and timber by the Crown, whereby the colonists cannot export either ... they cannot even procure them for their own consumption without express licence from the Governor and paving a heavy duty besides.

This claim was faithfully echoed by J. T. Bigge, as it was meant to be, and the extra duty of 2s. 6d. on coal for export was waived in 1822 but with little apparent effect upon overseas shipments. More recently G. J. Abbott commented that 'there were valid grounds for complaining of the imposts levied on colonial export productions' and doubtless the need to obtain licences to visit Newcastle and the monopoly of the Crown were inhibiting, but these factors were not decisive. Nor does it appear that the restrictions placed on shipping under the charter of the East India Company were of real moment. 44 Nor was it the nature of the penal colony, as Bigge claimed, which prevented the export trade. Those who have stressed these factors in explaining the paucity of exports have failed to take proper account of two crucial factors, the weak demand for costly, imported coal in Asia in the days before steam navigation and the poor quality of coal currently mined at Newcastle.

Experimental cargoes of coal reached the most likely markets, namely the Cape of Good Hope, India and the Dutch East Indies but the trade did not develop, nor did it become significant for decades after the abolition of the East India Company's privileges and though there were minor obstructions such as the need to give sureties against breaking the regulations before a vessel could visit Newcastle the merchants of Sydney would have overcome such problems had there been prospects of a profitable, steady trade. The freedom enjoyed by British shipowners in Calcutta or Madras to sail 'country ships' without restriction within the area of the East India Company's monopoly was all that was necessary for the development of coal exports from New South Wales.⁴⁵

Thus, despite the high hopes raised by the discovery in 1797 of coal in a position accessible to shipping, the total output of that product between 1805 and 1820 was no more than £9,495, an amount which compares unfavourably with the value of timber (£10,763) produced in the settlement in the same period. Eventually Newcastle would become a coal town but it was certainly not one in its first two decades. 46

Chapter 2

GOVERNMENT AND PRIVATE MONOPOLY IN COAL MINING, 1822-1847 The last decade of the government collieries

After Newcastle ceased to be a purely penal settlement in 1821 the Government retained its coal mines. Although Commissioner Bigge had recommended that they be leased to private interests, that was to take almost a decade to arrange. Meanwhile there was little change in the operation of the collieries which continued to attract unfavourable comments from both laymen and experts, including Naval Surgeon Cunningham:

The coal shaft is sunk upon the summit of the hill, and the coals carted down by bullocks; but from the defective nature of the working, and the lazy habits of the incorrigibles who are sentenced to this labour, the produce does not at all correspond with what may be expected when a more efficient system is introduced.

Three times the mines were inspected by experts who confirmed Cunningham's judgement and recommended changes in methods of production and management but little was done. There had been no basic change in transport technology since oxen were introduced to draw coal to the wharf, and the horse gin requested in 1817 was not erected until 1824. Water was still accumulating in the mine, impeding operations and requiring as many water bailers as there were miners in 1827. Nor was there any sign of a steam engine being provided though Governor King had forecast its need in 1801 and Busby argued in i824 that: 'the increasing dearth of wood fuel in Sydney and the prospective demand for exportation will make the mines of such importance that the expense of a steam engine...will not be considered of moment'.

Screening to permit the grading of coal by size had not been introduced and no workman was employed in the removal of impurities. Haulage from the pit top to the wharf was by waggon, the coal was stockpiled and the extra handling reduced it in size. The final stage of production, transportation from wharf to ship, was effected by gangs of convicts who worked from lighters and were always likely to pirate the vessel they were loading.³

Labour for the mines

The convict work force consisted of experienced miners and labourers who were sometimes put to coal cutting when trained men were in short supply. This practice irked John Busby who recommended that:4

none but regularly bred miners. if it is possible to procure such, should be sent to work coal. The business of a miner is as distinct as that of a carpenter or blacksmith and no man is capable of it who has not been accustomed to it from his boyhood.

However, the governor had other uses for convict miners, particularly in the construction of Sydney's water supply, and the coal mines had to wait until that project was finished before the labour supply improved.

Busby also suggested that boys be employed to propel trucks below ground instead of men with wheelbarrows. As the former would require less headroom this would obviate the removal of a thin stratum of indurated clay which lay between the coal and the sandstone, thus both saving labour and removing a source of impurities. It is not known whether this proposal, which was also intended to train future miners, was implemented, but the wharf that Busby and his son constructed was ready in 1827 and some of his other recommendations were also carried out. Nevertheless the mine remained primitive by English standards and when Parry saw it at the end of the decade he noted that the coal was still being drawn 'along wretched wooden rail-roads to the bottom of the shaft,' that four pumps driven by a 'wheel and one horse' constituted the drainage system and that only one bullock cart was normally used for bringing coal to the wharf.

The expectation that the Australian Agricultural Company would soon take over the mine had also made the Governor reluctant to provide new tools or appliances and this

may have contributed to Parry's poor impression of the project.5

Miners still received an extra half ration because their arduous work demanded a higher food intake but Sir Edward Parry was amazed that they received extra for a task which could be accomplished long before the end of the official working day, so he took the precaution of writing to the Colonial Secretary to point out: 'the extravagant allowance of rations now given to the miners for half a day's work and requested the Government to alter it before the Company took the works into their hands'. He was more sympathetic towards their overseer, who impressed Parry as a very steady useful man. Edward Cottam was a convict who had supervised thirty miners for several years in return for his rations and sixpence per day.

Captain Allman, commandant in the mid-1820s, later recalled that too many convicts were employed and that 'they were worked to punish them, not to profit of their labour' and the company's first mine manager reported that everything was done in a slovenly way by manual labour. In these circumstances it is not surprising that the police magistrate had to be employed as a disciplinarian. The convicts lived in barracks where alcohol and gambling were prohibited but drunkenness and games of pitch and toss were common. Running away was severely punished, usually with fifty or seventy five lashes. Petty theft was common, detection leading to floggings or the iron gang, and for lesser offences, the stocks were used. Disobedience brought heavy sentences and John Moore received 100 lashes for persistently sending up coal without the marks to show who had cut it and for answering the constable with such remarks as 'Damn and curse the marker'. With a work force of this kind operating in such conditions, maximum productivity was not to be expected.⁷

Supply and demand

It is difficult to determine exactly how much coal was produced during the 1820s because the sources disagree. Busby said that the average output did not exceed 3,000 tons in the four years up to 1824 and the official statistics suggest a considerably lower average output. But in the second half of the decade about 4,000 tons per annum seems to have been usual.8

The mines were yielding far less than could have been obtained under vigorous management and this raises the question of whether the Government was interested in higher outputs. There were few colonial coal users apart from government departments and the demand for coal for export was insignificant.

Between 1823 and 1828 the annual average of Newcastle coal sold privately was 1,527 tons so that the Government appears to have been using about 2,000 tons per annum. This is borne out by the Government dockyard's advertisement calling for the shipment of this quantity for official purposes in 1825.9

Within the colony coal had been available in small amounts suitable for household use from at least 1822, and in 1826 coal scuttles were on sale in Sydney stores, but firewood was the usual domestic fuel, the Sydney gazette claiming in 1826 that even the poorest person burned a load costing five or six shilling each week. If John Busby's estimate was accurate, the total fuel needs of the colony exceeded 20,000 tons in 1826, a year when coal production did not reach one seventh part of that total, and soon afterwards the Sydney monitor commented: 'The new mines yield very badly...however the Government sell none of it: they have enough for their own consumption and the public must stick to the old material, Wood O'12

Even the Government relied heavily on firewood in centres outside Sydney, including Liverpool, so it is likely that the use of coal in private industry was still largely

TABLE 3¹¹¹ OUTPUT, NEWCASTLE COAL MINES, 1822-1831

		Tons	
Year	Colonial	Auditor	Blue Books
1822	Government	General	
1823			2,000
1824			3.000
1825			3,000
1826		1.824	2,000
1827	4,042	4,12211	3,500
1828	3,751	4,025	4,000
1829	2,406		2,400
1830	3,833		4,000
1831	3,653		5,000

limited to blacksmiths and founders. Certainly the three steam engines known to Sir Edward Parry in Sydney in 1831 did not use coal, possibly because of its poor quality and uncertain supply.¹³

There were occasional shipments from Newcastle to Van Diemen's Land before 1828 but the coal was not well known there and the intercolonial trade which was so important in the second half of the century had yet to develop. The export trade had a much longer history and J. T. Bigge expected it would expand if duties were reduced but foreign shipments during the 1820s remained spasmodic. More ships were visiting the colony and onward cargoes were relatively scarce but coal did not fill the need. In 1825, for example, eight overseas vessels cleared in ballast as did nearly all the convict transports and only five ships managed to obtain part or full cargoes for their next port of call. In that particular year only one coal export cargo was recorded but shipments went to a variety of Asian and Pacific ports in the last few years of government mining. 14

Valparaiso, Batavia and Lima received cargoes in 1822, and on 5 March, 1823, the brig Angerstein sailed for Rio de Janiero with 180 tons of coal and some cedar. Twelve days later Captain Joseph Blyth took the Princess Charlotte, 400 tons, to Newcastle where she loaded 120 tons of coal and a large quantity of cedar for Madras and Calcutta. In the same year the Calder sailed with coal for South America, the Mariner took 270 tons to Rio and the William Penn carried 200 tons to Isle de France. No exports are recorded for 1824 but early in 1825 the Princess Charlotte, having returned to the colony via London, Rio and Van Diemen's Land, loaded 460 tons of coal for Calcutta. This shipment is of particular interest, for Captain Blyth reported the results to John Macarthur Jr who was then involved in negotiations which would give the Australian Agricultural Company control of the Newcastle mines.

The cargo had cost 10s.6d. per ton, f.o.b. Newcastle and 30s. per ton was charged as freight to India where 'the coals were much approved of in the [East India] Company's works at Calcutta, fetching 81s. per ton for a profit of one hundred per cent. Moreover Captain Blyth discovered that the East India Company bought several thousand tons per annum at that price and the prospects for the A.A. Company's new venture seemed excellent. However profitable the results of this shipment, the export trade did not continue to develop, only 218 tons going abroad in 1829, half each to British colonies and foreign ports for a return of £248.16

The output of the mines was not large enough to ensure that coal would be available to foreign bound ships and its continuing poor quality discouraged export. On this point the Australian and Sir Edward Parry were in complete agreement though the language of the newspaper was more colourful:¹⁷

The coals he [Parry] is likely to have excavated for the market will probably be more bituminous than drossy - more economical in price and less wasteful in consumption, than the mixed mess of incombustible rubbish, and occasional clods of sulphurous stuff, which are too characteristic of the produce of the Newcastle coalmines, at present.

So concerned was Parry about the poor quality of the coal coming out of the government mine in 1830 when the ship **Norwhal** was intending to load a cargo for India that he warned her captain and the ship was diverted. This suggests that whether ships were prepared to carry coal abroad, if available, was still purely a matter of speculation on the part of the captain.¹⁸

No estimate of the cost of raising coal in this period has been found but twenty years later William Lithgow, the Auditor General, claimed that the Crown's costs did not exceed £500 per annum and that the mines were therefore a source of profit since annual income often exceeded this amount apart from the value of the coal consumed by the Government.¹⁹

Brisbane revealed the attitude of the governors when he commented that coals were a useful source of revenue but Commissioner Bigge planned to relieve the Crown of this responsibility in return for an annual rent. However, there was an alternative, for Busby reported that a new mine on a site requiring no shafts or machinery, worked by convicts and linked by a tramway to a new wharf, could be worked so cheaply that the cost of production would be two shillings per ton. He was presuming a yearly output of 25,000 tons, sufficient to meet all the fuel needs of the colony and annual exports of 5,000 tons. Such an expansion in demand, he believed, would develop if the price of coal f.o.b. Newcastle were reduced to 7s.6d. and as firewood was gradually displaced from the market.²⁰

The conduct of the mines by the Crown during the 1820s has been condemned but its failure should not be overestimated. The scale of production was unimpressive by English standards, the coal was not adequately cleaned and it suffered from overhandling but it is doubtful if demand was great enough to justify a modern colliery, as contemporary businessmen realised, and as the A.A. Company was to discover in its first few years in the industry. Sir Edward Parry summed up the hard-headed advice he had received in the colony: 'the coal mines they all consider as only to be worked with profit by cheap and simple means - and by convicts - with only one free overseer of active habits and good principles'. However appropriate this advice may have been it was of small moment to Sir Edward for the initiative of the company in despatching steam engines, pumps, an iron railway and a mining party at considerable cost had already committed it to the development of a modern colliery.

The Australian Agricultural Company enters the coal industry

Earl Bathurst had accepted his commissioner's recommendation on the future of coal mining, using Bigge's very words in his communication to Governor Brisbane;²²

It appears desirable that leases of the coal mines for a term of years should be granted, reserving an annual rent and a portion of the coal raised unless subsequent enquiry should induce you to consider that they could be more advantageously worked by the Government.

The Governor did not reply until the middle of 1825 when he explained that the coal mines had been retained because: 'there is no fit person to lease them on the usual principles of a Lordship, and if let to [an] unskilled individual, he might inundate and destroy the mine. Coals are very productive [of] revenue.'23

In the closing stages of his administration, Brisbane had discussed the leasing of the Newcastle mines with Thomas Winder, a Hunter Valley settler and shipowner who

operated his cutter, **Lord Liverpool**, as a packet boat between Sydney and the Hunter from December 1824. Subsequently, Winder claimed that the Governor had agreed to sell him 2,000 tons of coal surplus to the Government's own requirements, for sale in Sydney. Brisbane had departed without recording the alleged agreement but Governor Darling, his successor, felt obliged to honour it until enquiry could be made. This was unfortunate, for Winder, claiming priority over other purchasers, stockpiled the coal in Newcastle and the price in Sydney went up from 30s. to 40s. per ton. The **Sydney gazette** protested about this 'sham monopoly' and the incident coloured Darling's attitude to private control of the coal supply just as the British Government agreed to hand over the mines to the A.A. Company.²⁴

When this company had been chartered to undertake the 'Cuitivation and Improvement of Waste Lands in the Colony of New South Wales' coal mining was not envisaged among its activities, and there is some doubt as to who made the suggestion, its directors or the Colonial Office. The company's officers were later to assert that it was the British Government which asked them to undertake the management of the Newcastle miners but the official records neither supported nor refute their claim.²⁵

The first mention of the company in connection with the coal mines occurs in a letter from John Smith, its Governor, to Robert Wilmot Horton, dated 31 March 1825;26

We have the honour to enclose an extract from the Third Report of Mr. Commissioner Bigge upon the Agriculture and Trade of New South Wales in which we have observed that the Commissioner has recommended the Crown to grant leases of the Iron and Coal Mines that have been discovered in the Colony; and it appears to us that a portion of the large capital subscribed for the Australian Company might be employed in a manner beneficial alike to the Colony and the Company, in working the mines in question. We request you will be pleased to submit the accompanying proposals for the consideration of Earl Bathurst.

Only nine days later the company followed up the letter, revealing the strength of its interest in the coal mines:27

May I inquire whether we should enter into the question of the coal mines at our interview with you? It is one of great importance and several of our directors who are also directors of the East India Company are very desirous to work the mines, under a belief that they may facilitate steam navigation through the Eastern Seas and the rivers of our Territories in that quarter. The Company have several steamboats in India, and are about to send more. One is also preparing for Batavia. The coals are shipped under contract, from Newcastle whilst from our Newcastle they may be procured at one half the present expense in consequence of the short distance and the want of cargoes for convict and trading vessels.

Thus there can be no doubt that in 1825 the A.A. Company was eager to acquire a lease of the Newcastle coal mines. It is still possible that the suggestion came from the Colonial Office but this does not seem likely as it is not mentioned anywhere in the correspondence. It is unlikely that its negotiators would have failed to use such an advantage in presenting their proposals to Earl Bathurst. It would seem therefore that when it was later asserted that the company had undertaken the working of the mines 'reluctantly at the expressed desire of the Home Government' its Governor was confusing two separate phases of the long negotiation. The company took the initiative in 1825 not in response to a specific official invitation but because the introduction of steamers to India created a demand for coal and the Bigge report suggested that the Newcastle mines should be leased. Its directors displayed no reluctance about the project until October 1827 when they sought to withdraw from the venture but were held to their commitment by the Secretary of State for the Colonies.

The view that it was the British Government which asked the company to lease the

Newcastle coal mines has recently been asserted by J. Achison in his study of its origins. He has emphasised the constant tradition of the Company that the Colonial Office initiated the moves in 1825 and cites, in support, J. S. Brickwood's letter, written in April 1828, to his friend B. Thompson who had helped to complete arrangements for the coal venture.29 The company's Abstract of Proceedings reviewing the coal negotiations, written three months later is, not surprisingly, consistent with Brickwood's position. Achison's case rests then, on Brickwood's assertion because the company's constant tradition is based upon his documents. It is also probable, argues Achison, that if additional personal papers of the directors are found, they will confirm that the approach did come from the Colonial Office. This may well be, but what is puzzling is Brickwood's imprecision on this point. If someone in the Colonial Office took the initiative, probably because of Treasury economies, as Achison avers, in March 1825, why was it necessary for the company to write on the last day of that month, enclosing an extract of Bigge's report supporting the proposal? It will indeed be interesting to see, if further evidence is located, who in the British Government made the suggestion: the answer to that question may explain why the company did not mention the source of the suggestion.

Some support for Achison's view is derived from a remark by James Macarthur in the Legislative Council recalling that:30

during Mr. Huskisson's administration of the affairs of the Colony, it was considered desirable that the Government of this Colony should entirely divest itself of the management of all farms and mines, and in the course of a conversation at the Secretary of State's office, a proposal was made to the Directors of the Company, that they should take the mines ...

Of course Huskisson was President of the Board of Trade at the relevant time and did not take over the Colonial Office until September 1827. Was Macarthur confusing the initial suggestion with Huskisson's insistence that Governor Darling should hand over the mines in 1827 or did the conversation he referred to actually occur while Huskisson was at the Board of Trade in 1825? As Macarthur was not in London at either stage in the negotiations his recollection would have been based on his brother John's experience.

The initial reaction of the Colonial Office to the proposed lease was favourable and the company reported to its shareholders:³¹

Lastly we enter upon a subject respecting which, we have been more peculiarly anxious to meet you, namely - the result of a negotiation recently concluded with His Majesty's Government regarding the mines of coal in New South Wales. We have the satisfaction to acquaint you that His Majesty's Government have agreed to grant to the Company, a lease of these coal mines for a period of thirty one years. His Majesty's Government have also agreed to grant the Company, leases of any other minerals which may be found in the colony.

This suggests that the Colonial Office had already acceded to the company's request for a lease of all minerals but the reaction of the Treasury was very different and Wilmot Horton was advised:32

Pray do not close with the Australian Company on the terms they propose until I have seen you. Some of these appear to be quite inadmissible. We could not possibly agree to the last clause giving the Company a right of renewal on the same terms for a second thirty one years. Pray negative that clause positively. Nothing could be so improvident on the part of the Government as to tie itself up to any conditions in future leases.

The company was eager to conclude negotiations, and as early as 25 April, 1825, only ten days after John Macarthur's request for an interview, its secretary had advised that experienced miners would be sent on a ship soon to depart should the government think fit to contract with the company. On 7 July, 1825, Earl Bathurst expressed his willingness to grant the company a lease of the coal mines at Newcastle for thirty one years in return for one twentieth part of the produce at market price.³³ Note that Bathurst's proposal was exactly what Bigge had recommended. The coal lands were to remain the property of the Crown and no legal limitation of the rights of others to produce coal was envisaged. Yet, within three years the company received a grant of 2,000 acres of coal land in the centre of Newcastle and was accorded a monopolistic position.

The Australian Agricultural Company's monopoly

The Crown Law Officers were responsible for the substitution of a grant for the lease. They objected that the company was formed to cultivate its own grant and that its charter did not encompass coal mining or the leasing of land. Faced with these difficulties, the directors agreed to a new proposal, that portion of their principal grant consist of coal land at Newcastle. As 2,000 acres of land on the banks of the Coal River had already been promised for a landing depot which was no longer required, they asked for the same quantity of coal land.³⁴

Bathurst feared that such a large grant might 'place in the hands of the company a complete monopoly of the coals in the colony.' However, he agreed to grant 500 acres and promised to reconsider the matter after he had received a report from the Governor on the coal reserves of the colony. The Secretary of State then advised Darling confidentially to take care that 'the Public Interests be not prejudiced by allowing the company to take possession of more than a fair proportion of the most valuable land.'35

The effect of the Winder affair and the cautionary advice from the Colonial Office was to put Darling on his guard when the company's representatives raised the coal question. He had not been informed about the legal objections to leasing the government mines to the company and had concluded that the proposal had been dropped because of the danger of creating a monopoly. So confident was he that Bathurst would not hand over the mines that in March 1827 he privately commented on a report in the Sydney monitor: 'The Australian Agricultural Company does not possess one atom of the coal mines nor has the Government any intention of transferring any part of them to the Company'.36

Early in 1827 John Henderson, the officer in charge of the company's coal department, called on the Governor to discuss the venture. Concerned about the smallness of the local market for coal, he asked about the future of the existing mines. In reply Darling assured him of every assistance in opening mines at the Hunter River or elsewhere but declined to decide the fate of the government collieries until he received a specific proposal from the Company. He added that he certainly did not at present feel any disposition to discontinue the Government mines.³⁷

The substitution of a grant of coal land for a lease of the Newcastle mines left the company free to select the most suitable location for its colliery. Port Stephens offered ease of supervision by its senior officers, and the use of already established facilities but Henderson could not find coal there. He visited Newcastle and though he was favourably impressed by its coalfield he concluded that the estuary of the Hunter River

would not be a suitable harbour for vessels engaged in the export trade. Consequently the Colonial Committee directed him to commence searching in the Parramatta area where John Blaxland's estate became the centre of operations.³⁸

The Colonial Committee was dominated by members of the Macarthur family with James Macarthur and James Bowman playing leading roles during 1827 though John Macarthur Snr and Hannibal Macarthur also took an interest in the coal search. Their commercial and agricultural experience had not prepared them for such a role and they admitted that they would have to rely on their coal agent's advice. ³⁹ However, the arrival of the colliery department in Sydney and the commencement of the coal search caused the committee such disquiet that they decided to abandon the project.

On 26 May, 1827, the Colonial Committee wrote to inform the directors that they had decided 'to break up the establishment under an impression that it cannot be conducted with advantage at present; and that its continuance can only occasion increase of trouble, with increasing loss and consequent disappointment',40

In justification they argued that coal had recently been discovered on the Ganges River in India, that it might be found at the Swan River settlement and that therefore it was not possible to depend upon an export trade. They contended that the Colonial Government had refused to close its mines and that having no certain market for its coal the company would not be justified in incurring the additional expense involved in opening a colliery. Claiming that Henderson 'has uniformly stated ... that the Company were premature in attempting the establishment of mines unless there were sources of consumption of which he was not aware', and referring to a progress report made in early May 1827, James Macarthur commented: 'You will see from the report of Mr Henderson that the coal speculation is a most unfortunate one and must be abandoned'

However, though Henderson had failed to find coal at Port Stephens and had expressed doubt about the harbour at Newcastle, he was still in the early stages of the search in the Parramatta area and his subsequent reluctance to accept the decision to close the venture does not accord with the conclusions of the committee.⁴²

The committee explained that Governor Darling had promised them every assistance in establishing a mine but had declined to decide the fate of the government mines until the company had established a colliery lest he expose himself 'to the imputation of placing a monopoly in the hands of the Company. When asked if the Government would be interested in acquiring one of the steam engines and employing its miners should the company abandon the project, he had remarked that such an offer would be 'favourably received". On this basis 'and other indirect intimations' the committee 'had concluded that His Excellency had determined to continue the Newcastle Mines' and that the company should not proceed with its mining venture.⁴³

Arrned with this report the directors complained to the Colonial Office about Governor Darling's unco-operative attitude and the losses that had arisen from the idleness of their mining party and colliery plant. Arguing that they had every reason to expect that the Newcastle mines would have been handed over, they demanded an indemnity from colonial funds and stated, without justification, that the Governor had

approved of this indemnity. As they put it, the proposal to indemnify the company and transfer the colliery establishment to the Government was 'a proposal to the reasonableness of which they are led to believe that Governor Darling fully assented'. 44

Stung by the Governor's apparent disregard for government policy, William Huskisson, who sympathized with laissez faire ideas and had just been appointed Secretary of State for War and Colonies, declared that:45

he was not surprised the Committee were unwilling to work the Mines in competition with the Local Governor, if he were to be a Coal Merchant, but it would be a question with H.M.'s Government whether he would be allowed to continue in that occupation.

Huskisson said governors were always complaining about being too busy yet they took upon themselves employments that they ought to have nothing to do with. He promised to take action as soon as he had heard from Darling but shortly afterwards he was succeeded at the Colonial Office by Sir George Murray who, after only a month in office, received another deputation from the company.

Murray heard the directors review the negotiations and ask for the inclusion of the government mines in the Newcastle grant. Murray concurred, but stated that he did not intend to place a monopoly in the hands of the company, for that perhaps would not be desirable: as there was a large quantity of coal land, other grants might be made. The directors replied that they never contemplated working the mines in competition with the colonial government or with others who might also be granted land for coal mines 'although the Company did not seek any restriction to prevent private individuals from working coal which might be found on their own lands'. They promised to increase production and to sell coal to the Government at 8s.6d. per ton, the estimated cost price, and on this basis the agreement of 28 July, 1828, was concluded.46

In a report prepared for Earl Bathurst, John Busby had described an extensive coalfield stretching from Port Stephens in the north to Wollongong in the south and to the Blue Mountains in the west. Thus the Secretary of State was able to agree to the request for 2,000 acres of coal land including the existing mines at Newcastle if the company desired to include them in the grant. In addition, though the quit rent on this land was not to be redeemable, it was to be assessed on the 'value of land for an ordinary superficial occupation, and not with reference to its value as mine land'. Moreover, instead of receiving the one twentieth part of the total produce of the mines envisaged in the original lease the Government would have to pay for its coal at 'prime cost'.⁴⁷

An additional advantage was derived by the company from the sixth clause of the agreement:48

As the Company will have incurred a great preliminary expense for a public benefit, which expense they ought to have a fair opportunity of repaying to themselves, no Governor will for the next thirty-one years, grant or convey any Coal mine, or land containing any Coal mine, without specific exception of the Coal in such grant or conveyance, nor afford any assistance in Convict Labour for the working of any Coal mine to any individual, or individuals, without the previous sanction of the Government, a sanction which would probably be granted, if the Company should avail themselves of their monopoly to impose an exorbitant price upon Coal, the produce of their mines.

Thus though the Colonial Office was prepared to protect the company's investment it

retained two safeguards. There was the power to assist other competitors if the price was excessive, and the power, embodied in the fifth clause of the agreement, to resume the first 500 acres of coal land if at any time the company did not produce two thirds of the average annual output of the Newcastle mines in the years 1826, 1827 and 1828. Landowners whose grants predated the agreement were also free to open mines; however, the likelihood that any would be opened was lessened by the lack of understanding in the colony about the exact nature of the agreement. It had been expressed in the form of letters to the company and the Governor and it does not appear to have been published.⁴⁹

At the conclusion of the negotiation, Murray emphatically directed Governor Darling to implement the agreement and demanded an explanation of his treatment of the company. Provoked by accusations of discrimination, the Governor launched into a long defence of this actions, stating that he had:50

never before understood that the 500 acres of land which the Company was to receive at the Coal River under the authority of Earl Bathurst's despatch dated 26 July 1826. No. 51, was intended to include the mines at Newcastle.

He had supposed that the:

intention of leasing these mines to the Company had been abandoned by an idea that the Monopoly of Coals might prove injurious to the public, never having been informed previous to the receipt of your despatch, that any difficulty had arisen with respect of leasing them.

Darling concluded his despatch with the promise that he would give the company 2,000 acres of land which had been reserved for future expansion of the town of Newcastle but did not let the matter rest there. He sought an explanation of the complaints about him from the Colonial Committee. They provided the relevant extracts from their communications to the Court of Directors so that it must have been obvious to Darling that he had been ill-informed by the Colonial Office and misrepresented by the company's officers in London.⁵¹ His reactions may be gauged by his decision to reduce the price of coal before the company took over the mines.

The Company's first mine

The company commenced to sell coal in September 1831, more than six years after the coal question was first raised in London. That it would persevere with the venture had been determined in 1827 but by then its Colonial Committee had disbanded the mining party and Henderson had returned to England. Thus the arrival of Parry in December 1829 did not lead to a start in mining; that had to wait for Henderson who returned in the following May. Then Newcastle was visited, the miners' tools collected, the engines were recovered from Port Stephens and the iron railway brought back from the Manning River. Slowly exploration of the Newcastle seams proceeded and eventually Henderson located his new shaft, nine feet in diameter and forty six feet above the Dudley Seam on the corner of the present Brown and Church Streets, set up the engines and erected the inclined plane to a new wharf. When the mine was opened officially on 10 December, 1831, invited dignitaries saw the first decorated waggons descend to the wharf where the steamer Sophia Jane waited to receive the first coal. A single hammer blow was all that was required to release the coal into her holds before two more waggons descended from the mine and by so doing caused the empties to

return. In its design and equipment this mine was without rival for twenty five years.52

Several other mines, Blaxland's at Newcastle in 1828, Platt's at Port Waratah about 1830, Threlkeld's on the west side of Lake Macquarie, Brooks' Lochend Colliery also in the Lake Macquarie area, and several others in the Four Mile Creek - Minmi region, were to be opened in the next sixteen years, but compared to the A.A. Company's mine they were primitive and on a small scale, related to the government mines which closed in 1831 rather than to their successor.⁵³ The company had a mine worthy of its own impressive origins but an appropriate market had yet to be found.

Supply and demand

Output in the company's first full year of operation, 1832, exceeded 7,000 tons and though there was a slight fall in 1833, production grew year by year, reaching 12,000 tons in 1835, 21,000 tons in 1839, 30,000 tons in 1840 and 40,000 tons in 1842. There was then a decline in the company's output as demand fell and other mines were opened so that the 1842 total was not exceeded until 1847. However, total production in the Hunter area would have exceeded the 1842 total in 1846.

TABLE 454
NEW SOUTH WALES COAL OUTPUT, 1831-1847

Q	uantity Raised	Average Value
	Tons	Per Ton
		s. d.
1831	5,000	8. 0
1832	7,000	7. 0
1833	7,000	7. 7
1834	8,000	8.10
1835	12,000	8.10
1836	13,000	9. 1
1837	16,000	9. 9
1838	17,000	9. 9
1839	21,000	9.10
1840	30,000	10.11
1841	35,000	12. 0
1842	40,000	12. 0
1843	26,000)	12. 7
1844	23,000 \} +Ebenezer min	e 10. 8
1845	22,000 + 4 other mine:	s 7.10
1846	39,000 + 5 other mine	7. 0
1847	41,000 + 3 outer mine	6. 9

This sharp increase, from 5,000 tons in 1831 to well over 40,000 tons in 1847, resulted mainly from the introduction of the steamship in 1831 and the extension of steamer service within the colony, between Sydney and the outer settlements and overseas. In the beginning the ships burnt some wood but it was no mere symbol that the Sophia Jane received the first coal from the new mine in 1831: she was already burning it. Demand for coal was boosted by each new steamer and by 1847, one company alone, the Hunter River Steam Navigation Company, was burning an amount equal to 18% of the company's total output of 39,000 tons. 55

Reporting the near completion of two more steamers in 1835. Commissioner Dumaresq announced that a new shaft would have to be sunk and a fault corrected in 'A'



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

Pit in order that production might not fall short of demand. Four years later his successor explained that four or five more steamships would be in use within a year and that each one consumed about 1,000 tons per annum. Writing towards the end of a year in which output totalled 21,000 tons, Commissioner King predicted that within twelve months the steamers alone would be burning 10,000 tons: already they must have required about one third of the company's annual production. Then on the eve of the depression which would burst the colonial economic bubble, King commented that if all the steamers talked about eventuated they would consume more than his total output. ⁵⁶ Of course the growth of demand for coal was not limited to steam navigation but it would be difficult to overestimate the importance of this use.

The Australian Gas Light Company's formation in 1836 promised to add considerably to the demand for coal though its initial needs were small. However, the company did not commence commercial operation until May 1841 when it became a regular consumer, buying its coal in Newcastle and contracting for delivery until its own vessel was acquired. More steam engines were also coming into use and the Colonial Government contributed to the growing demand by buying over 2,000 tons per annum between 1837 and 1839, much more than the 1,347 tons sold to it in 1833. The heavier winter demand for coal also suggests a growing domestic consumption. Thus Dumaresq expressed alarm at the rate at which his coal stocks were falling in August 1836, and by the end of the decade King was striving to accumulate a stock of 5,000 tons for meeting the mid-winter demand.

Contributing to the market growth was the slow development of an intercolonial trade. After Lieutenant Governor Arthur enquired about the cost of supplying his colony with coal in 1830, shipping regulations were varied to permit direct trade between Van Diemen's Land and Newcastle and by August 1834, the company's coal was being sold there for 40s. per ton. Four years later coal from Port Arthur went on sale at five shillings per ton at the wharf, but the depth of the seam there and the distance of the mine from the place of loading made it difficult to meet the demand. Thus Newcastle coal continued to compete so effectively that in 1844 a duty was placed on coal from the mainland.⁵⁸

Following the establishment of Melbourne in 1835 and Adelaide in the following year shipments of coal to these ports pioneered what was to be a most substantial trade in the second half of the century. The Port Phillip settlement was 600 miles from Sydney and communication by sailing ship was as hazardous and uncertain as the ten day overland trek was tedious. Thus pressure for a steamer service quickly developed and Melbourne was fairly effectively linked to Sydney by steamer from 1841. In December of that year two sailing vessels carried a total of 586 tons of coal from Newcastle for use in the steamships but the lack of fuel reserves continued to plague the shipowners on that run in the 1840s.⁵⁹

The discovery of copper in South Australia boosted the development of the settlement and ultimately the demand for Newcastle coal but the ores were smelted in Wales until 1848, though the directors of the Burra Company considered establishing a smelter at Newcastle in 1845 and in the following year James Mitchell announced his plans for a copper smelter on his Burwood Estate. Until the first smelter was built at Burra in 1849, consumption of coal would have been mainly in steamships and metal working, as it was in the other outer settlements in the days before railways and gas companies.⁶¹

Settlements at Brisbane and the Swan River in 1824 and 1829 created additional potential markets for Newcastle coal but they were not to be as significant as Victoria and South Australia. Coal was to be found in Queensland and Western Australia, and

TABLE 560 COAL EXPORTS FROM SYDNEY, 1839-1847

	Va	lue of Coal	Exported by	Destination		
Twelve	Total	Other	South	New	Foreign	Total
months	Exported	British	Sea	Zealand	States	Value
to 30	(Tons)	Colonies	Islands	and		
September				Fisheries		
		£	£	£	E	£
1839	2,300	1,676	14	32	578	2,300
1840	2,520	2,333	4	227	60	2,634
1841	2,261	1,795	NIL	320	730	2,845
1842	2,650	2,495	NIL	123	1,025	3,643
1843	2,415	1,560	NIL	137	657	2,354
1844	1.702	1,253	120	90	10	1,473
1845	2,594	1,513	20	183	72	1,788
1846	5,347	2,799	202	344	347	3,692
1847	5,850	2,313	72	766	660	3,811

It appears that for administrative convenience direct exports from Newcastle were included in the Sydney totals. Even when direct exports were permitted from the Hunter in 1834 it was necessary for the master of the vessel to travel to Sydney to obtain his custom clearance. The declaration of Newcastle as a free port in 1846 did not lead to the publication of separate export totals by the Customs Department.

The value of coal exported appears to consist of the price at Newcastle plus freight to Sydney.

the latter colony, because of its location, was more likely to receive coal from the United Kingdom.⁶²

The colonies in New Zealand were also potential markets and the establishment of steamship services from Sydney in the 1840s lead to the export of Newcastle coal for bunkering purposes to Auckland.⁶³

British coal and coke was sometimes available in the Australian colonies as the home country expanded its coal industry and began to develop a vast export trade. Some of this would have reached Australia as speculative cargo or ballast and some was imported by colonial industrialists. However, the quantities were not large and supplies were so haphazard that in 1847 one Sydney merchant could not recall such imports and another had purchased only one quantity of ballast for 15s. per ton. It was more likely that English coal would reach the outer settlements where the price of colonial coal was higher but the amounts were not large, as Victorian statistics show. Imports into Port Phillip in 1847 included only seventy five tons of coal and coke from the United Kingdom.⁶⁴

To facilitate the export of coal, Parry arranged in 1834 for a Sydney merchant to open a depot at his wharf 'affording very great facility for the shipping of coal as ballast, ... at a reasonable price, thus obviating the necessity for ships going to Newcastle for this purpose'. This may have had some effect for occasional references to exports began to appear in colonial newspapers towards the end of the decade. A Madras newspaper reported the arrival of a speculative cargo of 250 tons of Newcastle coal in the **Grecian** in 1839: it was on offer to the Government at fifteen rupees per ton and the report stated that it was hardly distinguishable from coal from the North of England and that it had never been seen in that city before. In the next year the British Government took 190 tons for its China Station steamships and there were occasional shipments to Chinese ports during the 1840s. Another enquiry came from Manila for a large and regular

supply, indicating an additional potential market.65

As a result of an agreement concluded in London by the A.A. Company and the Pacific Steam Navigation Company cargoes also went to Valparaiso and Lima early in 1841. The Sydney herald hailed this development because it might lead to a method of paying for the colony's imports of South American grain without using specie but questioned whether the necessary coal would be available, claiming that all that was produced was needed in the colony and urging that a strict search should be made for coal in 'eligible situations' in the colony and urging that a strict search should be made for coal in 'eligible situations' in the colony and urging that a strict search should be made for coal in 'eligible situations' in the colony and urging that a strict search should be made for coal in 'eligible situations' in the colony and urging that a strict search should be made for coal in 'eligible situations' in the colony and urging that a strict search should be made for coal in 'eligible situations' in the colony and urging that a strict search should be made for coal in 'eligible situations'.

An indication of the comparative importance of the various market sectors may be obtained from Table 5. Annual exports from Sydney ranged between 1,702 and 5,850 tons, with an annual average of 2,492 tons, until there was an upsurge in 1846 when shipments to other British colonies rose to 2,799 tons to exceed the total amount exported in the previous year: this was to provide for steamers involved in the Maori Wars. Nevertheless the comparative failure of the export trade is brought out by the quantity of British coal, estimated at 115,000 tons, being used by steamers alone in ports east of the Cape of Good Hope, in 1846. The A.A. Company Directors had sensed the potential of the coal export trade to Asian ports in 1825 but they had failed to capture if for New South Wales.

The company had opened new mines and improved the quality of coal but had been severely affected by labour shortages so that availability for export continued to be a problem, particularly in the late 1830s and early 1840s. However, it does seem that an adequate supply of labour alone would not have ensured a sizeable export trade as the evidence of Sydney coal merchants to the 1847 Coal Inquiry reveals.

The Oriental Steam Navigation Company ordered 600 tons of Newcastle coal for trial at its Singapore and Hong Kong stations from the Sydney merchant John Thacker but he had difficulty in supplying it. The company had stipulated that the price should not exceed 26s, per ton at its depots and it was difficult to keep within this limit. Large vessels were reluctant to visit Newcastle where the f.o.b. price was only seven shillings per ton and the Sydney price of 13s, per ton was too high to make the business profitable. Consequently the firm had been able to send only 200 tons and was waiting until one of its ships was proceeding to these ports to complete the order. Thacker explained the captain's reluctance to call at Newcastle in these terms:⁶⁸

The vessel has so small a margin for clean freight, that it would scarcely pay her to start from here to Newcastle - run the hazard of passing over the bar when laden, and incur the expense of taking it in - then subject herself to the delay, annoyance, and the expense of being detained by desertion of her crew. (who can only be replaced from Sydney)

From the Spanish Government in Manila had come another opportunity - for the export of 10,000 tons per annum at no more than 20s.3d. for use in steamships, but Thacker had declined to tender because of the risk involved in obtaining shipping tonnage. He had tried to obtain a lower price from the A.A. Company but it had refused to supply superior cargoes or to lower the price to assist in securing these export orders. Sugar producers in the Philippines had also enquired for colonial coal if it could be delivered at about £1 per ton as they were using firewood but their business had been declined for the same reason:

Vessels frequently go up [to Asian or Pacific Ports] empty, and would take coal for almost nothing. when there are none going, but if a contract were taken and became known (which it must do) coal would then become an export, and a high freight be demanded accordingly ...

However, when a quantity of coal from New South Wales did reach Manila it proved unsaleable at \$4 while English coal sold at \$8.50 per ton.

As the A.A. Company gave preference to its colonial customers, Captain King had refused to make coal available for export during one busy period when his stock was exhausted but this was unusual and the slowness of the export trade to develop after 1831 appears to have been caused by high freight rates that did not allow competition with English coal. Thacker's reference to the Manila market suggests that quality was also a significant factor and that consumers would pay twice as much to obtain a more suitable coal. This question was much discussed at the 1847 Coal Inquiry where John Thacker, John Piper Mackenzie and Thomas Hyndes, coal merchants who do not appear to have had interests in rival collieries, were highly critical of the A.A. Company's coal for its impurity and tendency to pulverize. The company was still mining the Dudley Seam and consumers complained frequently about the presence of slaty material in the coal. To

Labour supply and industrial relations

Just as the most powerful force for increasing coal demand between 1831 and 1847 was the extension of steam navigation, so labour shortages and labour relations tended to dominate the supply side of the industry until about 1843 when depression appears to have changed the labour scene. During the 1820s the mines had employed about thirty men for an annual average output of 3,500 tons. There were forty workmen in 1828 but early in the following year Governor Darling directed that in future there were to be an overseer, eight mechanics and twenty five labourers, a total of thirty four. To its own five miners the company added the government's colliery establishment, and then sought additional convicts under the terms of the 1828 agreement as it required them. Its five immigrant miners and sixty four convicts produced 12,392 tons in 1835, 179 tons per man, but the company believed that this output could not be sustained and appealed to the governor for more labour. 11

Commissioner Dumaresq explained that the workforce was at full stretch, that it had not been possible to build up any reserve stock and that any break down in mine machinery would seriously interrupt steamship services. He added that the two steamers about to join the colonial fleet would require an additional 5,000 tons of coal per annum and asked for a total of 100 assigned convicts including fifty miners. Governor Bourke and his Executive Council readily agreed to the request but this did not end the company's labour shortages as demand continued to grow and the formation of the gas company promised a further increase. Thus, apart from the period after 1838, when twenty eight experienced miners and seven labourers who had been engaged in the construction of Sydney's water supply were assigned to the colliery, the supply of convict labour was inadequate. The promises of the British Government to provide labour had proved to be far more difficult to fulfil than either Secretaries of State or the company could have anticipated. Coal miners appear to have been transported rarely but even so it is difficult to avoid the conclusion that the colonial authorities did not do their utmost to fulfil their obligations to the company.72

The British Government had promised that every facility would be given in order that an adequate supply of coal could be maintained but Darling had cut back the Newcastle establishment in 1828, making it difficult for Parry to obtain replacements for convicts whose period of assignment was over and in 1833 Governor Bourke showed reluctance to supply mechanics for the maintenance of colliery plant. Two years later Bourke assured the Secretary of State for the Colonies that the company would be given 100 assignments for the collieries including as many miners as the government service could spare, but this total was rarely achieved. When Dumaresq introduced cash incentives Bourke rejected them in a manner considered peevish by the Commissioner but efforts to change his attitude failed. The labour shortage continued though, when assignment was severely limited late in 1838, Governor Gipps assured Captain King

TABLE 6^{73} ASSIGNMENTS TO THE A.A. COMPANY'S COLLIERIES, 1835-1841

	Miners	Miners or Labourers	Assignments per annum
1835	6	55	61
1836	2	12	14
1837	58	20	78
1838	0	12	12
1839	12	12	24
1840	4	7	11
1841	1	12	13

that, in the interest of the public, convicts would still be assigned to the colliery. King remained sceptical, convinced that the colonial authorities were not sending proper workmen but assigning a majority of men of the very worst disposition from the iron gangs and providing only six of the twelve colliery assignments ordered by Gipps in July 1839.74

Forced to commence an immigration programme because colonial labourers would not accept underground work, the company received a promise of assistance under the bounty scheme from the Marquis of Normandy, but this was denied by the Governor because the company had never contributed to the Land Fund. This evidence and the reluctance of the Government of New South Wales to enforce the coal reservation clauses shows that opposition to the company, however unjustified, continually interfered with the implementation of the 1828 agreement. The company was obliged to play its part but only half-hearted support came from the Government. This opposition appears to have been influential within the Legislative Council and it is difficult to discern the extent, if any, to which successive governors shared in hostility towards the company.⁷⁵

The shortage of labour was exacerbated by the lack of harmony between the company and its miners. There were problems with assigned convicts in the 1830s and with immigrant miners in the next decade: they arose from different causes but had similar serious effects on productivity.

Though neglect of work or insubordination could lead to prison or to a whipping and offences were common, it would be wrong to conclude that the convict miners were powerless. Parry had begun by reducing the wages of his assigned labour but Dumaresq decided to introduce money payments for overtime work because many of his skilled men were spending up to half their time working for the people of Newcastle while he faced a desperate labour shortage. To discourage this he threatened to withhold the extra rations of tea, sugar and tobacco of those who did not meet their daily quotas, but this was not necessary. The opportunity to earn two shillings per ton for extra coal had a remarkable effect upon the miners who rapidly established a stockpile of 2,000 tons. Similar incentives were paid to other mine workers and there was a simultaneous improvement in clothing allowances: an extra pair of shoes for the wheelers, flannel instead of cotton shirts and extra woollen trousers for all who worked below ground. Dumaresq wrote a glowing report on the results, declaring 'I have every reason to be satisfied with the proceedings of the parties in charge of this ... undertaking but the Anglican clergyman in Newcastle, C. P. Wilton, and the police magistrate feared that the possession of money would lead the convicts into drunkenness and crime. Dumaresq argued that there had been a reduction in crime during the year which had elapsed since the introduction of this scheme because the men spent so much more time at work but Governor Bourke was persuaded to condemn the scheme during his visit in 1836. Whatever its effect upon the crime rate, the withdrawal of money incentives had a startling effect on productivity.⁷⁶

The money payments which His Excellency described as illegal were soon replaced with orders on local storekeepers for flour, tea, sugar, tobacco or clothing to equivalent values at approved rates, but the men were greatly dissatisfied and refused to do more than their allotted tasks. They continued to behave with great propriety, reported Dumaresq, but they would not accept the new system and the stock of coal fell sharply during the winter. Bourke did not change his mind, and as the convicts could not be punished while performing their allotted tasks and manifesting no improper or unbecoming spirit, the company could only appeal for more convict labour in the hope that this would persuade the men to reconsider. They were then receiving a bare ration of 10lbs. of flour and 7lbs. of meat per week so their resistance to the new system must have been as strong as their unity, unless they had been able to supplement their income in other ways.⁷⁷

Apart from the motivation problem, the company found its convict work force rather rebellious: the indiscipline already noted in the penal settlement and in 1829 continued. In 1844 a man who had refused to work was charged with insolence to the overman and was sentenced by the magistrates to ten days of solitary confinement. There was a spate of similar cases during that year and a contemporary commented that:⁷⁸

the cases under the Master and Servants Act of late have ... been numerous ... The assigned servants of the A.A. Company themselves form the bulk of the prisoners' cases brought before the court; and many are men of very bad character; but it is a subject of congratulation to the public to know that, when arraigned before the bench on serious charges, their punishments never fall short of the offences proved against them.

Another case involving prisoners working at the colliery elicited an interesting comment on their conditions of service. Six men had received their pay on a Saturday afternoon and proceeded to spend some of it in an hotel. Found guilty of drunken and disorderly behaviour, they received from one to two weeks of solitary confinement and an indignant correspondent of the **Maitland mercury** remarked that 'the prisoners in the service of the A.A. Company are better clothed, housed and fed than many of the immigrants now out of employment'.⁷⁹

TABLE 780
A.A. COMPANY COLLIERY ESTABLISHMENT, 1839-1847

	Free	Ticket of Leave	Convicts	Total
1839	9	-	95	104
1840	43		111	154
1841	63		120	183
1842	68	-	84	152
1843	66	9	62	137
1844	66	12	34	112
1845	61	14	17	92
1846	50	36	14	100
1847	52	48	4	104

Such difficulties in controlling the convict coal miners were perhaps to be expected given their background and the forced nature of their employment but in the early

1840s, while the immigrant miners were at loggerheads with the company, they remained the backbone of the labour force. In Captain King's opinion they were far from satisfactory as employees but they were much more obedient and industrious than the immigrants.⁸¹

From the convict miners' withdrawal of extra work in 1836, the company's path led directly to the introduction of immigrant miners who formed the majority of colliers in the next decade. While considering a supply of British miners as a solution to the scarcity of labour during his superintendency, 'Dumaresq had realised that high costs would not be the only problem - there would be 'the difficulty of controlling them.' It is doubtful however whether anyone foresaw how severe the struggle between the company and its miners would become.⁸²

There were thirty seven colliers in the 1840 contingent, a large group from Wales, Cornwall and other English counties, and the remainder from Scotland: these two groups reacted very differently to their new environment. The Welsh, as the majority were designated, struck work soon after arrival and were castigated again and again by Captain King who commented that he had never met 'a more impertinent set of rogues' and that most of them 'had been concerned with the Chartist faction and have brought with them a spirit of insubordination that will be difficult to subdue'. He was convinced that their 'turbulent' behaviour on the voyage and in the colony signified a similar record before immigration and contended that 'their emigration was no doubt a great benefit to the neighbourhood where they worked and lived'. It was his belief that false references had been provided by employers who wished to be rid of these men. However, the Scots were considered efficient miners, the reverse of the 'Welsh' who were the very refuse of bad characters, discarded from various collieries, idle, drunken and discontented, suspicious and litigious'. On these judgments the company based its future recruiting policy, seeking to use the industrious Scots as recruiting agents among their own people.83

As the conflict between Captain King and his indentured miners continued for several years its causes are worthy of examination. The commissioner believed that these men, who were highly paid by colonial and British standards and also received rations and accommodation, were so rebellious because of their experience at home and because they were encouraged to be difficult by Robert Dawson. The company had dismissed Dawson, its first manager, after he had been suspended by the Colonial Committee who accused him of incompetence. His resentment, King alleged, caused Dawson to impede the company at every opportunity and his visits to Newcastle to attend to his land in the region permitted him to take a continuing interest in the immigrant miners.⁸⁴

The miners had been brought out at the company's expense and had entered indentures to work for seven years in return for one pound per week plus rations and accommodation. They were dissatisfied before leaving Sydney, in consequence, King said, of having been ill-advised by Dawson, and soon after commencing work they struck for a shortened term of indenture and improved conditions. By acting on Dawson's advice and prolonging the strike the miners eventually forced King to concede that they were 'to be paid by the job or piece and that if they do not choose to work they cannot be forced'.85

The company approached the Newcastle Bench to prosecute the leader of the strike, John Griffith, but were at first delayed because of the magistrates' belief that the inclusion of a penalty clause in the indentures had removed the issue from their

jurisdiction. While this was being resolved the strikers wrote to the Attorney General on behalf of four other migrants who were in Newcastle Gaol for breaking their agreements with the company. A party of twenty four left for the interior and those who did not return when called upon to do so were pursued and arrested. When one of these men was gaoled for a month for deserting his employment, the 'Welsh' miners financed an action against King for 'wrongful imprisonment and trespass'.86

After two months twelve had still not reported for work and four months later Captain King complained that the immigrant miners would not work, and that it was only the stockpile of 5,000 tons that prevented another strike. The large stock on bank had been produced mainly by the convicts whom King considered troublesome, but more obedient and industrious than the migrants, some of whom did not produce enough coal to pay for their rations. They worked as hewers at two shillings per ton and labourers were employed to wheel the coal away while the colonial-hired, free and ticket-of-leave men received four shillings per ton for getting and wheeling.⁸⁷

It is unfortunate that records relating to the long struggle between the company and its immigrant miners between 1840 and 1844 do not reveal more about the causes of unrest. That there were grievances which are not adequately reflected in Captain King's despatches is suggested by the experience of James Birrell. He was a Scots miner from Fife who immediately attracted the attention of his employers as a very superior man and he was appointed assistant overman to Alexander Brown. He provided names of potential immigrants from his district in mid-1841 and was praised for his efforts but in the following year he became the leader of the dissident miners.⁸⁸

Birrell emerged in this capacity when the company was introducing larger skips in order to reduce the cost of wheeling. King contended that this measure improved the men's earnings as well as saving £2,700 per annum but the miners objected and he reported that, 'notwithstanding the miners had advantage, because it was a mutual one, every opposition was made and combinations were formed'. These were led by Birrell and Grahame, a member of the company's staff who supported the men instead of using his influence for his employer. The 'artful' Birrell was accused of filling his skips in a deceptive fashion so that he would be paid for more coal than he had actually won and was suspended. As his wages were withheld, Birrell summonsed the agent of the company to appear before the Newcastle Police Court for breaching their agreement.⁸⁹

After hearing the evidence the magistrates adjourned the case so that they could consult the Attorney General, but urged Birrell to settle out of court. He refused and was rewarded by full payment for the period of his suspension, but the company threatened further action. Henceforth 'as a punishment' he would be paid at the rate of one pound per week in accordance with his indentures and not at 'the present scale of prices' which enabled the miners to double their earnings. The company also intended to proceed against him for deserting his employment, an offence which could entail a penalty of £50, but there is no record of their having done so.90

One year later after several cases under the Masters and Servants Act involving the company's employees, particularly their assigned servants, Birrell sued his employer for non-payment of wages. The court room was crowded with colliers who came to hear that particular case, an indication that Birrell had the support of many of his colleagues and was not simply recalcitrant. This time the company did not let the matter rest and Birrell was charged 'with neglecting his employment and disobeying the lawful commands of those placed over him'. He had refused to produce his coal quota on two successive days and was sentenced to a month in Newcastle Gaol.⁹¹

There were similar prosecutions in 1846 when James Lindsay, another immigrant miner, was sentenced to fourteen days gaol for using abusive language to his superior and a few months later the Tulip case went to the Supreme Court, an indication of the determination and resources of the militant miners. Tulip had not arrived with the first party, but this did not prevent his involvement in the struggle with the company. Arguing that it was obliged to provide him with a reasonable quantity of work for the term of his indentures, Tulip claimed compensation for the work he had not been given. His complaint was that the company had not worked its pits continuously therefore depriving him of paid employment but his suit was rejected by the court because the agreement would not bear this interpretation, 'they could only judge of the agreement by its terms ... and nothing in them warranted the implication contended for'.92

The Tulip case seems to have arisen, in part, from the changed position of the company as competition developed and labour became more plentiful, thereby reducing the amount of work available to each miner. The loss of the case merely inflamed the miners further and another prosecution of an immigrant miner for absconding occurred within six months: he too went to gaol.⁹³

For its first ten years in coal mining the company had relied almost wholly on convict labour which proved to be effective enough to make the prospect of transferring to free labour unattractive. By utilising payment by results Dumaresq had demonstrated that convict coal miners could be manageable and economic and it was the lack of assigned labour which forced a change in policy. Though highly paid and treated more generously than the letter of the law demanded, ex-convicts showed a reluctance to remain in the mines in the labour-scarce late 1830s and the company turned to immigration.

In its second decade at Newcastle, as prisoners disappeared from the ranks of its miners, Commissioner King had to deal with immigrant labour at its most truculent. There was no union organisation of the type which developed after the gold rushes but ever present were the combinations formed to meet particular situations and revolving around recognised leaders such as Griffith and Birrell. The militancy of these miners was partly the result of their experience in the British coal industry where conflict between the colliery proprietors and their miners was already intense, but they also would have been affected by the experience of migration. Departing from unusually tightly-knit communities, they were subjected to the boredom, sickness and occasional danger of a long sea journey and landed in a strange environment with an obligation to serve an unknown employer for seven years. 94 Added to this there was the difficulty of explaining accurately what conditions would be like, a difficulty sometimes compounded by unscrupulous immigration agents, and the temptations offered in the colony by rival employers created further difficulties. It is not surprising that the management and supply of labour was the company's most pressing problem until other collieries were opened and competition developed.

The appearance of competition

The agreement of 1828 did not confer on the company a legal monopoly of coal mining in New South Wales for the thirty one years from 1830, but it placed would-be competitors in a most disadvantageous position: they would be denied convict labour, they would be prohibited from mining on lands alienated before 1828 and they would be unlikely to obtain government contracts. However, colonial business interests were

prompted to open rival collieries by two related developments, the fuel needs of steamships after 1831 and the high profit potential of the industry in the early 1840s. Naturally the company defended itself against these interlopers by political action in the colony as well as in London and by commercial practices such as the buying of rival property and price manipulation.

Before 1831 J. L. Platt had briefly operated a mine at Iron Bark Hill on the south arm of the Hunter River on land which was granted before the Crown reservation came into force. Parry had seen the coal and correctly discounted it but Dumaresq, believing that a colliery might be developed in association with a gas company, bought the 2,000 acre property for the A.A. Company for £6,000. He wrongly believed that the coal was excellent, correctly assessed the shallowness of the river as an obstacle to water transport, accurately gauged the problem of obtaining and controlling free labour, rightly decided that there was no need to fear competition from this source and spent a large sum on land which he recognised as valueless except as a small dairy farm! Reporting to London, Dumaresq explained that he did not dread competition but he was 'not insensible to the advantage of rendering it impossible'. 96

Given his opinion of the coal, the possibility of an assured demand for gas making and limited water access, the commissioner's decision becomes explicable, particularly as his colliery was not yet a commercial success, but hindsight permits another verdict: the company was still vainly searching for coal there in the last decade of the century. The idea of purchasing coal properties likely to offer effective competition was revived on several occasions by P. P. King but he did not put it into practice.⁹⁷

Of more significance, perhaps, was the proposal to mine coal discovered in the vicinity of Western Port in Victoria. Charles Swanston, the managing director of the Derwent Bank and the principal supporter of the Port Phillip Association, and others interested in promoting the Bass Strait area, proposed its exploration for use by steamers. The company opposed the plan but Governor Gipps approved it and was supported by colonial opinion. The Secretary of State for the Colonies decided to refer the matter to the Crown Law Officers but his chief adviser James Stephen was pessimistic: 'I fear there is little chance of escape from this improvident bargain'. 98

To his surprise the Law Officers reported that there was nothing to stop the Government developing other coal mines and that if it wished it could also provide convict labour for use in new mines. This was possible because the 1828 agreement contained a clause permitting the Government to open other collieries and to allocate convict labour to them if the company were to charge an 'exorbitant price' for its coal. As the Marquis of Normandy informed the Secretary of the company:99

although the only circumstances particularly mentioned in the letter and despatch of the 31st July, 1828, as likely to induce the Home Government to interfere with the monopoly of the Company, is the sale of coal at an exorbitant price, yet the power reserved is quite general and might be exercised whenever any circumstances should render it necessary.

The Secretary of State went on to suggest that, unless the company intended to sell its coal in Port Phillip at no more than the cost of locally produced coal, its price would be considered exorbitant and the Government would permit the development of other mines. Accordingly, Governor Gipps was left to decide whether to permit coal mining in Western Port and he granted permission. However, nothing came of the proposal because the coal seams there were either steeply inclined or too far from a port. Thus,

though defeated in law, the company continued to supply the Port Phillip settlers who were 700 miles from Newcastle. 100

While this challenge was being decided another threat developed, one nearer to home where there was not the same justification for setting aside the 1828 Agreement. Captain Westmacott, who had a grant on the south coast, applied for the cancellation of a reservation clause in his deeds. The grant had been promised in 1825 but the deeds came later and contained the clause. The Government agreed to withdraw the reservation from this grant and Commissioner King accepted that this was fair, but, fearing that the Governor would allow convict labour to Westmacott, he urged his directors to 'nip the evil in the bud' by intervening at the Colonial Office. In his letter home Gipps suggested that the company, in return for a continued supply of convicts for its mines, should relinquish its monopoly, which was of little advantage to it and of no great disadvantage to the public but which was made 'the frequent theme of reproach to the Government which granted it'.¹⁰¹

The company did not take this view and pressed the Colonial Office to uphold its rights. Again Russell referred to the Law Officers and Stephen minuted the correspondence, 'The Law Officers of the Crown have already twice reported their opinion that this claim cannot be sustained'. 102

During the winter of 1840 coal became scarce in Sydney and prices were raised by the coal merchants to as high as 40s. a ton, though the price at the coal staiths in Newcastle was still only 10s. per ton. In these conditions the Australian Mining Company for the Supply of Coal was established and its directors sought a suitable location for their colliery. That they understood the limited nature of the A.A. Company's rights cannot be doubted, for John Blaxland's estate at Newington was recommended by the directors because it was 'free from any objections as regards the rights and privileges of the Australian Agricultural Company'. 103

The formation of the new company gave the editor of the **Australian** great satisfaction and he attacked the A.A. Company, asserting that it could not supply half the demand, that its claim to a monopoly was 'preposterous' and that

distinct opinions have been had from no less than four of the most eminent lawyers in England twelve months since and they have each and all determined in the most unqualified manner, that the clause in the charter referred to is altogether untenable and valueless.

This was probably an exaggerated reference to the legal opinions given in the Western Port case but it does demonstrate the growing tendency to challenge the company's position.¹⁰⁴

The Reverend L. E. Threlkeld, who conducted a mission to the aborigines of the Lake Macquarie area from 1825 to 1841, announced the discovery of coal on his grant at Ebenezer in 1834 but he made no attempt to exploit it until 1839. The purchase of Platt's land would have impressed every landholder with a show of coal on his property and Threlkeld was no exception. He wrote to offer his farm, 'on which a good seam of coal crops out', to the company, stressing that it was not affected by the reservation and suggesting that specially designed vessels of shallow draught would open the way to the Sydney market. A postscript explained that fourteen miles of canal were all that was required to link the Hunter River and Sydney Harbour by an inland waterway, thus further enhancing the value of this coal. Curiously the experienced naval officer, King, dismissed the vessels as impracticable and the proposition as unprofitable. However,

he was mistaken and the Ebenezer mine did become an annoying rival.105

Reviewing the efforts of his competitors in January 1841, King found little to concern him. The Australian Mining Company was failing, only £7,000 being subscribed for its shares, a sum inadequate for the shaft it had decided to sink on Blaxland's estate where Henderson had vainly searched in 1827. Threlkeld and his neighbours were ruled out by the nature of the entrance to Lake Macquarie and nothing had been accomplished at Port Phillip. Demand was growing and if all the steamers being talked about were to eventuate, they alone would consume more coal than the colliery was producing. With coal selling at Newcastle for 13s. per ton the mine was yielding good profits and only the labour problem remained to be overcome. 106 Yet Captain King was too sanguine, the worsening depression and the development of effective competition would soon cause him to advocate the surrender of the company's privileges on the best available terms.

With borrowed capital, Threlkeld had pushed ahead with his colliery, sending the first cargo to Sydney in May 1841. He was hampered by the shallowness of the entrance to Lake Macquarie which vessels with a draft of more than four feet six inches could not enter, but partially overcame this by using barges to cross the lake and loading coasters lying in the bay at its entrance. Nevertheless, this transport problem would ensure that the Ebenezer mine would never be more than a nuisance to the A.A. Company. 107

Two further challenges were also developing, one in Moreton Bay and the other at East Maitland. The Moreton Bay case was similar to the situation at Western Port and, fearing that the colonial authorities would approve it, Captain King considered buying the only land through which the mine could be linked to the sea, thereby preventing its exploitation. However, though the application succeeded and the mine opened, King's principal fear, that the right to work coal on the northern coastal rivers of the colony would also be granted was not conceded. Moreover, the Secretary of State for the Colonies would not agree to Governor Gipp's claim to decide on applications of this kind. Lord Stanley was not prepared to leave the company to the mercy of the colonials and reserved that power to himself. 108

At about this time several mines were opened in the East Maitland area, some for the purpose of supplying the Hunter River Steam Navigation Company. John Eales, a director of this company, had been searching for coal close to the river but it was John Christian who first won the steamship company's contract in mid-1844 by supplying at a price which saved the cost of transport from Newcastle. Several months later, James Brown, who had opened a mine at Four Mile Creek, replaced Christian by reducing to 9s.6d. and the steamship company, taking advantage of competition, called tenders for 4,000 tons of fuel per annum. Brown was successful, securing the contract to deliver at Morpeth at 5s.11d. per ton and this ensured that the A.A. Company's efforts to protect its rights would fall on him. The loss of such a client as the steamship company and signs of intensifying competition for the Sydney market caused the company to warn all those who were mining land in which the coal had been reserved to desist or face prosecution. Only Brown persisted and the company asked the Colonial Government to enforce the reservation. ¹⁰⁹

The Attorney General's department moved slowly, far too slowly to suit Captain King. who attributed legal delays to antipathy to the company and corrupt civil servants, and it was almost a year before the Supreme Court heard a charge of intrusion against Brown in August 1845. For personal and political reasons, the barrister-politicians, Richard



James Brown, 1816-1894 Newcastle Region Public Library

Windeyer and Robert Lowe, Ms L.C., defended him, possibly without fees. Of course he was guilty and there was little they could do about that, but they attacked the rights of the A.A. Company arguing that the 1828 agreement was contrary to English law. The court rejected these arguments, as the full Supreme Court was to do when Brown sought a retrial, and found the defendant guilty of intruding on the reserves of the Crown. However, the Attorney-General, in introducing the case for the prosecution, had explained that the Crown did not desire punitive measures against the defendant, merely that its rights be upheld, and damages of only one shilling were awarded against him. Moreover, the Attorney General, in denying that the prosecution of Brown was undertaken to benefit the company, emphasised that there was nothing to prevent mines being opened on 1,750,000 acres of land, apart from the company's grant, alienated before 1830:110

The Company ... possessed no more monopoly than any other grantee whose grant had been issued previous to the last twenty years ... and it must be well known to all that large quantities of coal arrived at Sydney from lands with which the Company had nothing to do.

Thus the trial drew attention to the monopoly, provided critics with a public platform, showed that there were legal ways of evading it and demonstrated that violation of the coal reservation would not lead to heavy penalties. Nor was the specific goal achieved, for Brown was not prevented from mining and continued to supply the Hunter River Steam Navigation Company. In these circumstances it is doubtful if Captain King was wise to press the Government to intervene.

The Brown case was significant because it clarified for the public the company's position in the coal industry. From December 1825, when news of the original proposal first reached Sydney, there had been confusion about the nature of its rights. First there was the three year period of negotiation during which the proposal was changed radically. Then the next three years, from the conclusion of the agreement to the opening of the company's mine, brought no clarification to the colonists, though the company's officers and the Governor had received the text of the agreement. Furthermore neither of the parties to this agreement realised that the British Government still had the power to permit the opening of rival mines until the Crown Law Officers reported on the Western Port application. Even when Captain Westmacott succeeded in having the reservation clause removed from his deeds he did not manage to establish the colliery that would have publicly demonstrated the legality of his position. The development of competition from 1841 assisted the public to a true appreciation of the company's rights and the prosecution of James Brown may be seen as the culmination of this process. 111 It also had a profound effect on the finances of the industry.

The company's first enquiries had suggested that coal mining would be unprofitable until demand grew considerably. Busby had predicted high profits when the company had driven other fuel from the colonial market by selling at 7s.6d. per ton from an unmechanised tunnel mine worked by convicts and producing coal for two shillings per ton but Henderson took a different view. By the time of his inspection, to establish 'the cost of working' and 'the prospects [it] may have if established there', the company was already committed to a more highly capitalised mine. Assuming that the daily rate of

output at the mine was maintained throughout the year, Henderson arrived at a figure of 6,760 tons as 'sales' per annum, apparently not realising that this was almost twice the actual annual production. This total he considered to be too small to allow 'any certain profits' while coal sold at 10s. per ton. Most of the coal was being consumed by the Government which was unlikely to pay more than cost price so the commercial prospects of the mines lay only in the long term.¹¹²

Coal was selling at 10s. per ton at the Newcastle wharf when the lease of the coal mines was announced, and the company predicted a reduction after it took over the colliery. The Colonial Government did not leave this to chance, and after the conclusion of the 1828 agreement but before it was implemented, the price was reduced to eight shillings per ton in order, it was said, to increase the demand. However, it is difficult to see this reduction as anything but a device for forcing the company to keep its promise and as a safeguard against the abuse of its privileged position. Perhaps, though, it was a sign of Governor Darling's displeasure at the way the negotiations had been conducted and the manner in which his attitude had been misrepresented at home. This reduction was resented by the company which later complained that the low price set by the Government made it difficult to operate the mine profitably.

By 1832 the company estimated its expenditure on the mining venture at £15,000 including the cost of plant, the construction of a wharf, the development of the mine and the costs of operation. With annual sales of about 4,000 tons the cost of production per ton was more than twice the selling price but the company did not seek a general increase until mid-1833 because it wished to stimulate coal consumption 'to lay [a] foundation for future profit'. However, when Governor Bourke accepted a rise of one shilling he warned that he would take action if the company appeared to be exploiting the public, 'for whose benefit the mines were transferred by the Crown to the Company'. By 1836 when output had expanded to over 12,000 tons and a new price of 10s. at the wharf was negotiated, the financial position of the colliery had improved considerably. This was acknowledged by Commissioner King when he informed the 1847 Select Committee that the colliery had worked for the first five years at a loss, 'independently of the loss of the interest of the capital which was expended, before they raised a ton of coal'. 114

The price of 10s. per ton was maintained for four years until August 1840 when King added three shillings because of the high cost of introducing immigrant labour and the dearness of provisions. He was aware that such a high price was likely to encourage others to search for coal but maintained it and even contemplated another increase in 1842. The cost of production at that time appears to have been about eight shillings per ton, permitting a profit margin of about 62½%. Mainly by introducing a new system of transporting coal from the face to the wharf, King was able to reduce his costs per ton to no more than six shillings in September 1842, increasing the profit margin to over 100%. Though conceding that it might have been prudent to reduce the price to 12s., he contented himself by not proceeding with the contemplated increase. King's primary concern was to maintain the income of the company during the depression:

it would be prudent perhaps to lower the price: depending, however, as we now do, upon the coal sales to support the agricultural department such a step would be a material loss and therefore I shall not do so unless I see it absolutely necessary for your [the directors'] interests.

Such a motive may well have been queried by the Colonial Office, which had provided for the opening of rival mines with convict labour, should 'the Company avail themselves of their monopoly to impose an exorbitant price', but it was King's only hope of avoiding heavy losses during the current depression. 116 However, he was risking the appearance of effective competitors and encouraging those who were utilising other fuels. Furthermore when both these developments occurred, he was forced to reduce the price of coal and maintain it at a very low level with consequent heavy losses of revenue.

The series of reductions began in November 1843 when the price fell by two shillings, and a year later there was another one shilling reduction. Two more decreases occurred in February 1845 another brought coal to seven shillings at the end of 1845 and there it remained for the rest of the decade. These reductions were influenced by the depression as well as competition.¹¹⁷

The effect of the depression on coal consumption is of great interest, given the usual inelasticity of the demand for coal. The company's output had risen strongly in 1840 and continued to grow until 1843 when there was a fall of about 10,000 tons and there was no recovery until 1846. As the only mine producing a sizeable amount in 1843 was Threlkeld's, which Captain King estimated might produce 4,000 tons per year, coal consumption must have fallen in that year. Shipments from Sydney were 1,235 tons less than in 1842 but this does not account for the size of the fall. It seems likely then, that the reduced sales of this period were not wholly due to competition from rival mines though this did intensify. Firewood appears to have filled a space in the market previously occupied by coal.

From time to time Captain King refers in his correspondence to the growing use of wood as fuel and he believed that some had found its way into the bunkers of the steamers. By late 1843, the price of a load of wood was reported to have fallen from twelve to three shillings and this may be a reflection of its abundance. It appears likely that one of the results of increased unemployment was a multiplication of the number of wood cutters who had to sell for whatever they could obtain.

The Ebenezer mine appears to have shipped about 4,000 tons of coal to Sydney in 1843 and to have increased its output in 1845 to about 6,000 tons. As it suffered from considerably higher freight costs, perhaps three shillings per ton, and the total cost of delivering its coal to the wharf in Sydney was 11s.3d. in the mid-1840s, this was an impressive performance and one that confounded Commissioner King's assessment of the mine. His condemnation of Threlkeld's 'execrable' coal made it difficult for him to explain its success and he appears to have accepted that Sydney householders of the missionary's dissenting religion bought his coal for charitable reasons even when it was being sold at five shillings more than the company's product in the worst depression the colony had known! It seems more likely that this coal, which was mined in larger pieces, was preferred by many householders because it was cleaner and less likely to produce coal dust. 119

William Brooks also cut into the company's sales by selling coal from his Lochend Colliery on Lake Macquarie at 7s.6d. per ton and by winning the Commissariat contract

for about 1,200 tons per annum. Like Threlkeld, Brooks had tried to sell his land to the company but King considered that it would be necessary to buy four actual or potential coal mines at a cost of £20,000 before he could close down the Lake Macquarie coalfield until demand grew enough to justify its exploitation. His decision to decline was probably also influenced by his knowledge of Threlkeld's difficulties and the likelihood of the property being for sale at this time. 120

The end of monopoly

By late 1844 Captain King was extremely gloomy about the future. Having already suffered a fall in coal sales of about 33% and witnessed the opening of new mines within reach of the Hunter River and at Moreton Bay, he commented 'coals will be a mere drug ... the monopoly has virtually ceased to exist'. Accordingly he recommended the acceptance of any reasonable offer for surrendering the company's rights under the 1828 agreement because colonial antipathy would prevent its enforcement. He advised that full legal rights over the coal grant would be of far more value than the mines and, though negotiations took more than two years, this was the compromise reached between the company and the Colonial Office. 121

The company's coal mining department was profitable from about 1836 but the contribution it made to dividends is not easily discerned because of the difficulty of separating its affairs from the agricultural department. Between January 1835, when the first dividend was declared, and the first month of 1842, there were seven dividends, four of 15s. to the end of 1838 and then annual payments of 30s., 35s. and 35s. Dividends were not resumed until 1843 when 15s. was paid but then continued at the 20s. level until 1846. At that stage the directors complained that they had been able to pay only 34% on paid up capital in 22 years and that for ten years they had been unable to pay any dividends. Cultivating the wastelands of Australia had not been very rewarding but it would have been less so had the coal mines not been added to the company's activities as an afterthought.

To ensure that the company, having spent a large amount on establishing a modern mine, was not subjected to competition which might make the project uneconomic, two protective measures were taken by the Colonial Office, a denial of convict labour to rivals and a guarantee that competitors would not be allowed to exploit coal in lands subsequently alienated. The small demand for coal offered a third protection, one that was probably responsible for the company's sole possession of the field for almost a decade but the two artificial measures were less effective. As soon as competition became likely, opposition to the monopoly within the colony began to be manifested and on several occasions the Colonial Government so interpreted the 1828 agreement that the company's rights were more limited than they might have been. When the price of coal was raised in 1840 existing hostility towards the company was reinforced and, as the subsequent history of the industry was to demonstrate, high prices prompted the opening of new mines. By then opposition to the monopoly on theoretical and practical grounds was such that the authorities were unwilling to support it and the company realised that it would only survive in the industry by maintaining coal at a low price.

Powerful forces had been working against the company's enjoyment of its monopoly almost from its inception. The agreement of 1828 was arranged in London, not only without consultation but without effective communication of developments so that all ranks of colonists, including Governor Darling, found it difficult to understand what

was being done. Moreover the Secretary of State was often cast as defender of the rights of the corporation to scarce convict labour and as an opponent of mining in the outer settlements. Thus the monopoly was regarded as a Colonial Office imposition at a time when rule from the United Kingdom was being increasingly challenged. Furthermore the agreement, based upon limitations of trade, was introduced when the laissez-faire doctrine was being asserted with great conviction in New South Wales.

Intensifying the problem was the extent to which the governors also were regarded as defenders of the agreement and their opponents used it to belabour them - hence Gipp's cry that the monopoly 'was the frequent theme of reproach to the Government'. Add to this the company's early identification with the Macarthur family and the image of a wealthy British company holding immense acreages of freehold land while the squatters of New South Wales struggled to secure tenure over their runs and the difficulty of defending the monopoly may be appreciated.¹²³

A combination of these forces ensured that the attempt to uphold the company's rights in the courts would be difficult. The processes of the law were greatly prolonged, Brown was defended by two able lawyers, Robert Lowe and Richard Windeyer, and his legal costs were partly met by a public subscription. Robert Lowe, as a supporter of laissez-faire, of colonial self government and of opposition to the power of the executive, personified these forces. He and Windeyer used the case for political purposes, attacking both the 'monopoly' and the government for supporting it. 124 Given the strength of opposition the 1828 agreement was not likely to last its full term and by 1847 only the details of a settlement were still at issue.

To King's surprise, the Legislative Council's 'land grievance' report had recommended in October 1844, that the monopoly of coal be 'brought up by any inducement', a proposal which he was inclined to accept, particularly if full freehold rights could be obtained over the coal grant. The Brown case strengthened the company's interest in a negotiated surrender of its privileges and though the directors considered a suggestion of £5,000 inadequate they authorised King to accept the best terms he could obtain as a settlement was not expected to occur in London. 125

Late in 1846 the Secretary of State for the Colonies accepted the company's claim for redemption of the quit rents of the remaining portion of its pastoral land, thereby conferring freehold tenure upon it. From these negotiations, but by a separate decision, the coal agreement was terminated in February 1847, by the Secretary of State, just as his predecessor had arranged it almost twenty years earlier, without consultation with the colony. Commissioner King was the first to hear the news that Lord Grey had made a further concession, agreeing: 126

to emancipate the coal grant at Newcastle also, from all conditions appertaining to it, which liberal concessions will give the Company the same power of alienation as they now possess over their agricultural lands, with the understanding however that all existing privileges on both sides be given up. By this arrangement the monopoly of the Company will of course cease (which virtually has been the case for some time past) and with it all claim for compensation.

The news was received by the Legislative Council on 17 August, 1847, with repeated cheers. 127

Chapter 3

THE DEVELOPMENT OF COMPETITION IN COAL MINING, 1848-1866

No other period of the nineteenth century history of coal mining in the Newcastle district can equal the years between 1847 and 1867 for eventfulness. The industry experienced rapid growth, the fulfilment of old hopes for a large export trade, boom and depression, the opening of new coal seams, a new technology in transport and the intensification of conflicts between miners and proprietors. From these changes emerged the embryonic modern industry with the characteristics that were to mark it until the reorganisation effected after the Second World War.

Supply and demand

The announcement that the privileges of the A.A. Company in coal mining had been removed made no immediate difference to the industry or to Newcastle. There was no dramatic change in output, wages, or profits and there was no coal rush. Residents were sceptical about the prospects of their town as the convict gangs and soldiers were withdrawn and the population fell sharply. The harbour was shoaling rapidly, the wharves were crumbling and the shipping correspondent gloomily predicted the end of his occupation because the next southerly gale would surely wash away the breached breakwater to Nobby's Island. Indeed, one resident with a good memory recalled a prediction made in a letter to the Sydney monitor twenty years earlier: 'It was some time ago predicted that Newcastle would become the abiding place of the sable tribe alone, a prediction our rulers seem bent upon accomplishing'. However, there were small increases in coal production in 1848 and 1849 and consumers were benefiting from perhaps the cheapest coal of the century.

With coal selling at Newcastle at seven shillings per ton the Maitland mines were restricted to their local market and the Lake Macquarie mines lay dormant: the A.A. Company's cheap coal policy had succeeded in limiting competition. The company produced 35,912 tons in 1848, 78% of the colony's total output, but there were already signs of the emergence of competition based on the favourably situated coal lands now freed from the reservation. In the following year the Donaldson brothers shipped only 3,600 tons from the first Burwood Estate mine, a tiny proportion of the total colonial output of 49,000 tons but of greater significance than the 9,000 tons contributed by the collieries of the Maitland area. They were shallow mines, less than sixty feet deep, and worked by horse gins because their scale of operation did not require or permit steam engines: moreover they were too far from the port to threaten the company in the pre-railway era. However, the Burwood Estate was a vast reserve of comparatively good coal that could be cheaply mined, and James Mitchell, M.L.C., had the capital and influence needed to drive a tramway to the port across the property of the A.A. Company.³

The Victoria Tunnel Seam, which was worked on the Burwood Estate from 1849 until 1864, was described by Geological Surveyor Stutchbury in 1850. In the well laid out mine being developed by W. and A. Donaldson he saw a seam of coal and clay 9'9" thick, almost three times as thick as the company's Yard Seam, so that movement below ground for men and horses was easier even though the top portion was not being mined. Furthermore this coal seam lay close to the surface and could be exploited by tunnels, making expensive shafts unnecessary and reducing the cost of underground haulage: horses could haul waggons up the slight inclines to the pit top. It was unfortunate that two layers of pipe clay, eighteen and two inches thick, introduced impurities into the

seam, but otherwise the coal would be easier to extract than any mined in the Newcastle area in its first half century. When tested, Victoria Tunnel coal proved to be an adequate steam coal and though it did not compare with the Yard Seam for gas making, it was used by the Australian Gas Light Company. In quantity it seemed inexhaustible as James Mitchell's holding of fifty acres was estimated in 1855 to have a life of thirty years.⁴

of the Burwood Estate posed a threat to the A.A. Company, the discovery of the Borehole Seam improved its position immensely. Typical of the far-sighted, rational policies emanating from the company's London office in this period was the continuing exploration of its coal property which revealed the Borehole Seam, stratigraphically the lowest coal horizon of the Newcastle Coal Measures. It was some years before Borehole coal, first located by drilling in 1848, was marketed by the A.A. Company, but various other producers including the Minmi Collieries, the Newcastle Wallsend Coal Company, the Scottish Australian Mining Company and the Waratah Coal Company were quick to follow it into the new seam which yielded 140 million tons in its first century. A sample of A.A. Company coal which was analysed in 1856 may have come from the Borehole Seam but its results are not consistent with more recent findings; however, the tests carried out in 1862 provide sufficient information about this coal to assess its capacity for raising steam.⁵

Under the supervision of William Keene, first Examiner of Coalfields, eight New South Wales collieries had packed eleven samples, each of two tons, of their fair average coal for delivery to the Chief Engineer at Woolwich Dockyard. His staff had tested the samples to determine the amount of work they would perform (i.e. pounds of water evaporated per pound of coal consumed) and the amount of clinker (unburned residue) and the quantity of ash remaining after burning. Naturally the amount of work performed by a coal was of primary importance but there were other considerations. Too much ash wasted valuable space in bunkers and tenders: it also had to be placed in and removed from the furnace and then disposed of. However, too little ash could shorten the life of the engine as ash tended to protect grates from exposure to the very hot masses of clinker which sometimes adhered to them. Neither ships' captains nor railway engineers liked coal that caused sparks to shower from the stack and dirt was always unwelcome.⁶

TABLE 82 OUTPUT NEWCASTLE COAL MINES 1848-1866

			00	110	I, INL	TT CA	JILL	COA	L IVIA	LU I	0.40	000							
Principal Proprietors	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1B62	1863	1864	1865	1866
A.A. Company Newcastle Coal &	36	34	47	58	31	46	48	40	58	82	108	131	135	91	67	72	109	112	131
Copper Company Newcastle Wallsend			72	92	82	234	392	77	89	92	72	108	112	61	73	57	10	103	213
Coal Company														47	125	115	144	154	168
J. and A. Brown Scottish Australian											8	17	44	59	111	90	66	0	35
Mining Company Waratah Coal																	59	112	151
Company N.S.W. Co-operative																7	55	85	128
Company Newcastle															3	N.A.	N.A.	3	24
Total Output N.S.W. Average Price	36	34	54	67	39	69	87	117	1484	1744	188	256	291	261	382	342	467	478	660
per ton in pence	84	78	79	91	131	200	246	156	149	169	180	159	147	154	154	131	119	112	100
N.S.W. Total Output	45	49	71	68	67	97	117	137	190	210	216	308	369	342	477	434	0.000	-	774

- In some cases these totals represent coal sold, not coal raised.
- 2 All Burwood Estate mines are included.
- 3 Burwood Colliery

- 4 Newcastle Coal and Copper & A.A. Companies only
- 5 A.A., Newcastle Coal and Copper Companies and J. & A. Brown only.
- N.A. Not Available.

On completion of the tests a table was prepared comparing the colonial coals, English North Country (West Hartley) and Welsh (Merthyr) coals. The results indicated that the colonial coals would do as much work, approximately, as coal from the north of England but not quite as much as the Welsh, However, the clinker and ash content of the New South Wales coals tended to be higher although there were considerable differences between them. Of the Newcastle coals, the Newcastle Wallsend Coal Company's product performed the most work but the range between first and last was not great. The worst Newcastle coal, judged by the clinker and ash content, came from the Victoria Tunnel Seam of the Newcastle Coal and Copper Company's Redhead pit and the Minmi product was not much better, but, of greater significance, all their coals contained less clinker and ash than their southern rivals, Bellambi and Mount Keira, and Wallsend coal contained less than half as much as they did. Summarizing the results for publication, Keene concluded that the Australian coal on average excelled English north country coal in evaporative power and though the latter was slightly superior in evaporation per hour', the difference...is so insignificant as not to be worth attention'. Furthermore, though the English coal had only about half as much ash and clinker, it had already attained its highest average whereas the coal of the colony was still improving.

Little can be said of gas coal in this period except that the A.A. Company's Yard Seam had a good reputation, and that as small coal was suitable for this purpose, this was an advantage to that company. It alone could dispose of most of its small, the other companies being reduced to coke manufacture as a means of using it. In this they were reasonably successful but the quantities produced were insignificant."

With vast reserves of Borehole and Victoria Tunnel Seam coal available, the Newcastle mines were well placed vis-a-vis their competitors. Southern coals had been discovered first but exploitation had been slow, initially for want of harbour facilities and subsequently because the Newcastle mines were already established at a time when demand for coal was not strong. However, a mine was opened at Mount Keira in 1849 probably for use in the steamship serving Wollongong and in 1856 the **Illawarra mercury** claimed this coal had export potential. By 1859 two mines were producing about 25,000 tons annually for shipment to Sydney and some southern coal was in use in Melbourne two years later. These coals proved to be very suitable for general steam purposes but production from the southern district did not exceed 100,000 tons per annum until 1865 and represented no threat to Newcastle in this period.9

That great stimulus of coal production, steam navigation, had also brought Queensland coals into use in the 1840s but the first mine, the Moggil Colliery at Ipswich, was operated so haphazardly that Samuel Stutchbury reported:10

I cannot properly apply that term 'system' in the mode adopted as yet, in working Coal in this district for it is neither 'pillar and stall' nor 'broadwall', but merely dragging the Coal out, without regard to any established rule; nothing but an easy yield and high price, could have made the works pay.

An attempt to form a company in 1854 to develop this coalfield, which Stutchbury considered to have vast potential, appears to have failed and only 210 tons were exported in the second quarter of 1856. There was little to fear from that isolated field, whatever the quality of its coal, and Tasmania had also failed to produce a worthwhile rival so that shipments to that colony were continuing steadily in 1850.11

The remaining contender was the British industry which was expanding its export trade rapidly and which was having some success in the Australian colonies. The value of British coal exported increased from £600,000 in 1841 to £2,439,000 in 1855. South Australian copper smelters used it from 1850 and British mail steamers pioneering Australian routes in that decade also burned the product they knew. The scarcity of local coal after the gold rushes assisted United Kingdom exporters but when the

capacity of Newcastle mines increased, British coal was rarely available to Australian consumers and even the Royal Navy used Newcastle coal though it came to prefer southern coal which burnt more cleanly.¹²

Thus within Australasia the Newcastle producers had a high degree of natural protection. They were established upon a vast reserve of quality coals, adjacent to a port which, if inadequate, was capable of development and was within reach of the principal colonial markets. Competition would be more severe in the export trade but even there Newcastle's proximity to Asian and Pacific ports was a significant advantage.

The development of exports

Visitors to Newcastle in late 1850 were amazed to find that the harbour was so active. Formerly, like the Dead Sea, no sign of life upon its still waters, except when a solitary steamer was passing to and fro between Hunter's River and the capital: now, full of life and motion, flaunting with stars and stripes.'

This was J. D. Lang, referring to the twenty American ships which had come for coal to meet the demand arising from gold rushes in California and which, in the process, revived the foreign trade expectations of colliery proprietors and businessmen. Suddenly, it seemed, the capacity of the industry was insufficient though output in that year was boosted to 71,216 tons, valued at an average of 6s7d. per ton to reach a total of £23,375.13

Prospects were excellent and there was a rush to expand the industry. James and Alexander Brown hurried from the limited East Maitland field to lease a portion of Mitchell's estate and the Newcastle Copper Company, which had leased another section of the same property to obtain fuel, transformed itself into a coal company. To Burwood also came Messrs Brown and Nott but not all the developments were to occur there. A tramway was planned for the Hexham Colliery and the Australasian Coal Mining Company, with a capital of £200,000, was proposed for W. C. Wentworth's holding in the same parish. However, the demand from North America was not sustained and much more promotion, as well as industrial development would be required before the potential of the export trade was realised.

The 1850 surge in coal shipments to the United States resulted from sales to the Panama Steamship Company which were arranged by the directors of the A.A. Company in London but the Donaldson brothers also began to ship coal there on their own account. As K. H. Burley has shown, before the development of more systematic marketing arrangements, shipments on ship's account were normal but from 1851 onwards it was not at all uncommon for the more adventurous, or less well established, coal producers to charter tonnage for speculative cargoes to colonial and foreign ports. These were always risky but the telegraphic system reduced the risk of a vessel arriving in a glutted market and they helped to advertise the nature and availability of Newcastle coals. After 1859, when the capacity of the coalfield was greatly expanded, some companies engaged in such shipments on a relatively large scale. 16

Though it is difficult to assess the results of particular methods, there were several other attempts to advertise colonial coals abroad. William Fane De Salis, Sydney landowner, banker and shipowner, spoke before the Select Committee of the House of Commons on Steam Communication with India about the vastness of the New South Wales coalfields and the ability of the Port of Newcastle to take vessels of 400 tons burden. He stressed that the steam coals were as good as the best English steam coals, using an analysis by Sir Henry de la Beche to support his claims, and his evidence was reprinted in the **Observer** in 1853. William Keene not only arranged the Admiralty trials mentioned above but prepared a prize winning exhibit for the International Exhibition of 1861. Help also came from Sir Daniel Cooper who brought to the attention of the British Government the high cost of the British steamship companies' reluctance to use

colonial coal on the Australian run. Drawing upon the researches of Keene and W. B. Clarke he also wrote to the **Times** about the good quality and abundance of the colony's coal, arguing that it was "to the coal of Australia, more than any other of its valuable mineral products, that this great territory will owe its future advancement"."

Of greater significance than the export trade was the larger, more accessible and more secure Australian market. Steam navigation, which had been principally responsible for the growth of demand between 1831 and 1847, continued to absorb large amounts of coal. The demand for gas making also increased with urbanisation and by 1872 there were nine gas works in New South Wales. In addition Victorian producers depended on supplies from Newcastle with the Melbourne Metropolitan Gas Company taking up to 1,500 tons per month in 1865. However, the most important new coal consumers were undoubtedly the public railways.

Until 1861 billets of wood were burned by government locomotives but supplies were sometimes difficult to obtain. For the Great Northern line alone 4,000 tons of ironbark billets per annum were required and this must have influenced the decision to switch to coal for, apart from any other advantages it might have, large quantities could be obtained. The rate of expansion of this section of the market may be gauged from the increase in train miles logged by the public railways: from 275,000 in 1861 to 490,000 in 1866.

Coal continued to be used for general industrial purposes and in households but the amounts cannot be determined. Newcastle coal was reported to be flowing into Geelong in 1856 when coal fires were said to be common and there were the perennial announcements that Sydney's firewood supplies were becoming exhausted but it is difficult to proceed beyond such generalities. It may be that household consumption in Sydney was considerable, hence the noticeable easing of demand as summer approached.²⁰

In the early 1850s New South Wales consumed about 40,000 tons per annum but demand rose steadily to reach 135,000 tons by the end of the decade. Another period of growth began in 1864 and took domestic consumption to 233,000 tons in 1866. Thus the home market had increased almost sixfold between 1850 and 1866 while exports rose from 28,000 tons in 1851 to 174,000 tons in 1859, 74% going to the other Australian colonies and New Zealand, and reached 541,000 tons in 1866. By then Australasian ports were receiving 64% of exports which in total accounted for approximately two thirds of colonial output.²¹

Closely associated with the expansion of colonial demand were shipping and shipbuilding, both of which burgeoned in Newcastle in this period. The Burwood colliery proprietors were closely involved in shipping operations, owning coasters, tugs and sometimes oceangoing sailing vessels which assisted them to dispose of coal when customers were scarce. This development was noted in 1853 by the **Maitland mercury** which printed a list of twenty two vessels owned by Novocastrians, including nine belonging to proprietors of the Burwood collieries, with the comment that 'five years back we could not boast of one vessel belonging to the port'. 15

The simultaneous construction of tramways greatly improved land transport but it was the industry's oldest complaint, the deficiency of skilled miners, which had limited production for the first forty years of public and private coal mining, that presented the most serious obstacle to the expansion of coal mining.²²

The availability of labour

Another contingent of indentured miners had arrived in January 1850 to work for the A.A. Company but five months later a letter to the **Maitland mercury** stated that 'the demand for Hunter River Coal, both foreign and local, has lately so much increased that every miner is employed and the mines of Newcastle do not produce nearly enough



Alexander Brown, 1827-1877 Newcastle Region Public Library

(from want of hands) to supply that demand'. Taking advantage of their strength, the company's miners signed a round robin demanding an increase in wages and then struck work. They were prosecuted for breach of agreement and John Dyer was sentenced to six weeks in East Maitland Gaol by the Newcastle magistrates who remonstrated with the defendant in a crowded, excited courtroom, 'showing him that every such offence under the existing circumstances would meet with the extreme penalty allowed'.23

Another attack in the pages of the **Sydney morning** herald, alleging that they were already earning from two to two pounds ten shillings per week, prompted a novel and moving response from the strikers. In an advertisement in the local newspaper. 'The Miners of Newcastle' claimed that it was hard for them to earn more than £3.10s. per month, that they ran into debt because of being paid monthly and that they had more grievances than there was space to express. All that they wanted was to speak the truth and 'bring up their families in respectability', but it was necessary to strike to escape 'from distress and poverty'. To restore production the company conceded the demanded sixpenny increase, bringing the hewing rate to 2s3d. per ton of twenty four hundred weight, a result that was indicative of the bargaining power of Newcastle miners when the harbour was thronged with empty ships.²⁴

In this dispute the miners admitted that with effort they could earn £3.10s. per month plus rations and residence, but the newspaper report of from two to two pounds ten shillings per week is closer to Commissioner King's claim in 1847 that they had been receiving 'by the piece, generally from eight pounds to ten pounds per month, and in some cases, fifteen to sixteen pounds, besides being provided with rations and residence'. Such disparities usually arose from the tendency of both sides to quote the extremes but even at £3.10s. per month plus rations and residence, the income of miners compared quite well with the 4s.6d. per day earned by skilled tradesmen in the colony. The miners accepted that to hew and wheel six skips per day (two tons) was a fair day's work and quoted their pay rates at sevenpence per skip for large and fourpence halfpenny for small coal. Assuming that they won five skips of large to one of small, their daily earnings would have been 3s.3½d., with weekly and monthly equivalents of 19s.9d. and £3.19s. when fully employed. Oil and tools were also provided.²⁵

News of gold reached Newcastle in May 1851 causing a rush to the fields and signalling the beginning of a trying period for colliery proprietors. Wages were raised at once to discourage gold seekers, and indentured miners who set out for Bathurst were intercepted on route and charged with absconding from hired service. Four who were found guilty forfeited all wages due but were spared the usual gaol sentence because of their former good behaviour and back to work they went to complete their agreements. However, this was not the end of the problem and the A.A. Company found that some of its most settled employees left to try their luck. Those who remained and those who returned, as they commonly did, exploited their bargaining power by demanding higher wages; strikes were not usually needed and the men worked only when they liked.

In a characteristic dispute in May 1854 the company's miners demanded an increase from six to eight shillings per ton and ceased work to strengthen the claim. Captain Brownrigg, the superintendent, arguing that their daily earnings of about 24s. were sufficient and that an increase would only encourage them to work less, imported labour and broke the strike. 'The incorrigible and turbulent hands were got rid of' and new rules of payment offering a bonus for increased production were successfully introduced. The company threated to dismiss any miner who got less than twelve tons per week, in contrast to the action of the union only a few years later when it imposed a maximum on its members.²⁶ Nevertheless the problem of a reluctant labour force was

far from solved.

It was always possible for employers to concede wage increases and recover the costs by raising the price of coal, but this was unsatisfactory for two reasons. High wage rates for arduous labour under difficult conditions tended to discourage regular work and, at a time when prices were already high, further increases encouraged large consumers to import British coal, as the Australian Gas Light Company did in 1852.²⁸ To supplement the labour supply and restrain wages, two producers turned to immigration.

Anxious to enter the industry while high prices prevailed, the founders of the Australasian Coal Mining Company rather naively proposed in September 1853 to solve the labour problem by a single stroke. As they explained to intending shareholders and the Legislative Council from which they sought an act of incorporation limiting their

liability:29

To facilitate the Company's operations, arrangements have been made for importing from China a sufficient number of labourers. Chinese are now extensively employed in the Colony, and experience shows that they form as efficient labourers as Europeans: their services will be secured, as customary, for a term of years, at low wages, under Articles of Indenture legalised by the Colonial Acts.

As this company failed, this proposal was never tried but it is very doubtful if the miners would have permitted such an experiment. News of the suggestion caused the clergy and two prominent businessmen to call a public meeting and simultaneously to launch a movement for the moral and intellectual improvement of the working classes. The attendance at the meeting was the largest at Newcastle for several years and the voting was strongly opposed to the proposal. Only four people were reported to have favoured this method of recruiting labour and two were named: Simon Kemp, a businessman, and coal owner or colliery manager, Alexander Brown.³⁰

The A.A. Company preferred to rely on imported British miners but found them no more docile than their predecessors. A party of fifty were recruited in June 1853 on the following conditions. With their families they were to travel to the colony as steerage passengers and to work diligently until their passage costs had been repaid. The total for a man, his wife and four children was £66.1s. which could be deducted from wages at the discretion of the company. They were to receive either 2s.9d. or three shillings per ton for raising large coal, 2s3d. or 2s.6d. for small, depending upon the particular pit, or to be paid at the current colonial rates. These men struck work on arrival when they had to do 'horses' work' because horses were not employed below ground to move skips from the face to the shaft: the seam being too narrow to permit it.³¹ The employment of these immigrants under different conditions appears to have been partly responsible for another strike which revealed the further development of union practices and principles.

In July 1855 John Boothman and William Challoner were indicted for a violent assault on John Linton who had refused to stop work. The Quarter Sessions judge was informed that the 'object of the strike was that all men should be paid alike' and James Fletcher, a witness for the defence, had to explain the meaning of the term 'blackleg'. Though the miners lost on this occasion and suffered a decline in working conditions, there seems to have been little change in their attitude. Fresh from the British industry in 1856 Robert Whytte, the A.A. Company's new manager, was shocked by the habits of his work force. 'No regulation whatever had been made to keep them regularly at work' he complained without realising how difficult it was to regulate the habits of skilled



James Fletcher, 1834-1891, coal miner, union officer, newspaper officer and politician. Newcastle Region Public Library

miners while half a dozen other coal owners were eager to employ them at high wages, 32 The growth of the industry

Despite these labour problems, production increased steadily to a total of 117,000 tons valued at £119,380 in 1854. The average value of coal rose from 6s.7d. in 1850, to 7s.7d. in the next year, reached 10s.11d. in 1852 and then soared to 20s.6d. per ton in 1854. By then wages and other costs had also risen sharply, and the A.A. Company's profit on coal which cost 16s.5d. per ton was only 3s.9d. Its next annual report revealed that increased competition had reduced prices sharply and, though costs had also fallen, profit from the sale of almost 40,000 tons of coal was only £677! The very high prices of 1853 had prevailed during a period of scarcity and the company had not been quick to exploit those conditions.³³

The costs of smaller producers were lower for several reasons. Most significantly they were mining more accessible seams and did not have to service as much capital: they were not conducted by a giant corporation operating under parliamentary charter with a responsibility for maintaining the supply of coal to the public. Yet this point was ignored by the company's critics who used the 1847 Legislative Council Inquiry to charge it with incompetence and high costs. Moreover the Burwood producers could afford to be more opportunistic, hence their exploitation of a coal shortage in 1853. While the company stuck to its rules, loading vessels according to their turn, up to 30s. per ton f.o.b. was obtained by its rivals from shipowners anxious to sail. 34 Unfortunately the actual costs of the Burwood mines before 1856 are not known but some indications of their profitability have survived.

Early in 1855 the Newcastle Coal and Copper Company estimated its costs ar 10s.4d. when coal was fetching about 15s. per ton, but some of the other Burwood mineowners would have enjoyed lower unit costs and higher profits. This is suggested by the large sums paid for these cheaply developed mines. J. and A. Brown received £24,500; Donaldsons' mine fetched £23,500; Alexander Brown's share was £17,000 and to the Messrs. Nott went £14,000. That not one acre of freehold land changed hands in these transactions serves to elucidate an 1859 newspaper comment on mine promoters, 'having seen how wealth was coined while we [in Newcastle] enjoyed a monopoly, renders them the more eager to obtain a position and avail themselves of an opportunity of doing likewise'.³⁵

The increasing coal trade of the early 1850s was accompanied by the first signs of progress in the provision of ancillary facilities such as banks, shipping agencies, coal loading appliances and the paraphernalia of a busy port. The Bank|of|New|South|Wales opened a branch in Captain Bingle's residence in Watt Street in 1853 and in the same year the Bank of Australasia established the town's first fully fledged bank; the Australian Joint Stock bank followed in 1861. The chief business of these banks was exchange upon hypothecated drafts against shipments of coals to the neighbouring colonies and Asian ports such as Hong Kong and Shanghai. John Bingle, who had first sailed into the Hunter in Major Morisset's commandancy, carried on a shipping agency, issuing the town's first trade circulars in early 1850s. His rivals, G.R. and J.C. Dibbs began their long association with the industry as agents and colliery proprietors in 1859³⁹

In the same period the Newcastle Chamber of Commerce was formed to press for improvements to the harbour which was so silted up that the larger ships could only partly load under the shoots, having to complete their cargoes from lighters while lying in deeper water. Prompted by Sir William Denison, who told them they could not expect the Government to provide the necessary facilities, the chamber proposed a port authority and the imposition of harbour dues to finance a tug which would make the port entrance far safer for sailing vessels and could tow them to sea when winds were

adverse. Ironically most of Newcastle's trade was with ports to its south yet ships could not enter or leave the harbour on those winds which were best suited to their arrival or departure and so many had been lost in the attempt that insurers had suspended coverage. The appointment of a coal meter was also desired as a security for the character of the port and to prevent those losses and disputes which occurred because coal cargoes were not weighed but calculated on the basis of three waggons to the ton. Though the chamber did not last very long it appears to have contributed considerably to the progress made in upgrading port facilities in the next few years.³⁷

From 1859 privately owned tugs were normally available and the Government put a steam dredge to work in that year. A lighthouse replaced the coal beacon which had been burning since 1816 on Signal Hill above the harbour entrance and the first lifeboat finally appeared in what was quite a dangerous harbour in certain conditions. The port was surveyed and Captain Moriarty prepared plans for dumping ballast on Bullock Island to form the foundations of what would become a great railway marshalling and coal loading facility in the 1860s. The Government also intervened in an unseemly wrangle between leading coal companies over the steam cranes installed in 1862 and commenced the provision of such services as a complement to its role as chief railway provider.³⁸

While these improvements were being made another innovation of greater significance was also introduced. The tramways (or light railways using horse power), which were constructed in the early 1850s and became steam railways in 1856, were transforming the scale of the industry. Before the coming of the tramway collieries were established on sites adjacent to water transport, as at Newcastle, Lake Macquarie, Bellambi and Wollongong, or they had to depend upon oxen or horse drawn drays or waggons, as did the pits of the East Maitland area such as Brown's and Eales's. These were not genuine alternatives, for reliance upon the latter method of transportation was attended by serious disadvantages. Wet weather would interrupt the passage of coal as long as roads were primitive, disrupting shipping connections. Capital had to be spent on large numbers of teams and waggons, or teamsters who were not wholly under the control of the colliery had to be hired. Such labour intensive methods were expensive. and though James Brown had been able to move his coal six miles to Morpeth in 1845 for 2s.6d, per ton, the Minmi mine had to offer eight shillings per ton for carting coal to Hexham, four and a half miles away, in 1853. This was costly even in a period of high coal prices and the Minmi proprietors were already planning to build a tramway to their shoots at Hexham39

Tramways were expensive and troublesome to construct. The A.A. Company's line to its D and E pits at Hamilton cost £1,000 per mile to complete in 1852 and the Newcastle Coal and Copper Company's railway to Redhead, undertaken at the end of the decade, involved more than £21,000. In the same period the Newcastle Wallsend Coal Company's line of three and a half miles cost £23,400. But expense was not the only problem in constructing railways.⁴⁰

Disputes between rival proprietors were quite common, sometimes protracted and often bitter, with considerable sums at stake because of the varying costs of alternative routes and compensation for crossing intervening properties. In addition the industry was not well served by construction contractors and litigation arising from unsatisfactory work or the failure of the firms involved was not unusual. Nevertheless, the railways soon demonstrated their worth by reducing costs and increasing production.⁴¹

The cost of transporting the Newcastle Coal and Copper Company's coal fell from 10s, per ton by dray in 1853 to 1s.1d. by tramway in 1856 and to 81/4d, after locomotives replaced horses. Moreover, the completion of the Burwood tramway removed a

63

bottleneck in the sequence of production on that estate, dramatically increasing the mines' capacity, and the introduction of steam locomotives by the A.A. Company in August 1857 and the Burwood collieries soon afterwards, had similar effects. However, the opening of the Great Northern Railway between Honeysuckle Point and East Maitland in the following year was of even greater significance. For the port for existing and future collieries of the extensive coalfields of the lower Hunter Valley and, with the port developments, represented an important governmental financial contribution to the industry and the region. These various facilities were a welcome advance on the primitive arrangements which had been common in all but the A.A. Company's mines but they created a new problem.

The announcement of a reduction in the price of best Newcastle coal from 20s. to 15s per ton in October 1854 signalled the arrival of excess capacity in the industry. The labour problem was easing and there were now six mines on the Burwood Estate as well as major collieries under development at Minmi and Tomago. The A.A. Company had two mines with a combined capacity of 300 tons per day or 93,600 tons per annum, assuming continuity of operation. Its third mine, which would lift daily output to 500 tons was almost ready yet its actual sales totalled only 43, 940 tons in 1854. In the same year the Burwood mines raised almost 40,000 tons though their tramway was not completed until July and in 1855 their output reached 77,212 tons. Since they were also operating at less than full capacity, partly because of the seasonal nature of the trade, the power of the industry to supply coal greatly exceeded the demand for it.⁴³

The failure of demand to expand as quickly as mine capacity produced complaints about depression in the industry. In 1855, for example, when annual output increased by more than 17%, the A.A. Company complained in May, September, November and December. Competition became intense; the price of some coal had fallen to 10s. per ton by September and deceptions were employed in the struggle for business. To foreign captains who had heard only of the A.A. Company, J. and A. Brown were passing themselves off as 'the company'. There were also similar charges involving the forging of pit certificates as the older company lost ground in the market and its profit margin withered away.⁴⁴

Overproduction and the industry's first merger

In these conditions the annual average value of coal raised in the colony fell sharply, from 20s6d. to 13s. per ton during 1855, and, though colonial output had increased, its total value was estimated to be £30,000 less than in the previous year. With profits declining the directors of the Newcastle Coal and Copper Company renewed their attempts to merge the mines of the Burwood Estate, arguing that a disaster would ensue if competition was not arrested. By purchasing the existing mines for £79,000, half to be paid in shares in the reorganised company and half in its bills at six, twelve and eighteen months, and by substituting a guaranteed share of profits for a royalty to James Mitchell, they managed to concentrate 78% of production into the hands of the two proprietors. This prepared the way for a price agreement between the Newcastle Coal and Copper and A.A. Companies and that in turn increased profits and produced steady annual growth in the value of the colony's coal output which first exceeded £200,000 in 1859.45

This merger and price agreement averted the threat of a price war and sustained wages for the remainder of the decade, benefiting the people of Newcastle who were more than ever dependent on mining because of the failure of most of the manufacturing industries set up in the district in the 1840s. As one contemporary so succinctly remarked, 'Trade [in coal] is dull, the people are dull because trade is dull and there is every likelihood that both will remain in that very unenviable condition for

some time to come'.46

The record of the two major Newcastle producers after 1856 is in strong contrast: the A.A. Company gradually increased its output and went on to regain its dominant position while the Newcastle Coal and Copper Company, after five years in which profits ranged from £13,705 in a strike-affected year to £19,509.16.2, went into a rapid decline and was wound up.⁴⁷

The reasons for its failure are complex but financial mismanagement in a period of increasing competition and deteriorating labour relations stand out. From 1855 the company struggled to improve loading facilities in order to lower costs, speed up operations and reduce the breakage which resulted from excessive handling. Shoots were installed at the harbour and pressure was brought to bear on the Government for improved wharfage. Screening was introduced so that small coal, which was not welcome to steam coal consumers, could be removed for coke making. However, the demand for coke was not strong, partly because English coke was still being imported, and the disposal of unsaleable small coal remained a problem.⁴⁸

More serious were the difficulties the company experienced with its miners but its failure was precipitated by the decision to move to the Redhead Estate. Burwood coal was not competing well with Borehole coal and the directors decided to develop a new mine on 100 acres of land three miles to the south. After returning large sums of capital to shareholders, they borrowed heavily from a bank to finance the necessary railway extension, a policy that was sharply criticised by the company's auditors who also questioned the wisdom of such high capital expenditure on a mine with very limited reserves. Nevertheless it was increasing unit cost of production that was crucial in the collapse of this company. As competition reduced its share of trade, profit per ton fell from four shillings in the second half of 1860, when 56,787 tons were raised, to a loss of 31/2d. per ton on an output of 28,956 tons in the corresponding period of 1862.

Compounding the difficulties of the Newcastle Coal and Copper Company were the successes of new mines at Minmi and Wallsend. After opening a pit of their own near Minmi, James and Alexander Brown had bought John Eales's adjacent colliery in March 1859, and by enterprising management lifted its output to 111,000 tons in two years. At the time of the purchase of Eales's mine, a contemporary mine manager predicted:⁵⁰

Mr. A. Brown is a shrewd, pushing man ... the two brothers are practical men and although labouring under considerable disadvantages at such a distance up the Hunter, we shall shortly feel that we have competitors which could never have been the case so long as Mr. Eales was content to jog on his own slovenly and profitless manner and his coal miners half the year out on strike.

In fulfilling this prediction, the Minmi proprietors reduced their prices and pursued customers at home and abroad, particularly in London where they captured contracts for the South American market. Using their railway to Hexham on the Hunter River where coal was loaded into smaller ships and onto the punts used to serve larger vessels in Newcastle harbour, and then linking their line to the Great Northern Railway, they soon boosted their share of the growing trade. With a new mine producing a below-average Borehole coal, they had to rely more heavily on the export and intercolonial markets, sometimes shipping on their own account, so that in 1862 Brown's coal was fairly evenly divided between the domestic, intercolonial and foreign trades. It was typical that they should introduce the **Corio**, the first Australian screw driven collier in 1862, causing the **Newcastle chronicle** to proclaim that 'J. & A. Brown had led the van of colonial enterprise'. However, there was another contender for that accolade.⁵¹

The Newcastle Wallsend Coal Company had been founded in 1858 by a committee of

Sydney businessmen and another Alexander Brown, one-time under-manager of the A.A. Company and Burwood Colliery proprietor. Three years earlier Brown had bought for £1,120,500 acres of promising coal land west of Newcastle which he was prepared to sell to the company for £25,000. The prospectus stated:52

The land is situated in the very centre of the Newcastle coal district and adjacent to the Great Northern Railway, with which it is intended to connect the mines by a short branch of about two miles. at a point within six miles of the coal wharf at the shipping port of Newcastle. The land has been carefully explored and examined by mining engineers, trial pits have been sunk and in all of them coal has been found of very superior quality, in seams of extra thickness and freedom from partings, and at a depth peculiarly favourable for economical working.

The report of an unnamed practical and experienced mining engineering was

appended:553

I have carefully examined the borings of the 7ft 103/4 in. coal seam, and considered it quite equal in quality to the Australian Agricultural Company's best bore-hole coal. Its extra thickness and freedom from partings will enable the coal to be delivered at the pit top as cheap as any in the Newcastle District I should consider that the 7ft 10 inch seam will yield about 8,000 tons of coal per acre. Good pit timber abounds on the property ... I have not seen any lands about Newcastle giving richer signs of valuable coal seams.

The other members of the founding committee also had much to contribute as their business connections would ensure an immediate market and financial assistance. Charles Kemp, the company's first chairman, was already a director of the Australasian Steam Navigation Company, the Clarence and Richmond Rivers Steam Navigation Company and the Australian Gas Light Company, which he had helped to establish. He was soon to become chairman of the Commercial Banking Company of Sydney and he was joined on the founding committee by S. D. Gordon, local director of the English, Scottish and Australian Bank, and Michael Metcalfe, Lloyd's representative in Sydney, who was also on the boards of the Australasian Steam Navigation and Clarence and Richmond Rivers Steam Navigation Companies and of the Australian Gas Light Company. With such a committee and an excellent coal seam it is not surprising that the Newcastle Wallsend Coal Company became one of the most successful mining enterprises in New South Wales.⁵⁴

In planning the Newcastle Wallsend Coal Company, its founders had considered that a capital of £100,000 would be adequate, believing that the land, three and a half miles of line to the Great Northern Railway and plant would not cost more than two thirds of that amount. Actually the railway construction costs proved to be higher, £23,000 for the line alone without heavy costs for intrusion on other land, and it may be that the company was under some financial pressure in its early stages. In any case when the opportunity arose to buy 1,039 acres of crown land adjacent to their original holding at an average price of £5.1s. per acre, about £45 per acre cheaper than their original holding, the directors decided to borrow the money from their customers, one way of ensuring that the latter would continue to buy Wallsend coal. Nevertheless the new company was able to pay dividends from the beginning, 10% after five months of operation, and another six per cent at the next half yearly meeting. By 1866 this company had accumulated 7,000 acres adjoining their land at the low price of £22,000, thereby crippling a formidable competitor, the Waratah Company.55

It had taken more than three years from the first public meeting to discuss the proposal to bring the mine into production. From the beginning it was rewarded with valuable contracts with the Australasian Steam Navigation Company and the Australian Gas Light Company and later it captured the Melbourne Metropolitan Gas Company's

66

custom as well. Sales in its first year amounted to 47,000 tons despite a general strike and in 1862 when a serious industrial dispute disrupted the A.A. Company's mines, the Newcastle Wallsend Coal Company raised 125,000 tons, the largest individual mine output for that year. Thus J. and A. Brown and the Newcastle Wallsend Coal Company had established themselves partly at the expense of the A.A. and Newcastle Coal and Copper Companies whose production had fallen sharply. Unwilling, partly because of higher costs, to abandon their price maintenance agreement, the older companies had lost their premier position in the industry. ⁵⁶

The birth of unionism

In May 1860 the industry entered a new phase as the colliers brought their various unions into a district organisation. Before March 1856 when the Newcastle Coal and Copper Company's men formed the first union, there had been many instances of employee action to improve pay or working conditions but these had always been ad hoc in nature and there was no formal union structure. As James Fletcher, first president of the A.A. Company miners, later explained: 'in those days they had to send "round robins" if they wanted any grievance redressed. There was no union at the time [1854-1856] he was speaking of'. Indeed it was the failure of this method to achieve an increase in wages, which the miners believed should have followed a rise in the price of coal from 10s. to 13s6d. per ton, that prompted the formation of a colliers' union for mutual protection. When the management gave notice of dismissal to those working in one of its three tunnels, all its miners struck work and at a public meeting set up their union.⁵⁷

The background to this conflict was rather complex. The companies had conceded in July 1853 that there should be a sliding scale allowing automatic adjustment of wage rates when coal prices changed. However, after the amalgamation of the various Burwood Estate mines, the Newcastle Coal and Copper Company tried to reduce its costs and working conditions deteriorated. Thus, though a wages issue prompted this dispute, the colliers soon produced a log of claims alleging that ventilation was seriously inadequate, that the main roads had been neglected, that the smiths who had been employed to sharpen tools had been dismissed, and that they now had to make their own tramroads from the face to the main roads. Significantly they appealed not only to the custom of the Newcastle field but also to English practice and to the laws which assured miners in the United Kingdom of an adequate air supply. The response of the company was to dismiss all the committeemen of the union and to import nonunion labour from Sydney. Disturbances followed, extra police were sent by order of the Governor and the strike was prolonged until mid-April. When a settlement came it was based upon a wage increase, the employment of all the strikers and, as the miners were determined not to be brought under the Master and Servants Act, they were re-engaged without written agreements. Strengthened by this considerable success, the new union henceforth refused to stockpile coal, thereby breaking from previous custom on the field,58

By the end of the decade unions had been established at the collieries of the A.A. Company and the Newcastle Coal and Copper Company and at Minmi and Tomago. Parochial in outlook, they did not take up the broader issues affecting miners which were usually carried on by public meetings called for the purpose, such as the one to initiate a campaign for a coalfields regulation act. Moreover they do not appear to have assisted each other during strikes or lockouts and this would have been one of the reasons for establishing a district union. The slowness of the Government to respond to the campaign for ventilation rules was another important issue affecting miners.⁵⁹

A meeting of miners in May 1858 had decided to petition the Parliament for the appointment of an inspector of mines with the power to regulate working conditions

67

affecting the health and safety of mine labour. They were dissatisfied with the colonial act of 1854, which appointed an examiner of mines who was described as a **savant**, and sought a law similar to the British act of 1855. The failure of this petition, which took 18 months to reach the legislature and was then shelved for another year, convinced the miners that other measures were required.⁶⁰

The Coal Miners' Association of Newcastle was established at a meeting in Groves Paddock, Waratah on 24 May, 1860, but the constitution of what James Fletcher, the president of the Borehole Lodge, called 'one grand confederation' took six months to negotiate. It was comprised of five lodges, had a president, a secretary and a board of delegates which met quarterly. Membership cost one pound payable in six instalments over three months plus a weekly contribution of threepence per man. These revenues were retained by the lodges and invested until needed for strike pay, the cost of which was to be borne by all the lodges proportionately. To ensure that work would be shared the 24th rule of the constitution restricted the wages of miners, wheelers and boys employed in the mines. Miners were to be limited to 11s.4d per day, at contract rates about two and a half tons, and those who exceeded this total were obliged to pay the excess into the funds of the union.⁶¹

Prominent in the formation of the new organisation were Thomas Lewis, who chaired the inaugural meeting, James Fletcher, its first president, William Wonders, who presided over its second aggregate meeting, and Thomas Alnwick who was president in 1862. James Ray was the first secretary of the union. Under their direction the miners' association quickly became a powerful force in the industry with two old issues occupying much of their attention in the second half of 1860, the need for improved ventilation and the desire to evade the jurisdiction of the Master and Servants Act.⁶²

Failing to obtain a suitable response to its petition, the union took advantage of the advent of manhood suffrage and the 1860 general election to return a miner to the Legislative Assembly. On the hustings T. Lewis appeared to be the 'plain man' of all 'plain men' and his selection is rather puzzling. Until nomination day Dr William Brookes, a radical newspaper proprietor, was most likely to receive the miners' vote for the County of Northumberland but when Lewis nominated, Brookes stood down. Amid loud and repeated cheering, Lewis declared that 'he was a poor man and had done nothing' but 'his character was not polluted' and 'he had never done anything to make a disturbance between man and man'. He admitted that 'if he was elected on his speaking qualifications, he should be done' but declared his support for the Robertson Land Bill, an elective upper house, pay for members of parliament and universal education. State aid, Chinese immigration and the Morpeth and Maitland Railway, which he thought would impoverish Newcastle, earned his condemnation but it was about the need for improved ventilation that he spoke most warmly.⁶³

When the new parliament met in the following January Lewis was assured of the Ministry's intention to introduce a bill to regulate collieries in the current session but the question was referred by the Legislative Council to a Select Committee with a preponderance of colliery proprietors. It did not sit until October 1862 and by then the miners had taken effective action through their union.⁶⁴

'Throughout the coal district a great outcry arose amongst the miners for better ventilation' reported the manager of the Newcastle Coal and Copper Company which was forced to sink an air shaft and instal a furnace, 'contenting the miners on this head'. Referring to the same issue, Alexander Brown of Minmi claimed before the 1862 Select Committee on the Coal Fields Regulation Bill that⁶⁵

the men themselves are in such a position now, that if they [the mines] were not well ventilated they would have a meeting, decide that the mine was not well

ventilated, and stop working. We are completely at the men's mercy, and hove been for some years back.

He also referred in mocking fashion to the alleged weakness of the miners, for whose protection the new laws were intended, but realized some degree of regulation was inevitable:

I would much sooner be without the Bill but the house being determined to hove the Bill, the whole Bill and nothing but the Bill, it is desirable the compound will not be ... of an aperient litigative nature forcing us to the Courthouse too often ogainst our will

In parliament Lewis pressed for government regulation of working conditions, periodically visiting the mining villages to justify his actions before he accepted the post of inspector of collieries with the approval of his constituents. His subsequent civil service career removed him from the struggle which was developing at Newcastle between the union and the colliery proprietors.

During its first half year the miners' delegates had concerned themselves with wage rates, and J. and A. Brown's successful prosecution of Thomas Alnwick under the Master and Servants Act as well as disputes at the Newcastle Coal and Copper Company's mine and at Minmi. In the latter case the union had provided considerable moral and financial support for the strikers who were resisting a reduction in wages and their success strengthened the new organisation. It also elicited a rather touching declaration of faith in the bonds between miners. After investigating allegations that the Minmi men had tried to exclude newcomers from employment at their pit, the union exonerated them and resolved 'that all the colliers employed at these works are concerned to [sic] all that are colliers'.¹⁶⁸

The resumption of assisted migration into New South Wales and the decline of alluvial gold mining provided a much more plentiful labour supply in the second half of the decade when Newcastle experienced one of its most rapid growth periods. Between the 1856 and 1861 censuses the population of the city and the mining villages doubled and a newspaper correspondent commented:⁶⁹

Perhaps in the vicinity of no town in the colony of the same population has there been such an increase in the number of inhabitants and houses. On the Maitland and Lake Macquarie roads two years ago there were only a few scattered houses. but now they can boast of a population nearly as large as the town itself - whilst the Maitland Road is adorned by buildings equal to any in the city.

By the end of 1857 there was an oversupply of miners ('this department of labour is sadly overdone') and the tendency of colliery labour to oversupply was to be a feature of the industry. Some of the slack was taken up by the expansion of output that coincided with the formation of the district union but that was temporary.

While the struggle for an improved air supply was proceeding the miners began to implement their equalization of incomes policy which was much discussed at an aggregate meeting in February 1861:11

The object of this proposition was to equalise as far as such a restriction can, the earnings of men in the coal trade, to restrain the greedy and rapacious man from inflicting upon himself and others [and], to afford every man a reasonable day's wage and...a steady and regular employment.

Such a measure, it was contended, would involve no sacrifice for not one miner in the district could average 11s.4d. per day. This rule was based upon one which George Curless had seen in operation in Durham where the results had been most beneficial and it was immediately effective at some mines. It appears to have been particularly objectionable to the colliery proprietors who had realized by mid-1861 that their role in the industry was being seriously challenged.

When the union claimed the power to control rates of pay for driving headings and decreed that a miner who had ignored the rule should be excluded from future employment in the pits, the A.A. Company superintendent, Arthur Hodgson, took the initiative in forming an association of colliery proprietors. All the companies joined and immediately resolved to reduce wages, to assist each other if singled out for retaliatory action and to investigate the feasibility of introducing 400 British miners. From this point a collision with the union was inevitable and the district's first general strike commenced in August 1861.⁷²

After nearly two months the employers' stand was destroyed by J. and A. Brown, who settled with the Minmi men, in order to obtain a foothold in the South American market. 73 The union cause had triumphed once more but the struggle would continue for there had been no resolution of the basic issue: who would dominate the industry?

In the following year another long struggle between the A.A. Company and its employees caused the union to disintegrate. Using non-union labour the company defeated the miners by prolonging the stoppage until those who were working grew tired of supporting their colleagues. Recovery by the demoralized unionists would have been slow but they were hit by another blow in 1864-1865 when the district was flooded by additional labour. As well as the miners introduced by the Scottish Australian Mining Company there was an influx of ex-gold miners who had been forced out by declining gold yields and the union was not reorganized effectively until 1870.74 Without its protection the miners' conditions declined in the late 1860s but they were not suffering alone: the proprietors were sharing, albeit not equally, their discomfort.

Balancing supply and demand

The struggle for trade in a period of declining prices and over-capacity proved fatal for three Newcastle coal producers, the Newcastle Coal and Copper Company, the Tomago Company and the Alnwick Colliery. Their disappearance and the continuing growth of demand might have saved the district from low wages and minimal profits if further collieries had not been established. However, to the struggling Co-operative Colliery opened by the miners during the 1861 strike, were added two more effective competitors. ⁷⁵

The Scottish Australian Mining Company with a nominal capital of £160,000 was established in 1858 by the Scottish Australian Investment Company to acquire and exploit mineral lands. R.A. Morehead, the manager of both companies, intended to begin with a coal mine 'for even at present rates of wages and carriage, coal mining in this colony, in a colliery producing a fair article and tolerably situated as regards facilities for transport, is without question highly remunerative'. By developing 1,240 acres leased from the Crown at Lambton, only two miles from the Great Northern Railway, under a shrewd mine manager, Thomas Croudace, and with a nucleus of skilled miners from the north of England, the Scottish Australian Mining Company brought another modern mine into production during 1863. From Lambton came 5,900 tons in 1864, 112,000 tons in 1865, 151,000 tons in the following year and a record 180,000 tons in 1867.76

The Waratah Coal Company, as the name suggests, was a colonial concern very similar to the Newcastle Wallsend Coal Company. As early as 1857 parties had been

boring for coal near Waratah, a village on the Great Northern Railway about four miles from Newcastle, and after amendments to the land laws permitted free selection of mineral lands, Thomas Groves, G.R. Dibbs, T.W. Smart, Charles Smith and T.S. Mort built up a holding of 1,467 acres. This was converted to freehold and sold for £30,000, which was taken in shares, to the Waratah Coal Company, capital £60,000, in 1862. Dibbs was a coal and shipping agent and would have been well aware of the potential of an excellent seam of coal so close to the railway and port.77

The Waratah Coal Company was the last of the big coal producers to be established in the Newcastle area in the 1860s. More than 55,000 tons were raised in its first full year and more than double that quantity in 1866 but the industry had expanded too rapidly. Fierce competition led to a price decline which would undermine the prosperity of the Newcastle district if it was not arrested.

Co-operation among British coal owners to maintain prices had a long history and it was only to be expected in the colony when competition developed. The first price agreement between the A.A. and Newcastle Coal and Copper Companies had helped to sustain prices in periods of slack trade thereby contributing to the flourishing condition of the district in the second half of the 1850s. Thus, when the proprietors met in August 1861 to establish an association, one of the proposals before them was a price agreement. However, 'it was deemed impracticable to adhere to any fixed price for coal and the question was not seriously entertained, the general impression being that the price at the different collieries must be regulated by the supply and demand', ⁷⁸ For a time the association was preoccupied with the struggle with the miners' union but the need for price maintenance was soon to be resurrected for it, not labour relations, was the dominant issue facing the coal industry in the nineteenth century.

During 1862 the colony had produced 477,000 tons of coal, an increase of almost 39% over the previous year although the A.A. Company's output was sharply reduced by an industrial dispute. The year's production was valued at £305,234, an increase of £86,414, and the average price per ton was maintained at 12s.10d. However, in 1863 the demand for coal for domestic and foreign consumption fell and total output was reduced by 43,000 tons. Production rose to a record level in the following year but by then competition among the major producers, now including the newcomers at Lambton and Waratah, had reduced the average value of coal to 9s.11d. per ton so that the sale of an extra 173,000 tons generated a reduction of £35,000. Worse was to come and the average value per ton reached 8s.4d. in 1866.⁷⁹

After a series of unsuccessful attempts to arrange price agreements several proprietors proposed more ambitious schemes. One of these was the vend system which had been in use in the United Kingdom since the eighteenth century. It was basically an agreement to share the demand for coal between the proprietors and during 1866 it was suggested by T.S. Mort of the Waratah Coal Company, the A.A. Company directors and the secretary of the Scottish Australian Mining Company who argued that 'it is very much by means of such arrangements that such great wealth has been obtained from the working of collieries' in Great Britain. However, the proprietors were not yet willing to co-operate to this extent and the vend proposal was not revived for several years.⁸⁰

A different kind of solution was proposed by Alexander Brown of Minmi who favoured an amalgamation of the principal mines to put 'an end to the ruinous competition...thereby raising and sustaining the value of the coal properties'. He had the support of W.C. Wentworth whose undeveloped Minmi property was considered a

threat to any monopolistic solution of the industry's problems and the Newcastle Wallsend Coal Company was interested but on this and subsequent occasions amalgamation failed to secure unanimity and, as the number of producers and coal varieties increased, it became more and more unlikely.81

These failures forced the proprietors to return to price regulation, which was easier to arrange, and in November 1866 the Australian Agricultural, the Scottish Australian Mining Company, the Waratah Coal Company and the Co-operative Coal Company, the Newcastle Wallsend Coal Company and the Newcastle Coal and Copper Company and J. and A. Brown, established a price of 9s.3d. for best screened coal at Newcastle.⁸² However, this arrangement was shortlived and the price decline resumed with impoverishing effects upon the whole district: a solution to this problem was still more than half a decade away.

Two other developments demand attention in any review of the twenty years that followed the announcement that entry into coal mining would no longer be restricted. Industrial relations had worsened and the possibility of an orderly development of the colony's coal reserves had become more remote.

Both employees and employers had experimented with protective associations with a degree of success and this was to be the pattern for the future. As the miners were predominantly from the United Kingdom, its industrial heritage must have been influential but it would be unrealistic to ignore the influence of seventy years of colonial industrial experience on the worsening of employee-employer relations in coal mining. To this compound of English trade union militancy and colonial independence must be added the rather unsettling experience of migration and of life in the small-town atmosphere of Newcastle:⁸³

a strange, straggling, out-of-the-way, undescribable English-Australian watering place, colliery village, oasis of greenness, Sahara-of-sand kind of place... the whole town appeared to have woke up in fright... and to have no definite ideas of a rendezvous whereat to rally. Houses seemed to be running into the country in dismay.

It is true that the wage rates for strenuous work in unpleasant conditions were high by colonial or English standards for most of this period but this did not produce a contented work force. Of course the lure of gold had intensified the problem by making an indentured life more objectionable than it otherwise would have been but disputes survived the rushes. It would be tempting to look for an explanation in the policies of the A.A. Company which was prone to use the courts to enforce its rights but the Newcastle Coal and Copper Company also had its share of strikes in 1850s. From their first appearance in the colony in the 1820s, the immigrant miners had been far from easy to manage and the development of trade unions did not alter the situation. The men who founded the lodges were able, often outstanding men, many of whom became mine managers, members of parliament, cabinet ministers, inspectors of collieries and mine owners. Their creation, the district union, was used so effectively in a campaign to control the industry in labour's interest that it provoked the first employers' association and the confrontations of 1861-1862. The bitterness of the 1862 dispute not only destroyed the union, it discoloured industrial relations for the rest of the decade.

In March 1855 on the recommendation of the Examiner of Coalfields, William Keene, the New South Wales Executive Council had adopted a policy governing the disposal of the Crown's coal lands. Such land would no longer be sold but could be leased subject to a charge of five shillings per acre for the surface rights plus a royalty, to be determined by auction, for each ton of coal extracted. Minimum royalties of sixpence, ninepence and one shilling per ton were prescribed for the first, second and third seven

year periods of the maximum term of twenty one years and the power to cancel leases which were not actively worked was reserved.⁸⁴.

Shortly after the Council accepted this policy, and after the first leases of coal land had been arranged, the Queen's Order in Council of 8 February, 1855, permitting the sale in fee simple of coal bearing land, reached Sydney. This prompted the Governor to ask for a reversal of the order because with coal, unlike other minerals, it was possible to calculate the quantity contained in a given area. A royalty system would ensure that the public would share in the value of the coal and free the mining entrepreneur from the need to expend much of his capital on land purchase. These arguments were based immediately upon Keene's advice which might have led to a more rational exploitation of the colony's coal in the second half of the century but they were first espoused in the colony by Samuel Stutchbury, the Geological Surveyor.

In his report for 1853 Stutchbury had concluded his description of the Ipswich coalfield with the advice that the Government should retain the power to 'sell, lease, or let to parties who have the skill, capital, and energy, tracts of land, which properly worked, would supply for ages all that could possibly be demanded of them'. His report also stressed the need for safety measures, the avoidance of waste and a fair return to the Crown.⁸⁶

With regard to the mode by which this valuable land should be disposed of...I am sure...that...the Government should reserve the right (now and forever) of inspection by their agents, so that the works shall not only be carried out upon well regulated systems, or principles, for the protection of life, as also for the economic value of the coal to the common weal; for once lost or wasted, it can never be recovered, and further; that all parties working mines, should be obliged under certain penalties, such as forfeiture of lease, or otherwise, to keep accurate plans of the workings as they are proceeded with, and forward, periodically, copies of the same to be deposited as records in any place of safety that His Excellency may think proper.

The hopes of Stutchbury and Keene were thwarted to some extent by the passing of the Robertson land laws of 1861. The 'Crown Lands Alienation Act' permitted the selection of up to 320 acres of coal land for two pounds per acre with provision for freehold title after two pounds per acre had been spent upon improvements. As its companion piece, the 'Crown Lands Occupation Act', granted pre-emptive leasing rights to freeholders over adjacent lands, the way was open for the colliery proprietors to increase greatly their reserves at low cost and when this occurred the Government's power to ensure an orderly exploitation of the colony's coal was much diminished.⁸⁶

Already there were signs that the fears of Stutchbury and Keene had been justified. Though there were too many collieries the proprietors were obliged by the 1861 legislation to continue development expenditure on their leaseholds. At least one third of the coal mined in the 1850s had been lost because the three yard square pillars left to support the roof of the mine were not recoverable. Moreover accidents, sometimes fatal, were not unusual and the first inspectors of mines were having considerable difficulty in persuading proprietors, who were struggling with all the problems that arise from low prices, to meet safety standards.⁸⁷ Certainly there were reasons for optimism about the future of the industry but serious, perhaps insuperable, problems had appeared in the first two decades of unrestricted coal mining.



Newcastle Harbour, 1873. From the Illustrated Sydney News and N.S.W. Agriculturalist, 27 September, 1873, in the Mitchell Library.

Chapter 4

TOWARDS A REGULATED INDUSTRY - THE COAL VEND, 1867-1880

No single event in the history of nineteenth century New South Wales coal mining was as significant as the establishment in 1872 of the Vend, an arrangement for sharing trade between the major colliery proprietors while maintaining a standard price for Newcastle coal. The effects of the Vend touched every proprietor, every miner and every consumer in Australia and many of their overseas counterparts as well.

Newcastle coal production expanded in 1868 to exceed 800,000 tons for the first time but then dropped back to average about three quarters of a million tons per annum over the next three years. Despite this, the average value per ton resumed the downward trend which was to carry it from about 13s. in 1862 to seven shillings in 1871 with depressing effects on the whole district. Output then accelerated to exceed a million tons in 1873 and though it was maintained at about that level for five years, the reversal of the falling price trend was far more significant. Commencing in 1872, the joint action of the proprietors, with support from the miners' district union, raised and maintained prices so effectively that the average value per ton exceeded 12s.6d. in 1874. It did not fall below 12s. until 1880, making this decade, perhaps, the most prosperous of the century.

Oversupply and disunity

Struggling under the heavy burden of overcapacity created in the early 1860s in a market which was not expanding rapidly the association of Newcastle colliery proprietors found it difficult to limit competition to secure higher prices. The November 1866 agreement to maintain the price of screened round coal at 9s.3d. per ton did not have the wholehearted support of all signatories and it was soon breached. Nevertheless it remained uneasily in force as the proprietors fought for a larger share of the New South Wales market to compensate for the declining foreign and intercolonial trade. These conditions favoured the Scottish Australian Mining Company and J. and A. Brown who substantially increased production at the expense of the A. A., Newcastle Wallsendland Waratah Coal Companies, and the last-named refused to renew the agreement for the following year. However, the other members promised to maintain an increased price of 10s. per ton leaving the Waratah Coal Company in an apparently strong position: it was the only colliery capable of providing Borehole coal at less than the declared price.²

Though there were significant differences between the Borehole Seam coals being produced by all the Newcastle collieries and some consumers had marked preferences, especially for gas making, the differences were not so great as to neutralise the effects of price reductions. For those with the less favoured coals, such as Waratah, or for proprietors under financial pressure, such as the Browns, price reductions were necessary for survival.

During 1868 competition was intensified by the rapid expansion of a new colliery belonging to J. and A. Brown, who had lost £18,000 when their Hartley Vale Colliery failed but had recovered by taking over a crown lease of 270 acres of land surrendered by the Scottish Australian Mining Company. Unfortunately for those who depended on the industry, the Browns decided to call the colliery 'New Lambton' in order to trade on the established reputation of Lambton coal. This incensed R.A. Morehead, the Superintendent of the Scottish Australian Mining Company, making him less willing to participate in efforts to raise the declared selling price of coal.³

The New Lambton mine was not ready until late in 1867 but the Browns managed to sell 131,000 tons of its coal in the following year as well as 69,000 tons from their Minmi mine. This was the first time that one producer had exceeded 200,000 tons in a single year and it would not have been possible without aggressive marketing. It was more than twenty years since the Brown brothers had opened their first mine and their experience and willingness to take risks in the speculative coal trade were second to none. Referring to their Melbourne shipments in 1868, the A.A. Company's agent in that city protested:4

They have but to tell you coals are on Barlow's (a man of no means who could not sell at a loss if full price was charged) or any one else's account, and ship away, getting back but 7s.0d. or 8s.0d. net, in fact sometimes less for their cargoes, and they are selling a coal here they call New Lambton equal to any raised, selling at all prices and we cannot go on competing with them for charters.

As Melbourne was an important market for the Newcastle collieries, the Browns' speculative shipments had a disruptive effect. The Co-operative and Scottish Australian Mining Companies lowered the price of their coal in Melbourne in retaliation and this further disturbed the business of local coal merchants, particularly those who dealt with the A.A. Company, which abided by the price agreement. The severity of the competition made it unlikely that the proprietors would agree when they began to discuss selling arrangements for 1869.5

Assessing their prospects, Alexander Brown urged that the declared selling price be advanced one shilling per ton as he did not anticipate effective competition from collieries outside Newcastle. He knew of no likely prospects in the north, the southern collieries already had as much work as their harbours permitted and such an increase would yield an extra £30,000 p.a., 'a good thing for the mines'. However, Morehead had in contemplation the development of his company's Stockton property, 'the best situated coalfield in the colony', and was in no mood for co-operation. Disregarding a promise, he reduced prices in Melbourne while the issue was still being negotiated, provoking E.C. Merewether of the A.A. Company to describe the Scottish Australian Company representative as 'a dishonourable fellow [who] ought to be held up to the scorn of all men',6

TABLE 97 Output, Newcastle Coal Mines 1867-1873

	Output, Newcastle Coa	I MILLES 100/ 10	13
Year	Quantity	Value	Value per ton
	(thousand tons)	(£000)	d.
1867	667	280	101
1868	822	351	103
1869	778	281	87
1870	743	262	85
1871	768	267	83
1872	859	341	95
1873	1014	582	138

These values are more rough guides. Estimates were made by the officials when mine owners did not provide returns ¹ and there are some absurdities, e.g., in 1870 Burwood coal was valued at 12s, per fon, A.A. Company coal at seven shillings per ton.

The withdrawal of such a formidable producer ended the agreement and the price quickly fell to eight shillings with profits at their lowest for many years so the other proprietors pressed the Scottish Australian Mining Company directors to overrule their local representatives. In a letter to London they argued that by the withdrawal of the Scottish Australian Mining Company 'capital to the amount of about half a million sterling is rendered comparatively unproductive' but their appeal failed and without the restraining influence of an agreement, the average value of coal

76



Edward Christopher Merewether, 1820-1893, General Superintendent of the Australian Agricultural Company, 1861-1875. Newcastle Region Public Library.

produced in the colony fell from 8s.9d. in 1868 to 7s. in 1871, the lowest level since the

For the proprietors whose costs of production could not be reduced proportionately. low price levels had serious results and, for the Newcastle community, these were depressed years. The average profit per ton of A.A. Company coal never exceeded 1s.6d. between 1868 and 1871 and the other large companies were even less profitable. A comparison of their results by the Scottish Australian Mining and the Newcastle Wallsend Coal Companies in 1870 showed profits of 1s.2d. and 101/4d. and dividends sank to a new low. The Newcastle Wallsend Coal Company shareholders' only return for 140,000 tons of their reserves in 1871 was a dividend of four per cent. For the Browns and their bankers these years were also difficult with the latter maintaining an anxious vigil over the overdraft of the partnership, but they survived. Less fortunate was the Cooperative Coal Company which succumbed because of inadequate capital and the problems of democratic ownership. Of little immediate moment, this had much greater long term significance because the colliery was taken over by its mortgagors who made the property highly productive.9

The real reason for the withdrawal of the Scottish Australian Mining Company was Morehead's decision to drive some of his competitors out of business, particularly the New Lambton Colliery and the Co-operative Coal Company. This decision was justified to his directors in terms of survival of the fittest theory and on the ground that there could be no joint regulation of the industry until the untrustworthy proprietors had been removed. The directors, who had consistently argued for co-operation among the proprietors so that profits might be increased, became suspicious of their superintendent's policy, but did not feel that they could be peremptory on such an issue from so great a distance. They were not prepared to countermand Morehead's policy, only to question its basic assumptions and counsel co-operation, 'for it would rather seem that if owners of collieries in the colony are as a rule lower in the commercial scale than at home, they all the more require to be under a binding agreement'. To Morehead's argument that it was erroneous to suppose 'that any number of collieries, however much their producing power may be in excess of the demand for coal may be made profitable by means of a mere agreement as to price', the directors riposted that it was not excess production, but unwise competition that was responsible for the profitless state of the industry.8

Subsequently, in one of its strongest letters, the board directed 'that the representatives of the other Collieries should not be allowed merely to infer that you would follow them in any proper upward movement as to price, but that you should take means to let them know and leave them in no doubt that you will do so'. This, too, failed to convince Morehead, who, it seems was more influenced by the desire to revenge himself on his rivals than by the free trade principles ascribed to him by a biographer. London urged him not to bury his head in the sand and not 'to let the development of "the great laws of natural selection" or the "great laws of production" draw your attention away from the legitimate means or opportunity of realizing immediate profit'.

That Morehead continued to ignore the advice of his directors is borne out by correspondence between the other proprietors. To Alexander Brown Merewether pointed out that further price reductions would be futile:12

you will simply get the one cargo if you gain anything and it is not impossible that the captain will load Old Lambton after all and use your offer to screw the

reduction out of Mr. Young. You must take your own course and God send your decision may not be to reduce at all costs today or this week Remember ASN [Australasian Steam Navigation Company] and other contracts

Given Morehead's attitude, there was no possibility of success for any scheme depending upon unanimity and so in something like desperation the other proprietors prepared a plan to bypass the Scottish Australian Mining Company in August 1869 but did not implement it. After another year of minimal profits and still no disappearance from the lists, the Scottish Australian Mining Company announced a further reduction in the price, to seven shillings per ton, in order to recapture what it called its lost trade. Made against a background of rising demand for coal this reduction was greeted with disbelief by the editor of the **Newcastle chronicle** who savagely attacked the company's management.¹³

Commenting on a meeting of Scottish Australian Mining Company shareholders, the editor argued that the latest reduction would not win back the trade the company claimed to have lost, it would merely impoverish all who were connected with the industry:¹⁴

Well may a shareholder demand the reason the company has come down to such a low ebb. Well may he exclaim, 'If Mr Morehead was the cause of the company's non-success, he ought to be removed from office.' Well may 'several other shareholders maintain that there has been gross mismanagement on the part of the company at home and abroad, and propose the appointment of a committee to investigate its present position.' But faith, marvellous faith, again prevailed A motion on the subject was lost on a division.

Increasing demand and growing unity

Of greater significance was the other theme of the editorial, that the demand for coal had grown so much that the other proprietors could combine to raise prices without the Scottish Australian Mining Company. Perceiving that, even if the Lambton Colliery were fully employed, its output would not be great enough to prevent the other mines from selling acceptable tonnages of coal at profitable prices, the editor concluded, it would appear then, that the power of the Lambton Company for evil has departed from it: the other companies are now in a position to treat it and its management with contempt.

Seven weeks later the newspaper returned to the question with another editorial which may have had an important influence on the future of the industry:

Here although the demand would appear to be inexhaustible, there seems to be something radically wrong in the matter of supply; we cannot send our coal away fast enough to meet the demand, and yet our prices are constantly receding, threatening in the end reduction of the miner's wage or ruin to those employing him. Where shall we seek the cause of depression... of the meagre formightly pay, of the complaints made by the storekeepers, town and country, of dullness of trade, of the small dividends received by mine proprietors, or the exodus to the gold fields now but commencing. In this shall we find the cause - that there has been no unity of action between the masters, and that they have allowed one man in an almost irresponsible position to destroy their trade, and by destroying their trade to work havoc to all dependent thereon.

This editorial, which may reflect the influence of James Fletcher, went on to suggest a means of: 17

neutralising the selfish policy of the management of the Lambton Company. Let all the other collieries - the A.A. Company, the Co-operative, the New Lambton, the Wallsend, and the Waratah, and, if need be, the Anvil Creek and Burwood - unite, and agree not to put a single ton of coal - outside already existing contracts - on board ship under, say nine shillings per ton, and then select one of their number to fight the Lambton Company with their own weapons; reducing step by step, with that Company, the price of coal, and supplying it at the same rate. Any loss to the selected company being made good out of the extra shilling earned by the others... The welfare of the whole community is at stake... The Lambton management are striking blow after blow into the vitals of the mining and all other interests of the community... If any pushing out is to be accomplished, after what has lately taken place, we should infinitely prefer before anything the closing of the Lambton pit, with the disappearance from the scene of its Sydney representative. A victim, self immolated on the altar of insatiable greed, and wondrous, monstrous insensateness would be the verdict found; none would regret the holding of the inquest

After reprinting this editorial four days later under the heading 'The Coal Trade', the Newcastle chronicle followed it with a letter from 'Argus', a pen-name for James Fletcher, in which he argued that the Scottish Australian Mining Company could not expect to remain the leading producer always as fluctuations in the quality of its coal would continue to affect its sales. Fletcher claimed that that other proprietors had 'exhausted every legitimate means to convince Mr Morehead of the impropriety of his course of conduct' and had then proposed to him a vend which would guarantee the Scottish Australian Company the largest share of the market, 130,000 tons of the estimated 640,000 tons. Writing with its shareholders in mind, he concluded with five questions revealing the 'ruínous consequences' of Morehead's refusal to agree to maintain higher prices for Newcastle coal.¹⁸

Fletcher's letter and a series of leading articles from the **Newcastle chronicle** were republished in a pamphlet entitled 'The causes of the ruinous condition of the coal trade in the northern district of New South Wales', and it was widely believed that these articles played a significant part in the establishment of the Vend. According to Alexander Brown, Fletcher 'chiefly brought about a uniform selling price of coal and the state of the coal trade from 1868 to 1872 was very much worse than it is today [1897]. The proprietors, instead of living in affluence, were in beggary, and a colliery was the refuge for the destitute'. ¹⁹ However, two other forces were facilitating moves to increase prices and share existing trade, the recently formed district union and the growing demand for coal.

The weakness of the union

According to custom on the Newcastle field, a reduction in price implied the acceptance by the miners of lower wage rates. This tradition weakened their ability to resist wage reductions even when their union was flourishing but that was certainly not the case in the late 1860s. Unionism was too strong to disappear but it ceased to be effective at the district level in this period. As R.A. Gollan has shown, there was a marked tendency for the miners at a particular colliery to make common cause with their employer rather than with other miners and this delayed the restructuring of the district organisation until 1870 despite low wage rates, under-employment and worsening conditions.²⁰

Squeezed by low profit margins and their limited ability to reduce the hewing rate lest they provoke strikes, the proprietors strove to lower their other costs of production.

This led to complaints about worsening conditions and revealed that the Coal Mines Regulation Act of 1862 had not ensured adequate ventilation. The Wallsend miners protested about the inability of the inspectors to prevent temperatures of up to 82°F at the face and this was borne out by events at the New Lambton mine. Inspector Lewis, formerly the miners' representative in the Legislative Assembly, directed that the air supply be improved. On his return he received 'rather harsh treatment' from James Brown and his manager, and reported 'that the air current does not circulate...at all and the miners suffer great and unnecessary hardship in consequence'.²¹

Similar exchanges between Thomas Croudace, the manager of the Scottish Australian Mining Company, and the inspector caused the secretary of that company to comment that such a 'passage of arms' was 'a not uncommon occurence in the relations between two officers discharging responsible and to a certain extent antagonistic duties'. The problems of inspectors facing strong and independent mine managers with many years' experience in the industry, such as Brown and Croudace, showed the need for modifications to the laws governing working conditions but this did not occur until 1876. The Coalfields Regulation Act of that year, provided for 'a minimum of one hundred cubic feet of pure air per minute for each man, boy and horse, which shall sweep undiminished along the airway past each working place' and vested in the inspector the power to close the mine until safe working conditions had been established. It also endeavoured to correct other abuses prevalent in this period.²²

The miners alleged that they were being paid by some proprietors for 11½ cwt. of coal for each skip they filled and that skips which did not reach this weight were not paid for at all. They contended, too, that coal in excess of this amount was also not credited to them and argued that collectively they were not paid for large amounts of coal, perhaps as much as 200 tons per day. In August 1868 they resolved that ²³ 'the existing standard of weight at some of the collieries of the district is a serious evil and injurious to the district generally' and that 'encroachments of an undue and unfair nature have been made on the miners employed at several of the collieries of this district, such as turning boards away [preparing new work places], filling and stowing stone and small coal and receiving no pay for such work' They were concerned about insecurity, arguing that 'miners in common with all other classes of the community should have some guarantee for the permanency of their employment and not be discharged at the caprice or ill will of their employers unless they are guilty of misdemeanour'.

These grievances indicate the pressure put upon labour by the proprietors during a period of low prices and while there was no effective district union to give financial support to oppressed lodges. This need was recognised by the men and there were moves to form a district organisation of a more effective nature in September 1868. However, this was not to occur for another two years.²⁴

One of the reasons for the weakness of unionism in the district was the oversupply of labour, which appears to have been largely caused by assisted immigration, and the miners as a body were strongly opposed to its continuation. Proposals to expand the scheme in 1870 were attacked publicly by James Fletcher who retained the support of the miners though he was by that time the manager of the Co-operative Coal Company Ltd. He argued that 705 fully employed miners could have produced all the coal raised in the previous year when 1,400 were actually employed in the Newcastle collieries. This assumed an average daily output per miner of 2-3/4 tons for 300 days a year, but this was unrealistically high. The A.A. Company miners had averaged 1.81 tons per day in 1869 and between 1862 and 1881 they exceeded two tons in only one year.²⁵

Fletcher was disregarding the tendency of miners to take time off from their arduous

work and their refusal to stockpile coal, which, combined with the fluctuating nature of the trade, made it inevitable that the owners would try to assemble a larger work force than would otherwise have been necessary. Of course the proprietors also had reservations about stockpiling because of increased handling costs and the tendency of their coal to crumble in storage.

Though little is known about the re-emergence of unionism at the district level between 1868 and 1870, it is clear that the declining price of coal had produced such pressures on wages and working conditions that the miners were obliged to come together in defence. For some the memory of the 1862 struggle would have faded and many others would have arrived in the colony since then from the United Kingdom where unionism was strengthening in the industry. Unfortunately information about the founders of the new union is fragmentary.²⁶

The district organisation had not been effective for some years but the miners had continued to hold occasional aggregate meetings to discuss matters affecting the coalfield. These appear to have been called by delegates from the various lodges who also met from time to time so that the machinery of a district union had never been entirely dismantled. There were no aggregate meetings in 1869 and if there were delegate meetings they were not reported in the Newcastle chronicle but in the following year the new union was formed during a protracted dispute at the Waratah Colliery. The basic issue in that dispute concerned all the miners to some degree: it was the determination of the proprietor to reduce labour costs to levels commensurate with

By threatening changes in rates of pay without notice in June 1870 the manager of the Waratah mine provoked a strike by his own employees and provided an issue for those who wished to form a district union. This dispute was immediately discussed by delegates from the various lodges who declared their support for the strikers and resolved 'that a general meeting of the miners of the Hunter River district be held on Griffith's Flat, on Tuesday, the 12th July'.²⁸

the lowered price of coal.27

The first business of that meeting was the formation of a union and the speeches made there reveal the mood of the miners and indicate their leaders. Most prominent were two Lambton men, R. Dainty and E.N. Brown, chairman and secretary pro tem, who stressed that a new organisation²⁹

was imperatively necessary. If they had not been subjected to wrongs there would be no necessity for such an association but as they all knew that wrongs had been committed, they were called upon to protect themselves. But justice should be done to the masters as well as to the men... The miners did not wish to dictate to the masters; all they wanted was to protect themselves and nothing else.

Also active were two officials of the first district organisation, T. Alnwick of Wallsend Lodge, and John Davis who was as ready to defend the old, as to support the new union:³⁰

the masters were now putting on the screw, and it was the duty of the men to resist the oppression and to assert their rights...they ought not to fear the masters, who might well be called the servants, for they were more in that capacity, if the miners liked to assert their rights, than the men were.

However, most of the speakers had not been to the fore in the early 1860s and of these, John Wood was one of the most influential. As president of the Waratah Lodge and their check-weighman he proposed that

in consequence of the miners of the Waratah colliery having to give in their fourteen days' notice for the protection of their fellowmen, whom we consider to be victimised...we, the miners, do hereby pledge ourselves to support the Waratah men until the present dispute is settled, the amount to be fixed by the delegates.

Support for the new union was severely tested by the Waratah dispute which was still continuing when the miners met four months later to confirm the constitution of the Coal-Miners Mutual Protective Association of the Hunter River District. By then the Waratah men had already received in strike pay £1,843 which had been raised by a five per cent levy on members' wages and there was no sign of a settlement. Nevertheless an estimated 600 miners reaffirmed their support for the strikers after a series of emotional speeches. Referring to the introduction of lower rates of pay without notice, Simpson of Waratah proclaimed:31

What can we designate this but imperialism? Imperialism laid on with a high hand and outstretched arm... When the miner is in the bowels of the earth, stripped of all clothing, and almost as naked as when he was issued from his mother's womb, and the perspiration flowing from every pore of his body, he receives the peremptory command, you must in future get this coal for 2s.6d, per ton. The ambitious man, [the mine manager] must win his way into popular favour by crushing and trampling on the rights of the poor coal miner'.

The Waratah dispute was settled by compromise early in the following year and the district union settled down to the task of consolidation. There were changes in the leadership, moves to amalgamate with miners from the southern field, support for the New Lambton miners over conditions of work, expressions of sympathy for civil servants facing wage reductions and efforts to widen union membership. However, the most important issues were the hours of labour and low wage rates. Miners were in a peculiar position over the question of working hours, and could not easily agree on a common policy. At shaft mines the day was usually divided into two shifts and entry into the pit was regulated but miners at tunnel mines were not limited in this way and tended to suit themselves as to their working hours. Intermittency of employment also made them reluctant to accept limitations on the length of their day and the employment of day labour as shiftworkers in and around the mine at tasks other than getting coal further complicated this issue. On the wages question the miners were agreed but while the declared price of coal remained at eight shillings it was difficult to obtain an increase.32

Early in 1871 James Fletcher, as manager of the Co-operative Colliery, sought the assistance of his miners in an attempt to raise the price of coal. The proprietors were unable to agree on an increase but some of them were prepared to countenance union involvement in the regulation of the industry if it would restore profitability. Other proprietors were opposed to the idea and there was a deep conviction among miners that it was not right for them 'to interfere in the matter. The price of coal did not concern them... They were not to be used as tools to help the masters to raise the coal [price]'. The secretary of the district union thought the matter was foreign to its objects and a poorly attended and very unruly aggregate meeting agreed that 'it is entirely out of place for the miners to interfere in the question of raising the price of coal'. The miners would go no further than endeavouring to obtain wage increases which would force the owners to raise the price; to reverse the process would be to step outside their role in the industry. Just as some employers feared union interference in their prerogatives, some miners were concerned that co-operation of this kind would lead to the proprietors running the union. They preferred the familiar world where Jack and his master knew their places,33

There still remained the possibility that union action for increased wage rates would produce a higher coal price and in June 1872 the delegates called the rank and file together to consider hours of work and an increase in the tonnage rate. They decided to limit their working day to nine hours and to press for an increase of sixpence per ton in the hewing rate by demanding the new rate at one colliery at a time. Lambton was selected as the first target at the suggestion of its delegates who complained of 'the tyranny and ill usage they had suffered under the manager, Thomas Croudace'. The union would support the Lambton men with strike pay should a stoppage occur as a result of this policy.³⁴

In response, all the major collieries except Lambton, which declined to participate, decided that they would close down any mine singled out by the union and pay compensation of one shilling per ton to it for loss of trade. However, they were prepared to concede an increase of threepence per ton immediately and a similar increase at the end of the year. Always quick to seize an advantage, the astute Scottish Australian Mining Company superintendent prevaricated until his rivals faced a strike, then conceded the sixpence per ton on condition that the union would also extract it from his competitors, raised his price by one shilling per ton to take advantage of strike-induced scarcity and returned to work. The others would not permit the Scottish Australian Mining Company such an advantage so they also conceded the increase. Negotiations between the proprietors followed and within a few months coal was selling at 11s. per ton. In this devious manner prices, profits and wages were increased and the objectives of the proprietors and the union were realised. What had made this possible?

When the Lambton miners heard that the increase had been granted they reacted not only with pleasure but gratitude. Led by the band as was usual at celebrations, they marched to the manager's residence to thank him: this was not the reaction of men who had extracted a concession: it was an appropriate response to a gift. Magnaminity had been rare in the past and there had been no change for the better: the Scottish Australian Mining Company revealed that 'it gave the miners an increase of 6d. per ton

because labour was scarce',36

Lest the Lambton miners, and others, conclude that the disunity between the proprietors could be exploited to secure additional gains. Morehead printed a circular letter which is very revealing. He had hesitated before awarding an increase partly because the level of other colonial wages did not appear to justify it but also because of the manner of the request. 'The tone adopted towards employers had been... very objectionable and unfitting' at the last aggregate meeting. He denied that his policy of price reductions had been undertaken to grind down the wages of the miner and maintained that it had been in the best interests of the industry: ³⁹

I make the statement with a thorough conviction of its entire correctness - that the course followed by the management of Lambton is best calculated to promote the permanent interests of the coal trade, including in these the maintenance of just relations between employer and employed. ... I venture to predict that any further demand that appears unreasonable to the employers generally will fail of success possibly, may be attended with worse results to those seeking unduly to press it for, even without any formal agreement among the employers, uniform action will, I feel very confident, be taken, that will effectually meet unfair encroachments on the rights of the capitalist.

The Scottish Australian Mining Company's decision to grant the sixpence per ton was indicative of the state of the industry. The last major coal company to begin operating in the district had done so in 1864 and in the meantime, annual New South Wales production had increased by almost 350,000 tons. The output of the five principal Newcastle producers had grown from about 644,000 tons in 1867 when the last precarious price agreement had been arranged, to approximately 857,000 tons in 1872. The average annual production for the five was 122,000 tons in 1867 and 152,000 in

1872. In the words of the editor of the Newcastle chronicle, 'trade is no longer overdone; on the contrary, such improvement has it of late manifested, that quite possibly the current year's export may touch nine hundred thousand tons', 38 It had taken almost a decade for demand to catch up with the expansion of capacity in the early 1860s but by 1872 each of the principal collieries could anticipate satisfactory annual sales.

Forming the vend

In the closing months of 1872 the A.A., Newcastle Wallsend, Co-operative and Waratah Companies and J. and A. Brown entered upon a period of co-operation so complete that even well informed members of the public were convinced that there had been an amalgamation. They began by establishing a common policy in dealing with their employees, went on to raise the price of their coal, agreed on rules governing commissions to foreign customers and agents and then, early in 1873, adopted a set of proposals designed to maintain the price of coal by apportioning the demand according to negotiated quotas. Within three years, even John Whitton, the Engineer-in-Chief for Railways was convinced that these collieries had amalgamated.³⁹

The Associated Northern Collieries, later known as the Northern Coal Sales Association, established a vend by predicting 1873 sales for themselves and the other major Newcastle producer, on the basis of sales in the previous two years and dividing that total between the six collieries. They bound themselves to accept their quotas and agreed that a monetary penalty would be levied on companies selling excess coal in order that undersellers might be compensated. To dissuade any who might choose to leave their coal in the ground and simply accept compensation, annual reassessments were arranged so that quotas were reduced for undersellers and increased for oversellers.⁴⁰

Thus for 1873, a vend of 600,000 tons was predicted for the Associated Northern Collieries with the A.A. Company receiving the largest quota, 162,620 tons, and the smallest going to the Co-operative Colliery, 84,000 tons.

The proprietors used these quotas as a guide in the conduct of their business with everyone closely watching the state of demand in order to determine whether the estimated total vend for the year was under or over the actual figure. If sales were high then it might be safe to oversell; if demand appeared to weaken, production could be cut back accordingly. As the penalty for overselling was 3s.8d. per ton those who oversold were accepting a much lower return on their coal and in some collieries, where costs were high, to have oversold would have involved losses. By the end of 1873 the Associated Northern Collieries had sold 788,935 tons, more than 30% in excess of the vend, and, though the individual quotas were raised in proportion, some collieries were still found to have oversold. Browns for example were entitled to sell coal valued at £64,778 but their sales exceeded that figure by £9,916. Thus they were obliged to pay into the funds of the association for distribution to collieries which had undersold, such as the Waratah Coal Company, which received £1,912.14.0 as compensation for selling 20,865 tons less than its allotment.⁴¹

After raising the price of their best coal to 11s. per ton from January, the Vend members increased it to 14s. per ton in June 1873, the highest price since the 1850s, and sustained it at that level until 1880. Though the miners' wages were raised simultaneously to five shillings per ton, this was a very rewarding price. Thus the A.A. Company's profit per ton increased from 1s.4d. in 1872 to 4.8d. in the following year and 4s.9d. in 1874. Not all the proprietors did so well because costs of production varied considerably, but these years were very profitable for even the high cost mines. For example, costs at the Browns' New Lambton mine were much greater than the eight shillings per ton accepted by the Associated Northern Collieries as the average for

TABLE 10⁴² ALLOCATIONS TO MEMBERS OF THE VEND, 1873

ALLOCATIONS TO MEMBER	Tons
A.A. Company	. 162,620
Newcastle Wallsend Coal Company	. 140,340
Waratah Coal Company	. 126,010
J. and A. Brown	87,030
Co-operative Coal Company	84,000
Total	. 600,000

vend calculations and their Minmi mines were burdened with relatively high transport costs: but the first vend transformed their financial position. At its inception this firm was a continuous source of worry to its bankers but by the end of the decade the Browns had a business empire strong enough to survive for fifty years.⁴³

Between 1874 and 1879 the Newcastle Wallsend Coal Company, whose £10 shares had been selling at five pounds in 1873, paid dividends of £9.10.0 and returned six pounds as retired capital, for each share. And this was not all. In the same period its mines were substantially re-equipped, large additions to coal reserves were financed from profits and considerable additions were made to reserves. This impressive record was achieved by a deliberate policy of underselling in the years 1875, 1876, 1877 and 1878 so that, in addition to generous profits on yearly average sales of 178,000 tons, the company received several thousand pounds in compensation. When the Newcastle Wallsend Coal Company directors changed their policy after the first vend had been abandoned, sales rose to 315,000 tons in 1881.44

Such comparatively high profit levels were achieved and maintained because the Associated Northern Collieries steadfastly adhered to the declared price. Not only were the New South Wales Railways Commissioners charged the full price for their fuel, the discount of 21/2% normally permitted to shippers was not extended to them.⁴⁵ This policy produced high profits but also presented competitors with ideal conditions for widening their share of the market.

TABLE 1146

OUTPUT OF NEWCASTLE COAL MINES AND THE SOUTHERN AND WESTERN COALFIELDS 1872-1879

(Round Thousand Tons)

Company	1872	1873	1874	1875	1876	1877	1878	1879
A.A.	184	173	195	224	230	246	233	189
Waratah	170	187	181	162	101	62	72	90
Newcastle Wallsend Coal	155	202	240	217	167	145	115	162
Co-operative	97	112	149	183	179	177	176	147
J. and A. Brown	101	175	140	135	951	148	153	107
Newcastle						50	73	71
Ferndale							44	
Vend Total	707	849	905	921	772	828	866	757
Ferndale								40
New Lambton					59.	94	91	90
Scottish Australian	150	159	128	149	161	164	213	225
Newcastle Field	859	1014	1038	1075	996	1092	1181	
Southern Field	87	136	137	150	-	217	238	1135
Western Field		10	35	19	57	76	96	267
°The New Lambton Collin						/ 0	40	120

The New Lambton Colliery was sold by the Browns in 1876 and withdrew from the Vend.

The principal threat to the Vend was that cheaper coal from other mines would capture a share of the custom of the Associated Northern Collieries. There were three possible sources of such competition, the southern, western and northern coalfields of the colony. The southern mines increased their output threefold between 1872 and 1879 and though this was partly the result of their links with the principal steamship companies, it was also a reflection of the comparative cheapness of their coal. Costs of working there were considerably lower than in the north, principally because of easier mining conditions which permitted high productivity and lower wages. However, the coal was definitely inferior for gas making and it was not as suitable for railways as northern coals. The western mines also increased their output considerably but they had to transport it on a railway of limited capacity over a much longer distance than their competitors. In this period, the Newcastle collieries had little to fear from them.⁴⁷

The prosperity resulting from the Vend made the proprietors anxious to preserve their association and willing to accept arbitration as a means of settling both labour disputes and arguments between themselves. Thus, for example, when the Browns objected to their allocation for 1874 and the decision of the arbitrator went against them, they accepted the same quota as they had had, 14.5% of the total vend. Arbitration was usually unnecessary, for disagreements over allocations were rare. So when the proprietors met after three years of regulation under this system, there was no hesitation in renewing it for 1876. There was to be no alteration in price, though the Waratah Coal Company had considered 14s. to be too high when it was first introduced, and one firm proposed a reduction soon after the new agreement was concluded. There were two significant alterations: one reduced the proportion of profit on excess sales to be paid to the general fund from 3s.8d. to 1s.4d. and the other permitted the entry of new producers.⁴⁸

The threat to the Vend

By far the greatest potential threat to the members of the Vend was their old rival, the Scottish Australian Mining Company, but this took some years to develop. From the Lambton mine had come 135,000 tons in 1871 and 149,000 tons in the following year and its output grew only moderately until 1878. Thereafter its rapid growth was the principal cause of the demise of the Vend which Morehead had refused to join, desiring to preserve his freedom to vary prices in pursuit of business. This was accomplished by selling at slightly less than the declared price except for larger orders which attracted concealed discounts of up to $12\frac{1}{2}\%$. By this method as well as concern for the quality of its product and by the cultivation of relations with shipping agents and customers, the Scottish Australian Mining Company increased its share of the district trade at the expense of the Associated Northern Collieries.

By July 1878 only four producers remained in the association and five others were selling below the declared selling price, seriously threatening the vend scheme. The A.A., Newcastle Wallsend and Co-operative Companies and J. and A. Brown complained that the Scottish Australian, Waratah, New Lambton, Newcastle Coal Mining and Greta Coal and Shale Companies were capturing their custom by selling at less than the declared price, but only Newcastle Wallsend was actually selling less coal than in previous years. The output of this company had fallen sharply from 240,000 tons in 1874 to 167,000 tons in three years because of its policy of selling less than its vend quota. Nevertheless the Scottish Australian Mining Company's share of the market was growing and the Newcastle Coal Mining Company had made an impressive debut selling 50,000 tons in its first year. 50

When the latter company joined, the Vend's prospects improved and the declared selling price of 14s. was reaffirmed for 1878. However, this was to be a brief respite for another new colliery, the Ferndale, produced 40,000 tons in that year and the increasing

success of the Scottish Australian Mining Company so rankled the Vend members that they all declared their intention to withdraw at the end of 1878. As the capacity of the mines was estimated to be double the demand, this was ominous: a return to severe price competition seemed likely. But there was an alternative. It did not appeal to the proprietors for it meant sharing power with the miners but perhaps union coercion would have more influence on R.A. Morehead than proprietorial persuasion.⁵¹

Between February 1873 and March 1880 there was a degree of industrial harmony on the Newcastle coalfield for which one is unprepared by the events of the preceding thirteen years. In the early 1860s the union had run rampant until its bitter struggle with the A.A. Company in 1862 practically destroyed it. Long frustrating years of defensive activity were eventually terminated by its revitalisation in 1870 but progress was slow. Then the miners and their employers entered a new phase marked by co-operation and negotiation as they pursued a common interest, the maintenance of the Vend. At no other times have the proprietors and the miners' leaders co-operated in the ordering of the industry to the extent that was possible between 1873 and 1880. Organised labour had played a culminating role in the formation of the Vend and its strong support was to continue until the collapse of the system in March 1880. Of this period, R.A. Gollan has written: The general picture we have of these years is of a moderate unionism with substantial agreement between union and management, made possible by high coal prices, high profits, high wages and arbitration to iron out disagreements.'

The associated proprietors jointly decided their labour policies and negotiated with the delegates of the union. In this way complex problems, such as the length of the working day, the creation of an arbitration system for resolving disputes and the establishment of an accident relief fund, were settled amicably. Thus there were no major disputes between the employers and the union from the end of a dispute over the

hours of work early in 1873 until March 1880.53

Industrial relations

At the end of 1873 the owners and miners' representatives signed a District General Agreement establishing a sliding scale of wages which provided that the hewing rate per ton of coal would be adjusted by threepence per ton for every rise or fall of one shilling per ton in the price of coal, with a minimum of 3s.6d, which would be reached when best round coal was sold at eight shillings per ton, provision was also made for the submission of disputes to a council of arbitration to consist of five persons, two nominated by each of the parties and an umpire acceptable to the other four.⁵⁴

Another agreement reached in 1875 laid down the rates of extra pay to apply to miners placed in sections of the mine where conditions made it difficult to produce the usual quantity of coal. The payments, or 'considerations', were to apply when seven types of 'deficiency' existed. Thus the miners could expect to be paid at least five shillings per ton and as they usually obtained between two and three tons of coal per day per man, their daily wages would have ranged from 10s. to 15s.⁵⁵

With coal selling at 14s. per ton, the first principle of mine ownership became continuity of production, and substantial profit margins enabled the owners to make concessions and indulge in arbitration procedures which tended to produce compromise settlements. The high wage rates and the considerable amount of leisure time promised by the Vend also made the miners its firm supporters. This was evident at their annual demonstration in May 1875 when the chairman of the union, William Davies, deplored the strikes that used to occur in the district and still did elsewhere in the world, castigated Welsh coal owners as 'perfect tyrants', and contrasted their behaviour with the local scene:⁵⁶

Instead of contention, the agreement we celebrate this day has been signed and all disputes can be rectified by arbitration. Would to God the same agreement was in existence all over the world. We desire to cement this friendship between master and man. We wish to make it lasting, binding, sincere and honest.

Prosperous conditions were conducive to good feeling on both sides and to incidents which contrast with earlier, protracted, often violent, conflicts. When Merewether, who had presided over the destruction of the first district union, retired from the chairmanship of the proprietors' association in 1876, the union presented him with an embossed address thanking him for his courtesy. The employers also made their gestures, agreeing to contribute to a permanent relief fund for injured or sick miners to the extent of 16.66% of the miners' contributions and providing annual picnics for their employees. However, these harmonious relations were checked from time to time as ever present basic tensions disturbed the generally tranquil industrial scene. Some of these affected particular collieries or personalities but there were others which affected the field as a whole.

TABLE 12.8

NUMBER OF EMPLOYEES AND PRODUCTIVITY
IN NEWCASTLE COLLIERIES, 1869, 1875 AND 1879

	1869	1875	1879
Employees	1,767	2,532	3,659
Output	778,263	1,075269	1,134,792
Output per			
employee	440	425	310

Perhaps the most remarkable feature of the mining scene in this period was the continuing growth of the workforce particularly because of assisted immigration. In 1869 in Newcastle 1,767 mineworkers raised 778,000 tons, but ten years later more than twice as many men produced only 46% more coal. Output per person per annum in 1869 was 440 tons but a decade later this had fallen to 310 tons! To some extent this decrease resulted from the Vend system which had restricted output but it was also caused by an influx of labour. 39

In the first half of this period an increase of 43% in the work force appears to have been absorbed without difficulty because of a similar increase in output (38%) but in the second half the increase in the number of miners (44.5%) far outstripped the growth in production (5.58%). This was significant for it impoverished the miners, particularly those at the Vend collieries where output was more static, created unemployment and contributed to the deteriorating industrial relations of the district.⁶⁰

Many of the newcomers were British migrants who were attracted by the hewing rate of five shillings per ton and letters home reporting high daily earnings with plenty of leisure time. However, by 1876 when there were reports of 250 people leaving Clackmannon and Fife for Newcastle, the Newcastle Wallsend Coal Company miners were complaining about underemployment and the Co-operative Lodge was also showing concern about this problem. It was indeed, becoming the main theme of union discussions.⁶¹

During 1875, either in response to the growth in the workforce or for ideological reasons, the unionists had resumed their efforts to enforce a 'darg'. The Co-operative miners considered imposing a limit on daily output and when Commodore Goodenough, R.N., toured the district he found the A.A. Company miners strictly limited to two and a half tons per day. When the Lambton miners applied a similar rule, the Scottish Australian Mining Company's secretary wrote from London expressing his regret that a policy which had plagued British coalowners was likely to be enforced at Newcastle. Of course there was a danger that such measures would provoke further

increases in the work force, as employers sought to adjust to the new limits on mine output.62

The miners continued to protest during 1876 about the number of immigrants reaching the district and their efforts were supported by the Newcastle morning herald which suggested that they should try to inform people in Britain of the true state of employment. Allegedly newspapers had reported that work was at a standstill in the colony for want of labour and advertisements had appeared in England stating that daily wages ranged from 12s. to one pound per man and that land could be bought for one pound per acre. In response to union representations the assisted immigration regulations were amended to exclude miners but the number employed in the Newcastle collieries continued to grow, forcing the union to formulate its policy that 'the last man coming to the colliery would be the first to go' in 1877. The explanation was that individual miners continued to nominate migrants who were able to evade the regulations by posing as agricultural labourers. On arrival they came to the coalfields where their sponsors pressed mine managers and the union to provide work.⁶³

The majority of the associated proprietors preferred to co-operate with the union rather than return to unrestricted competition so complaints about underemployment at the Vend collieries were unsympathetically received: there was 'a ready cure for this distress in the hands of the miners themselves'. However, Jesse Gregson, the superintendent of the A.A. Company, thought his colleagues too disinclined to defend their prerogatives:⁶⁴

I consider it my duty to my employers to object as long as possible to dictation from the miners as to whom I should or should not employ, as to the hours of daily labour, or as to limiting the output of your (the directors) pits to suit their ideas of right and wrong.

As the maintenance of the Vend and the high wage rates it entailed was its first priority the union was bound to attempt to restore the situation. Its determination to maintain the hewing rate of five shillings had already bankrupted the Greta Coal and Shale company which had opened a mine thirty miles west of the Port of Newcastle. The easier mining conditions there would have permitted miners to earn as much as their Newcastle colleagues even though the Greta hewing rate had been reduced to four shillings to provide the extra cost of rail freight involved. However, the union was adamant and, though unemployed miners were anxious to work there at the reduced rate, the new proprietor complained 'I have been intimidated by a combination calling itself a union; and I have been informed that the property will be destroyed, before men shall be permitted to work at less than 5s. per ton'.65

Apart from threatening the Vend, the expansion of the trade of the Scottish Australian Mining Company was disturbing another cherished union objective by creating large disparities between miners at different collieries. Some Wallsend miners worked only seven shifts in ten weeks in 1878 and over the whole of that year their average output per underground worker was 234 tons whereas the average for the district was 371 tons and the Lambton men raised 533 tons. A miner producing the district average would have earned £92.15.0 per annum, not a large sum compared to the incomes of other workers in regular employment at daily wages of from 5s.6d. for labourers to 11s. for skilled tradesmen.⁶⁶

The strength of the union

Though the district union had been unable to prevent this situation developing, it was still a vital organisation playing a strong role in the regulation of the industry. When the Browns wished to work their new Minmi tunnel on pay Saturdays, normally a half holiday, they had to obtain the permission of the Delegate Board and it agreed to their request only because it considered there was an emergency. Another demonstration of



Jesse Gregson, 1837-1919, General Superintendent of the Australian Agricultural Company, 1875 to 1905. Mitchell Library, Sydney.

the miners' strength occurred at Lambton where Croudace was unable to compel the men to provide clean coal.⁶⁷ The union was strong but would it be more successful than the employers in bringing all the large producers into the Vend?

The miners planned to establish a supplementary vend to regulate the sales of the collieries outside the proprietors' organisation and to withhold labour as a means of enforcement:68

We have allotted to the Non-Associated Collieries an annual Vend, based upon the same calculations as those taken by the Associated Colliery Proprietors, by which we propose that the Associated, shall have the Vend they have decided upon, and the Non-Associated Masters the Vend which we have fixed for them. It will therefore, be seen that, if the men carry out our proposal, it will be possible for any colliery proprietor, whether Associated or Non-Associated to exceed their allotted Vend until each company in the trade has had its proportionate share. In other words, we propose to incorporate the Men's Vend with that of the Proprietors' and to ask the miners at one colliery to be no parties in depriving those at another of their trade. The miners working at the Associated Collieries will, by the Vend arrangement of their employers, be unable to encroach upon the trade of each other, and we invite the men engaged at the Non-Associated Collieries to accept the Vends proposed, and thereby, as members of one Union, guarantee to each other a firm basis of mutual operation. In the allotment of the Vend, a very large margin, amounting to 107.152 tons, has been left, in addition to the annual increase of the trade. There is, therefore, every prospect of the various collieries receiving the several Vends allotted to them.

As the circular described the methods of supervision to be employed the close implication of the Vend proprietors was revealed:69

In order to carry out our scheme, we also propose placing an official in Newcastle who will, in turn, see that the Associated Collieries do not exceed their Vend, and that the Non-Associated Collieries get their pro rata share in accordance with their allotment. This official will act in concert with the representative of the Associated Proprietors; have free access to the books, and thus daily ascertain the quantity of coal leaving the port, and the quantity to be supplied by each colliery. He also will advise the Checkweighman at each of the Non-Associated Collieries, who will in his turn communicate with the men, and regulate accordingly. In other words, the Master's representative will regulate the work to be done at the Associated Collieries, and the Miners' representative will regulate the work to be done at he Non-Associated Collieries, consequently the men's labour will be more uniform than heretofore.

This scheme represents the highwater mark of the union's endeavour to control the industry. The proprietors had been unable to co-operate in their mutual interests: now the miners were to fail the same test. Perhaps the most surprising feature of the whole affair was that the associated proprietors were prepared to tolerate such union interference in their business.

To Morehead, who had stubbornly resisted involvement with his fellow proprietors, union control would be anathema. Accordingly, when the Lambton Lodge accepted a quota of 150,000 tons, he threatened to employ non-union labour. Forced to choose between a costly struggle with a determined, powerful employer, whose policies had given them more work than their fellows and union policy, many Lambton miners refused to support the union, continuing to work after their quota had been filled, they endure expulsion from the union and violent mass demonstrations against them. During one of these E.N. Brown, the president of the Lambton Lodge, exchanged pistol shots with a man who was trying to carry out the policy of the district union, an

organisation which Brown had done much to establish. The severity of this struggle was much influenced by the prosperity of the Lambton miners: thus a special correspondent of the **Sydney morning herald** referred to the 'prosperity of Lambton, which made it a land of Goshen in the midst of the troubled district around it',⁷⁰

The struggle continued into 1879 with Fletcher using the Newcastle morning herald for propaganda, editorialising against the Scottish Australian Mining Company and suppressing evidence of his own involvement in the campaign for the Lambton miners' allegiance. This provoked Morehead who prepared to prosecute him for conspiracy, alleging that the disturbances at the Lambton mine had involved the loss of £40,000. He complained that his rivals were leaving coercion to the miners, 'they, the associated standing aside and by their organ the Miners' advocate referring to it [the Vend] in mild language addressed to me in the interest of my shareholders'.71

The union also failed to enforce its scheme at the South Waratah Colliery which locked out its miners when they stopped work after its Vend quota had been reached: this signalled the defeat of the plan. However, the union tried again by introducing a general limit on production in August 1879 when it decided to observe two working days of the week as holidays until 'an improvement in the trade warrants a change'. 72 In view of its earlier failure this was an optimistic plan: it came too late to save the Vend.

Predictably the Scottish Australian Mining Company directors were delighted that their 'freedom of action' had been preserved, but the future of the Vend concerned them. If it continued, Lambton's high rate of production, over 200,000 tons per annum, and high profits could be preserved. Grainger, the secretary of the company, could see no inconsistency in his expectation that the other proprietors should be constrained in order to maintain the price of coal to the chief benefit of his company. However, Morehead planned to conceal the company's high profits from the miners and Grainger speculated about a combination of the non-associated collieries to keep the union at bay:73

Of course it is to be deplored that there should ever be occasion for them to associate, but, whilst workmen combine to interfere in matters that are quite out of the sphere of their legitimate action, it is not to be wondered at that employers should seek the means of defending themselves against their attack.

While the union tried to implement its scheme the associated proprietors introduced a modified system to operate from the beginning of 1879: one shipping manager was to conduct the trade of the five member collieries, allocating orders between them in accordance with negotiated quotas and regulating the working of the mines on the basis of monthly balances. No firm could be required to produce more than 1/26th part of its yearly vend per fortnight nor to supply part-cargoes lest their coal's reputation be damaged, and there were to be fines of up to £500 per cargo for the supply of dirty coal or coal not authorised by the manager. Most significant was the regulation that the Associated Northern Collieries, as they were to be known, would give 'no undertaking positively to supply a particular coal from any of these mines'.⁷⁴

This rigid system was accepted because it overcame the problem of unwanted coals and because it would lessen the inducement to shipment on colliery account which so mixed up the different interests of colliery owners, shipowners and commission agents that underselling could not be detected. They hoped that being assured of a share of the trade the proprietors would be able to reduce the costs of idle time and avoid the tendency to overequip the collieries to meet peaks of demand. The system had disadvantages, principally that customers who were refused a specific coal might choose to deal with a non-associated colliery. Speculative shipments, which had not only raised sales abroad but had also introduced Newcastle coal to new markets, would also not be possible. It was recognised that the new system might also lessen the

inducement to expand the trade and to maintain the quality of coal.75

The acceptance of this plan by the Associated Northern Collieries is surprising as its defects were obvious before it was implemented. The A.A. Company superintendent realised that the refusal to grant the customer the coal of his choice was a serious defect and the Scottish Australian Mining Company secretary commented that 'the plan seems calculated to throw business our way'. In fact its implementation is understandable only on the assumption that the miners' vend would bind the hands of the non-associated companies. Without such a limit the new system would merely add to the problems of the associated proprietors by driving away customers who wanted a particular coal - and there is considerable evidence that the customers had strong preferences.⁷⁴

Initially this scheme was reported to be working well but as the months passed it became apparent that it was reducing the total sales of its members. The Newcastle Wallsend Coal Company had benefited but the A.A. Company had suffered severely and so had the Browns. The restrictions on trade were so onerous that none of the members had been able to fill one large foreign order and this may have gone to the Scottish Australian Mining Company. It kept its prices close to the declared price in order not to excite 'the jealousy and ill will of the Associated Colllieries and cause them to renew or increase their efforts to get the Lambton men to strike'. So successful was this policy that the company raised 226,000 tons of coal, it highest yearly output, and won the Victorian Railways contract to supply 60,000 tons at 13s.8d. f.o.b. in 1880.79

Its defects brought this system into disrepute and reinforced the doubts which the A.A. Company superintendent already had about union involvement in traditional managerial functions. The fixing of a uniform price was ridiculed as 'a policy taken in conjunction with the vend scheme which enables those who produce an inferior article to flourish and fatten at the expense of those who produce a superior article'. Gregson, whose company's support was vital to the Vend, also found it unsatisfactory for a different reason; his colleagues in the association were too disinclined to defend themselves from the union.⁷⁸

The collapse of the Vend

When the proprietors met on 3 September, 1879, the A.A. Company announced that it would withdraw from the Associated Northern Collieries in September 1880. The Newcastle Coal Mining Company, hampered by a little known coal and restricted by a small vend, was further embarrassed in November 1879, when the association fined it three shillings per ton for a cargo loaded on the **Lady Darling** without due notification to the shipping manager. Three months later it joined the Newcastle Wallsend and the Cooperative Companies by announcing its intention to withdraw: the association was collapsing.⁷⁹

J. and A. Brown then reduced the price of Minmi coal from 14s. to 10s. per ton, but advised that prices would probably fall to seven shillings before June 1880. Their trade circular went on:80

The fall in price is solely attributable to the conduct of the superintendent, in this colony, of one of the English Companies, who for the past seven years has stood aloof from the other large coal owners and has, by offering discounts to purchasers, secured a large output for his colliery. The consequent loss of trade had injured the other proprietors who consulted together and decided to bring prices down to such a rate that the selling price would leave no margin for them, and they are determined to keep prices down until this Company is prepared to admit the demand for coal is not equal to one fourth of the supply, and that instead of competition they should each take a fair share of the trade.

The spirit of this announcement reveals the vast gap which existed between the

Scottish Australian Mining Company and its competitors; yet its secretary was quite unaware of the tensions created by his company. After watching Lambton's output grow year by year, to some extent at the expense of its rivals, while preserving its own cherished freedom of action, Grainger received the news of the end of the Vend with the hope that 'the leading collieries will not fall into the opposite error of competing recklessly with one another for trade, but [that] a spirit of moderation and conciliation may spring up between them'.⁸¹

The collapse of the Vend, six months earlier than anticipated, was brought about by the low demand for coal in certain sections of the market. Collieries relying mainly on the foreign or colonial trades were severely affected by the lack of shipping early in 1880. There was unusally strong demand for ships for South Australian grain exports, with high freight rates prevailing for the voyage to Europe, and coal exporters could not compete. At New Lambton, where the colliery did not work in January though the manager had promised two ships, miners were reported to be starving and at Minmi the pits worked only twelve days between Christmas 1879 and 25 March, 1880. Many 'new hands' there had not had time to establish themselves, and their families did not even have bread to eat, claimed the local newspaper correspondent. In these circumstances the Vend was suspended, the price of coal reduced and unrestricted competition commenced.⁸² Simultaneously, the proprietors attacked their principal cost of production, the hewing rate.

Under the terms of the agreement between the proprietors and the union the reduction of the declared selling price from 14s. to 10s. per ton should have been followed by a reduction in the hewing rate to five shillings. However, the employers surprised the miners by announcing a reduction to 3s.6d. and refused to accept arbitration as provided by their agreement. Their motives are difficult to determine but there had been a growing irritability about the union's failure to restore the Vend. Faced with profitless, cut-throat competition for an indefinite period without knowing how far prices might drop before the Scottish Australian Mining Company submitted, they made preparations for the struggle. In February, the union was given one month's notice of the termination of the general agreement governing wages and providing for arbitration. The intention was to remove a potential limit on their competitiveness but there was no reluctance about sharing their discomfort with the miners. This decision and the consequent long strike which culminated in a return to work at 3s.9d. per ton, ensured that the degree of harmony which had existed between the proprietors and the miners from 1873 to 1880, would not be restored.⁸³

The miners objected to the employers' rejection of the 1872 agreement and questioned their management of the industry. 'We were reduced from about £140 a year to £80 a year through them putting on men that they could not employ; and after they had starved us out as they thought, they came down upon us with a reduction of thirty per cent'.⁸⁴

To the coal-owners' justification in terms of increased costs of production, the miners made a telling reply:85

With their enormous profits they set to work and opened out their works, put men on, fixed some of the finest plant under the sun for raising coal, bought rolling stock until nearly every colliery in the trade can send into Newcastle over 1000 tons per day - and some of them can nearly double this quantity - in fact some of the collieries did not seem satisfied until they were in a position to supply all the trade of the port.

The miners' future secretary, James Curley, was more explicit: they did not dispute the capitalist's right to control his costs and to receive a gain on his capital but they did expect that profits should be reasonable and not made at the expense of the working

man: the capitalist should not 'screw the miner down to the veriest starvation point to

get exorbitant profit'.86

For the miners, 1880 brought little comfort: productivity was reduced, there was a decrease of 25% in rates of pay and a substantial drop in the workforce. For those who were displaced, some of them active unionists, readjustments must have been very painful.⁸⁷

The vend system contained the seeds of its own destruction. High prices assisted competitors; high profits facilitated the expansion of existing mines and by increasing capacity led to discontinuous mine operations which raised costs. Moreover high wage rates attracted excess labour, making high rates essential to underemployed mineworkers, and thereby tended to keep up costs.

The high price of coal under the Vend and the great profits earned had produced the competition which the Waratah Coal Company had forecast in 1873 but not from new collieries in the district: some had come from the other colonial coalfields, from New Zealand and from England but most of it came from existing producers in Newcastle. Of the 1,012,00 tons of coal New South Wales produced in 1872, the five companies which were to participate in the Vend contributed 70%; of its 1879 output of 1,583,000 tons they managed to sell only 44%.

The break up of the Vend was mainly due to the Scottish Australian Mining Company's successful capture of trade by selling for less than the declared price. Concern about the effects of this led to the modified scheme of 1879 which exacerbated the situation by denying customers the coal of their choice. The union's attempt to enforce the system also strengthened tensions among the association of proprietors, and helped to precipitate its break up because of objections to the union's encroachment on managerial functions.

Of particular significance was the expansion of mines, plant and workforce to create excess capacity. It is difficult to believe that the highly capitalized Newcastle collieries stood idle for half of the available working days in 1879 and one can only speculate on the extra costs involved. For the workers too, the burden was heavy: as one contemporary put it, five families had to be supported by three breadwinners and there was to be no immediate improvement.⁸⁹

In a letter to the **Newcastle morning herald** opposing a reduction in the price of coal, one of the weavers' had commented:⁹⁰ 'Yes Sir, capital and labour are two mighty giants, who, when travelling hand in hand, the sunshine of prosperity will shine on both, but, the moment they clash, then, like the proverbial Kilkenny cats, will eventually eat each other up.'

However, his remarks might equally have been applied to the struggles between the colliery proprietors, for their powers to promote poverty or prosperity were even greater.



Shipping coal at Newcastle, Illustrated Sydney news, 23 March, 1878.



J. and A. Brown's Minmi Colliery in 1886, showing the screens in the foreground and the small coal bin.

Newcastle Region Public Library.

Chapter 5

PROSPERITY AND DEPRESSION, 1881-1900

In the decade 1881-1891 the Newcastle coal industry enjoyed a rate of expansion which it had come to expect as production almost doubled. With this growth came a gradual decline in the value of coal but the profits of the major producers were sufficient to attract new capital into the industry. Wage rates did not return to the level of the 1870s but the plentiful supply of labour suggests that the work of the collier was still comparatively well paid. In the next decade this pattern altered drastically: output grew at half the previous rate, its value was sharply depreciated and profits were reduced to a fraction of their previous level. Though there were signs of improvement towards the end of the decade, the industry was at its most grim in this period.

Restoring the Vend

In 1881 New South Wales coal output expanded to 1.700,000 tons and under conditions of competition the Newcastle collieries contributed most of the increase. The A.A. and Newcastle Wallsend Companies triumphed by producing, for the first time in the history of the industry, more than 300,000 tons each and the other producers recorded substantial increases at the expense of the two collieries which had been outside the Vend. The output of the Scottish Australian Mining Company fell by 105,000 tons and the New Lambton mine raised 52,000 tons less. In this situation Morehead was ready to join a vend but the Newcastle Wallsend Coal Company, enjoying its best year and practically monopolising the San Francisco trade, to the chagrin of its rivals, was not ready to co-operate. The Browns tried to arrange an increase in the declared price of coal to 10s. per ton but the Superintendent of the A.A. Company refused: he desired the low prices to continue until all the producers realised the need for combination and was content in the meantime to build up his trade at a small profit. Of course the greater a colliery's sales during the interlude between the vends the stronger was its claim for a large quota in any new scheme.²

The changed attitude of the Scottish Australian Mining Company was brought about by falling sales, disappearing profits and signs of a deterioration in its coal. Its directors, who had previously done no more than query the free trade philosophy of Morehead, began to press rather more heavily, but still respectfully, for participation in a new vend. Having lost their two main Melbourne contracts to the A.A. Company, and with their rivals selling at seven shillings per ton, less than the cost of production at Lambton in the previous year, the company's shares dropped 16s. in value and its secretary informed Morehead that the shareholders could take 'disagreeable action', even 'action harmful to the company's reputation' if every effort was not made to enter an agreement which would restore profits. By May 1881, Morehead had relented but the initiative had passed to other producers and the Scottish Australian Mining Company directors had to endure many more anxious months before the final word reached them by telegram, fortuitously on the day they were to face their angry shareholders, that all the major producers had agreed to sell at 10s. per ton and to share the trade in 1882.

C. F. Stokes, Lloyd's agent in Newcastle, conducted the negotiations for the new vend which was constituted on 22 November, 1881. Its principles were similar to those of, 1872, namely, the sharing of anticipated trade according to agreed percentages, penalties for overselling, compensation for underselling, and price regulation. An innovation provided for quarterly adjustments of allocations in accordance with the demand for coal. The new agreement included all the major producers but the final quotas were not accepted until J. and A. Brown and the Co-operative Company agreed to reduce their allocations to allow the A.A. Company the 230,000 tons it was demanding ⁵

TABLE 13

OUTPUT OF NEWCASTLE COLLIERIES, 1881-1900

	Quantity (tons '000)	Value (£'000)	Value per Ton (pence)
1881	1,313	422	77
1882	1,518	691	109
1883	1,824	890	118
1884	1,970	967	118
1885	2,020	988	118
1886	2,047	1,022	120
1887	2,104	1.031	118
1888	1,911	950	119
1889	2,422	1,167	115
1890	1.944	926	114
1891	2,596	1,178	109
1892	2,384	1,009	102
1893	1,998	803	96
1894	2,394	816	82
1895	2,408	739	73
1896	2,623	803	73
1897	2,931	866	71
1898	3,356	889	64
1899	3,038	952	80
1900	3,492	1,124	77

However, there was a very significant change of attitude towards the declared selling price. Negotiations for the new vend revealed that most proprietors favoured quotas but not price controls. However, the opposition of the Newcastle Wallsend Coal Company made this impracticable and the association finally decided on a declared minimum price with members free to sell at higher prices. This suited the A.A. Company which wished to avoid refusing coal to customers after its quota had been exceeded. The new arrangement would allow it to fill the order at a higher price; but it had a much wider significance⁶

From November 1881 the price was raised to 10s. per tons and a year later there was another one shilling advance, but that was the limit, there was no move to restore the level of the previous decade. More moderate prices, the proprietors believed, reduced the likelihood of new mines and lower profit margins left less room for existing collieries to undercut the Vend price. The deliberate adoption of such a policy had important implications for the workforce who were not a party to these negotiations. The union expected that a renewal of the vend would restore high wage rates and the use of arbitration to resolve disputes: the disappointment of those hopes would be regarded as 'a delusion and a snare'.

During the first four years the Vend appears to have functioned very smoothly with no complaints about underselling and no serious disputes between the proprietors. To a considerable extent these results flowed from the startling effect of the new scheme on profitability.

The Newcastle Wallsend Coal Company paid £1.2s.6d. dividend per £10 share in 1881, £2.10s. in the following year, £3.5s. in 1883, four pounds in 1884 and thereafter until 1887, five pounds per share. The A.A. Company's coal, which yielded a profit of less than sixpence per ton in 1880, provided a return of 3s.1d. per ton three years later and in 1885 yielded a total profit of £50,000. A slow decline then set in but its profit per ton did not fall below 2s.5d. until 1889. J. and A. Brown, a much smaller firm, earned at least £25,000 per annum after the Vend was restored and early in 1885 John Brown predicted that the firm's overdraft of £43,067 would be repaid by the end of the year.⁸ Profits on this scale were bound to attract the attention of investors.

The search for new coal

With prosperity restored developers began to search for new coal lands but the choice was limited to relatively unknown coals in distant locations or the Borehole Seam reserves lying under the Hunter River and the adjacent seashore. Some chose the interior and therefore affected the Newcastle collieries only as competitors but three new companies preferred the hazards of sand and water while shaft-sinking and the danger of inundation during operation. Both the Stockton and Wickham Companies were established by New South Wales interests in 1883. The Sydney coal investor, Thomas Cowlishaw, was influential in the formation of the Stockton Coal Company, with a capital of £60,000, to mine 1,120 acres of land containing an estimated nine million tons of excellent coal within 400 yards of the northern shore of the port. With a slightly larger capital, James Fletcher set out to exploit the estuary north of the harbour in the interest of the Wickham and Bullock Island Company which was also well placed if the drainage problems that beset all such operations could be overcome. Two years later the Hetton Coal Company Ltd. was formed to exploit the remaining portion of estuarine coal land on the western side of the harbour. Two established companies, the A.A. and Ferndale, also worked delta coal in this period.9

In addition to the delta mines there were still some coal lands to the south and west of the port and they were gradually brought into production. The Burwood Coal Mining Company was formed by a Sydney syndicate in 1883 with a capital of £100,000 to exploit 1,200 acres of land leased from E. C. Merewether, but there were no further major projects until the Great Northern mine at Teralba opened in 1886: the West Wallsend and Young Wallsend collieries opened a year later.¹⁰

In 1886 the Stockton, Wickham and Burwood mines raised 213,000 tons and their continued development at a time when total Newcastle output was increasing only moderately caused the Vend collieries some anxiety. This was intensified when 1888 began with a slack period followed by a general strike. In that year annual production fell by 177,000 tons although the Hetton Company also commenced operations and the Vend began to labour under the strain.¹¹

Once again there were attempts to prohibit export shipments on colliery account and by April 1888 growing competition forced the proprietors to consider the introduction of a scale of prices to allow for the various grades of coal and a plan to amalgamate the major collieries. The Wickham and Bullock Island Company had already retired from the Vend and the announcement that the Stockton Company would also withdraw shocked the association into action.¹²

With a waterfront location and an excellent gas coal the Stockton Company posed a real threat to the Vend. Over 150,000 tons had come from its pits in the previous year and if the company were freed from price restraints that figure could easily be doubled. Faced with such a serious challenge the proprietors impressively demonstrated their support for the Vend. By unanimously declaring that Stockton's withdrawal would be followed immediately by a reduction to eight shillings per ton without a decrease in

Soldiers at New Lambton during the 1888 coal miners' general strike. A Snowball collection

wage rates, they forced it to drop its plan to resign. However, when a general strike occurred the Stockton directors withdrew without notice in order to obtain the Melbourne Metropolitan Gas Company contract. There were 100,000 tons of shipping in the harbour and to make the most of its advantage Stockton reopened its mine on a two shift basis, a defection which was considered to have had 'a more permanent effect, as well as being of a more treacherous character than anything which had occurred previously'.¹³

The association survived the trials of 1888 and maintained the declared selling price at 11s., but it continued to weaken, producing only 70% of the Northern District output in 1888 and 52% in 1891. The best measure of its efficiency was its ability to maintain prices but the average value of a ton of coal continued to fall, apart from a slight improvement during 1891, a year of record trade, until it reached eight shillings in 1893, the last year of the Vend.¹⁴

Deteriorating industrial relations

Long before 1888 the proprietors' association was challenged also by the district union, and it became evident that industrial relations would not be restored to the relative harmony of the previous decade. One reason for this was the determination of some proprietors not to recognise the district union but at least as important was the general reluctance of the coal owners to make concessions which would increase their costs. With the declared selling price lowered by three shillings it would be more difficult to earn profits on the scale that shareholders had come to expect of the Vend. On the other hand the miners doubted the necessity for reducing the hewing rate from five shillings to 3s.10d. and argued that their employers, having been shown the path to prosperity, had plunged Newcastle into depression in 1880 by their rivalry. Thus masters and men were at loggerheads as they entered a decade which was to be marked by a high degree of employer and labour organisation.¹⁵

When the associated collieries revived the Vend they did not provide for united action in dealing with their employees, and the next few years appeared to justify this policy for there were no general strikes while proprietors and miners were recovering from the lean years, 1880 and 1881. However, at one colliery a serious dispute revealed a growing antagonism among employers to the district union just as it was entering a period of growth and confidence.

In 1882, Jesse Gregson of the A.A. Company tried to implement the basic district hewing rates at its Borehole Colliery by abolishing the sixpenny allowance which had always been paid there as compensation for more difficult working conditions. He contended that an improvement in the seam had removed the justification for this and when the dispute was finally settled by arbitration, the award supported his claim, the allowance being retained on one section of the mine, halved in another and abolished elsewhere.

The company's 1882 output was sharply reduced by this strike but the Vend provided compensation and its costs of production were lowered as a result. However, Gregson failed in another sense: he and some other proprietors had begun a campaign in 1881 to persuade their respective miners' lodges to withdraw from the district union, but it was that organisation through its links with the labour movement, which sustained the A.A. Company miners for five months and the breakaway lodges rejoined. Encouraged by this success and by more prosperous conditions and influenced by trends in the labour movement, the working men of Newcastle demonstrated an even greater enthusiasm for trade unionism than in 1860-1861.

The Hunter District Miners' Protective Association was particularly active in this period. In 1884 it had 2,290 members and a bank balance of £3,000. A year later membership had increased to 3,000, a faster rate of increase than the workforce had

103

experienced, and its funds totalled £3,650. Moreover, in the interval it had forced two proprietors, at Waratah and Minmi, to reinstate men who had been dismissed and confidence in the union was growing. It began to co-operate with the Sydney Trades and Labour Council, negotiated to enter the Amalgamated Miners' Association, considered nominating a candidate for election to parliament, contributed to the support of striking Sydney ironworkers and Victorian bootmakers, advocated a school of mines for the town and began to campaign for the abolition of the standard weight practice in the pits. These developments were noted by the colliery proprietors but they were not ready to take joint defensive action although the shipping companies had already asked for support in disputes with seamen.¹⁷

Union activity continued to strengthen during 1885 with a two months' strike at Burwood Colliery in support of higher pay and the Greta and Co-operative Company miners made similar demands. There was a lockout at South Waratah Colliery when miners contested the competency of the driver of the winding machine and then the Wallsend Lodge initiated a move to limit the hours during which coal could be withdrawn from the mines to eight per day. The district union gave its support and the proprietors agreed to reduce to eight and a half hours from January 1886, and to eight hours in the following July. Following this success the union decided to support the Lambton miners' demands for a higher rate to compensate them for removing stone from the coal. Fourteen days' notice was given, a ballot of union members voted strike pay for the Lambton men and in October the strike began. This development prompted an employers' combination against what they termed the 'unjust and exorbitant' demands of the miners and ensured that this dispute would drag on for eight months. ¹⁸

If these demands, for example, for eight hours, were considered to be unjust, why were they met with concessions? The answer must lie in the prosperity of the industry: the proprietors wanted their profits to continue and it was still possible to meet demand despite the shorter hours of hauling. There is the further possibility that they wished to avoid a general strike which put abnormal strains on the owners' association. However, to contest any additional union demands the Newcastle Coal Owners' Mutual Protective Association, a sister to the Vend, was established. It provided for members to contribute to a fund which could be used, under certain conditions, to compensate collieries for profits lost because of lockouts or strikes.¹⁹

The first test of the defence association, as the coal owners called it, showed how effective it could be. The Scottish Australian Mining Company rejected the demands of the Lambton miners who eventually had to return to work with no more than a promise of arbitration while their employer received £15,068 compensation and paid a dividend after a stoppage of six months. A special levy on the members was needed to provide compensation over such a long period and the payment of such a large sum to the company which had destroyed the first vend is indicative of the proprietors' determination to make no further concessions to the union.²⁰

To the union a freeze of wages and conditions was unacceptable because it prevented the removal of inequalities or anomalies at particular collieries and produced a slow decline in the incomes of the whole body of miners. Just as the owners' associations had striven for a standard selling price despite variations in the district's coals, the union sought equal conditions for all its members despite marked differences in profitability at some mines, hence the unacceptability of the tactics of the associated proprietors. As R. A. Gollan has already noted, the general issue for the union was the lack of a means of settling disputes.²¹ Also important was the reappearance of the industry's characteristic tendency to attract more labour than it could fully employ.

During the 1880s the immigration of miners from the United Kingdom and recruitment in the colony ensured that there was plenty of labour. As before, far more of

these men were granted a place in the mines than were needed so that the workforce more than doubled between 1881 and 1888 while output grew by only 66% with depressing effects upon the average income of piece workers. Northern district output per person employed below ground fell steadily from 554 tons in 1882 to 430 tons in 1887. Of course these averages conceal the fact that the greatest decline occurred at collieries which did not maintain a balance between the number of miners and the work available.²²

Coal mining attracted workers because it provided the opportunity of earning high wages and this tended to offset the arduous, unpleasant nature of the work. Publicists and individual miners were often tempted to quote the highest earnings without adequately explaining the effects of intermittency, the influence of 'good' or 'bad' working conditions and the difficulty of sustaining high productivity because of physical strain. British miners must have wondered at the high hewing rate prevailing in Newcastle mines and the stories that circulated about the colliers taking days off from their work but colonial labour was also attracted and Thomas Croudace commented that 'hundreds of men who never saw a coal seam before went coal cutting' in the 1880s.²³

Arbitration had been accepted in the district as the means of settling disputes in the previous decade but now it was resisted by the proprietors who merely wanted to reject further demands. Influential in the evolution of this policy was Gregson who recognised that arbitration produced compromises and that the union officers anticipated success by asking for more than they expected to obtain. Objecting to this the proprietors developed a system which would stabilise the cost of labour.²⁴

With an insurance scheme against strike action to secure improved conditions, the employers' association moved to prevent improvements by more devious means. In January 1886 all members were instructed that²⁵

"no change, addition or alteration in the price of getting coal or concessions in existing rates or alternatives in customs of any colliery of any kind were to be made by any of the Associated Managers thereon, without reference to the Board of the Association and obtaining its approval.

When this policy provoked stoppages at Lambton and Burwood the owners of those mines were compensated for loss of profits so that they could continue to resist the union. Managers were accused of 'victimisation' and of dismissals on 'frivolous' charges and the union took particular exception to the growing practice of 'tributing', whereby individual miners contracted to work a section of the mine at a special price, often lower than the standard rate because of more favourable working conditions. This lowered the owners' costs but antagonised the miners because this led to 'the masters working the good or fair positions of a mine and the miners' lot being the unprofitable work', 26

Attempts by the union to bring their grievances to the proprietors were usually 'fobbed off' and whenever a conference was conceded, as in May 1887, on the question of an agreement to standardise conditions and provide for arbitration, the intransigence of the owners made agreement impossible.

On that occasion when the miners proposed amendments to the employers' draft agreement, Gregson replied:²⁷ 'They were unable to concede any of the propositions made. He need not refer to them in detail, but the mode of settlement of disputes was the critical point of the whole thing, and on that the associated proprietors were unanimous.'

This system was feasible for the proprietors because they were trading profitably, they could easily close down one or two collieries and still meet the demand for coal and it was no hardship to pay compensation to those who were resisting increases in

labour costs which would affect them all. However, as the success of this policy left the union no alternative but to threaten a general strike, the proprietors fortified themselves against such an eventuality. They knew that a general strike would seriously threaten the unanimity on which the whole structure of the vend and defence associations rested.

As some could remember J. and A. Brown's defection in the struggle against the first district union and many had suffered because of the Scottish Australian Mining Company's refusal to join the first vend, the proprietors tried to ensure that there would be no betrayal in the coming struggle with the miners' association by agreeing to²⁸

a further bond of Association which provides for building up by quarterly contributions a guarantee fund to act as an effectual bond of fidelity to any course with regard to questions arising with the miners which a four fifths majority may think it right to adopt.

A draft of this bond, the Newcastle Collieries Unanimity Guarantee, 'provided for united action on the part of all proprietors to prevent disastrous results which might accrue from want of unanimity thus enabling miners to enforce claims or carry out schemes injurious to the trade and prosperity of the district.' ²⁹

Money would be deposited by each of the proprietors so that, in the event of a member's failing to carry out the decision of the members voting in proportion to their vend contributions and subject to rules requiring a four fifths majority on questions involving a general strike, he would forfeit his contributions.

The miners' leaders realised a struggle was pending. Believing that they had to fight or abandon the union and submit to the proprietors they elected to strike. In letters to the newspapers and at union meetings they argued that it was unfair for employers to make high profits while depressing wages and lowering working conditions. They complained of the victimisation of active unionists and their 'blacklisting' by 'sixpenny bosses', the mine deputies. Then in August 1888 they demanded that the employers enter a general agreement on pain of a general strike. The proprietors claimed they were being coerced, postponed their decision until 'better counsels prevail' and warned the men that 'responsibility must rest entirely with them'. 30

The inevitability of such a tactic on the part of the miners should have been obvious. The proprietors, since 1885, had frustrated every attempt to settle long standing grievances. The secret payments made to companies involved in disputes had enabled them to outlast employees who took strike action. They had rejected, without discussion, the system of arbitration favoured by the miners though both sides had found it acceptable in the past. Furthermore, they had arranged a system of cooperative resistance to moves to improve conditions or wages at the various collieries. In fact the proprietors had closed every door except that of the general strike and at last realising the futility of their position, the miners struck.

The 1888 general strike

This stoppage which was announced by the Newcastle morning herald as the struggle between 'Capital and Labour', lasted three months. It was marked by rancour, attacks on non-union labourers, unruly demonstrations, arrests and prison sentences. The whole district was affected as the associated collieries closed down, leaving railway men and wharf labourers with little to do, and the major tug companies laid up their boats as usual in general strikes. Eventually, after the Stockton Coal Company had defected, a compromise was arranged, but the dissatisfactions which had committed the miners to the strike were not ended by the terms of settlement. The system of arbitration, which was introduced, was based on the appointment, by the Chief Judge in Equity, of a referee from outside the industry: a system which the miners regarded with suspicion. The conditions governing the payment of considerations were regularised

106

with advantage to some miners and losses to others and the no-strike clause of the terms of settlement reduced the likelihood of obtaining satisfaction by further strike action. Disgruntled still, the miners, who had voted for the strike 3,005 to 893, ended it by a ballot which showed that 1,632 of the 3,491 formal voters disapproved of the settlement.³¹

The cost of this strike to some sections of the community was probably much greater than the losses suffered by the mining community. To Sydney gas consumers, for example, the stoppage brought inconvenience, and the Australian Gas Light Company estimated its losses at £10,313. If the attention paid by the newspapers of Melbourne and Sydney are an indication of public concern, there can be no doubt of the impact of the strike. During a period of six weeks the Newcastle Telegraph Office transmitted 564,625 words for Sydney and Melbourne news reporters, the greatest volume of business transacted there between 1861 and 1897. Yet the cost of the stoppage to the mine owners and their employees is more difficult to assess. For them a strike usually meant a postponment of profits and wages. The proprietors' coal remained in reserve and the cost of maintaining the mine during a stoppage was not great. Miners without pay would have to go into debt if they could, but resumption would usually bring big wage packets as the backlog of orders were filled and consumers rebuilt stockpiles. Thus in 1888 northern output was reduced by only 117,000 tons even though nearly all the mines were closed for three months and in the following year production soared by more than half a million tons.32

As Gollan has perceived, the union leaders revealed new attitudes in the debate surrounding this strike. 'They were beginning to articulate a criticism of the economic relations of a capitalist society' and there was 'a growing awareness of the inequalities of a system which brought wealth and power to the owners and a bare subsistence to the workers'. '33 It would also appear that there had been a prior change of attitude on the part of the coalowners.

Contemporaries recognised that the change was not limited to the unionists;34

There seems to be a very wrong idea in the minds of not only the miners but of many others besides, as to the relation of Capital and Labour ... Capital is spoken of as if it was necessarily antagonistic to Labour ... Capital is not such a frightful evil as it has been depicted by Communists and other agitators.

Capital had of course behaved in an antagonistic manner towards labour for at least three years before the 1888 strike. The proprietors had endeavoured to preserve the wage rates and working conditions of 1885 despite the serious dissatisfaction of some of their employees. By so doing they had denied the tradition that miners and masters prospered together: high prices had implied high wages since the 1850s but now it seemed to the miners that that relationship had been upset and that they were not sharing as they had in the previous decade in the prosperity of the industry. The fact that the proprietors were exhausting their reserves at a record rate in order to make large profits was not one to appeal greatly to the miners nor did they take into consideration the point that the declining income of some miners resulted partly from the opening of new pits, a development which also threatened the coal owners.³⁵

An investment boom

Towards the end of the decade there was a remarkable surge in investment in coal mining in the northern area, probably as a result of the profits made under the reestablished Vend but also reflecting the current Australian stock market mining boom. Kingswell listed fifteen mines under development in 1889 and soon afterwards the **Newcastle morning herald** commented:³⁶

there is at present a greater amount of capital being expended in opening out new mines than there has ever been before in the history of the district. Within 20 miles of the port there are 18 companies opening out new collieries, the expenditure in many instances exceeding £50,000 before even a ton of coal is obtained. In every case the necessary capital has been obtained outside the district, the majority of the companies having been floated in Melbourne and London.

Prominent among those formed in London were the Wallarah, North Stockton and Northumberland Companies with capitals of £100,000, £125,000 and £200,000 respectively. They planned to exploit large, promising holdings at Catherine Hill Bay, Hexham and Fassifern on the fringe of the Newcastle district but only the Wallarah company was successful. However, others survived to add to the capacity of the industry and the mining boom of the late 1880s bears much responsibility for the chaotic conditions of the next decade.³⁷

This rapid expansion of the coalfield occurred inopportunely: the great strikes of 1888 and 1890, the subsequent depression and the collapse of the Vend introduced the most difficult financial conditions of the century. It is not surprising that many of these ventures failed and that even the established producers were seriously threatened. The older companies had also expanded their capacity and some had acquired new reserves. Daily outputs increased; the Newcastle Wallsend Coal Company, for example, raised a record 2,600 tons in eight hours in 1888 and exceeded 400,000 tons each year after 1881. By the end of the decade the A.A. Company was also approaching a total of 400,000 tons per annum and several other companies regularly produced more than half this amount. New pits had been sunk, mechanical ventilation had markedly improved working conditions and there were moves, as yet unsuccessful, to introduce mechanical coal cutters. This redevelopment, with the entry of so many new companies, intensified the problem of excess capacity which would eventually destroy the Vend.³⁸

Limits on the demand for coal

The amount that Newcastle could sell depended not only upon factors such as quality, cost and availability but also upon transportation systems. At home the rail link with Sydney in 1889 made shipping less important but in the Australasian and foreign trades the supply of tonnage at commercially acceptable rates was the key factor.³⁹ The other important limitation arose from the activities of competitors both at home and abroad.

In the steam coal sector, essentially railways and steamships, the southern field provided keen competition particularly after the completion of the railway from Sydney. Its growth was only moderate until 1888 when the Newcastle general strike boosted output to 796,000 tons, and with their port bottleneck removed these collieries raised over one million tons in 1896. The proximity of collieries on the southern railway and the loading facilities constructed at Darling Island, which was bought by the Government for the purpose, proved to be of great advantage, a fact which did not escape Newcastle interests who bitterly attacked the whole concept. In comparison the mines of the western district remained insignificant, yielding only 316,000 tons in 1900, less than a single large Newcastle colliery.⁴⁰

For the gas coal market a new and formidable contender appeared with the development of the Greta Seam in the South Maitland area where coal had long been known to exist. Here in the early 1880s Professor Edgeworth David carried out surveys which indicated vast reserves lying in thick seams and his reports led to the development of a new field which would soon be the principal supplier to the Australian gas industry. The established Newcastle producers showed little interest in the large area reserved by the Crown for mining purposes but by 1890 over 20,000 acres had been taken up by new coal companies which had to struggle to establish their coal in an already over-supplied market. The East Greta Coal Company managed to

overcome a steeply inclined seam and discoloured coal to emerge as the first large scale producer on the field but many others failed in the difficult business conditions of the 1890s and the vast potential of the Greta Seam was not realised until the early 20th century.

Within the important intercolonial trade there were several other competitors usually with an advantage in proximity. Tasmania, Queensland and New Zealand were still producing coal: Western Australia and Victoria opened mines in the last decade of the century while South Australia carried on its search. Nevertheless all of these continued to buy large amounts of the produce of Newcastle mines. For gas making the Hunter River coals were so predominant that in 1888 the Melbourne Metropolitan Gas Company committed itself to take 200,000 tons of Stockton coal per annum for six years at 11s. per ton. South Australia required coal for smelting as well as for the usual purposes, hence its relatively large importation.⁴²

TABLE 1443

THE INTERSTATE MARKET FOR NEWCASTLE COAL (INCLUDING BUNKER COAL) (Round thousand tons)

	Victoria	South Australia	Tasmania	Western Australia	Queensland
1894	607	168	55	31	16

Overall, British exporters continued to be the most serious source of competition but two other rivals were very significant in the last two decades of the century, the Japanese and Canadians. The coal of the former was increasingly available in Asian and North American ports where it provided serious competition for Australian exporters. With British technical assistance and capital, production had grown from 925,000 tons in 1873 to exceed five million tons in 1897. As it could be produced and shipped to Chinese ports for about nine shillings per ton it had a strong influence on that market. It also made great headway in Singapore, increasing from 45,000 tons in 1892 to 194,000 tons within two years while Australian shipments there were reduced from 83,000 to 30,000 tons and there were also reports of large sales in San Francisco.⁴⁴

The growing importance of cheaper British Columbia coal had contributed to the decline of New South Wales' share of the San Francisco market from 57% in the late 1860s to 23% in 30 years. Though exports from Vancouver had increased in the same period from 17% to 63%, the use of oil in stationary engines and railway locomotives also reduced the importance of New South Wales coal in this region. The falling coal supply to San Francisco in the last years of the century appears to have been due to the increasing use of oil.⁴⁵

Fortunately for those involved in the industry, the decline of the North American market was coincidental with the expansion of the South American trade, principally the trade with Chile. Shipments of Newcastle coal to South America increased with regularity from 1881 until 1885, then dropped before beginning a period of even growth from 1888 to 1892. There was a decrease in 1893 but another long period of steady growth until 1898 then ensued. The year 1900 brought an increase of 119,000 tons: thereafter the trade continued its upward trend but with more fluctuation.⁴⁶

Competition from these sources would always place restraints on the amounts Newcastle could sell and the prices that could be obtained for its coals. Even so it is clear that rivalry from within the district could drive down the income received for its basic product and this was most likely to occur when there was a big margin between

TABLE 1547

DISTRIBUTION OF NEW SOUTH WALES COAL EXPORTS 1891-1900 (Round thousand tons) (Quinquennial Averages)

Period	Pacific Isles	Asia	North America	Central and South America	New Zealand	Others
1891-1895	137	182	289	266	894	21
1896-1900	235	267	235	449	1,203	17

The Vend weakens

During 1889 almost one third of Newcastle's coal came from outside the Association and by the middle of the following year new collieries had raised the number of non-members to thirty. At that stage the ten members threatened to reduce the price from eleven to nine shillings per ton to try to force outsiders into the Association; but they had no success and by the end of 1890 J. and A. Brown and the New Lambton Company had resigned. However, the declared price was maintained despite the interruption caused by the Maritime Strike and the boom of 1891 prolonged the life of the Association. In that year J. and A. Brown began to exploit the advantage which the Scottish Australian Mining Company had long enjoyed in the 1870s, the chance to win extra trade by judicious price reductions.⁴⁸

From the Brown's Minmi Collieries in 1891 came 288,000 tons but the effect of this was reduced by the great growth in northern output generally, up 733,000 tons. The Brown's further expansion in the following two years to 307,000 and 346,000 tons, when Newcastle's total output fell sharply, posed a much more serious threat to the Association and the declared price was reduced to 10s. in 1892 and nine shillings in July 1893.⁴⁹

The proprietors were evenly divided over the reduction issue. The Newcastle Wallsend Coal Company, the Brown's main rival in the North American market and an important supplier to South America, voted for the reduction. The Scottish Australian Mining Company with a large percentage of its trade being arranged in London, and two other companies also favoured the lower price, but the A.A. Company, predominant in the nineteenth century in the colonial trade, the Newcastle Coal Mining Company and two other producers were opposed. In Australasia New South Wales coal enjoyed a strong position though severe competition at times tended to reduce prices below the levels which could have been obtained in markets protected by isolation. On the other hand, price levels and prevailing freight rates were of supreme importance in coal markets such as Valparaiso, Hong Kong and San Francisco where English, Japanese and North American coals could offer strong competition. Nevertheless, within the financial limits set by conditions in these markets New South Wales producers frequently out-reduced one another in a struggle for trade. 50

Plans to widen the membership of the Association were delayed by disagreement between the two principals over the form of the new agreement and their opinions illustrate the perennial problems besetting the Vend. Gregson wanted to share out the trade with the proprietors setting their own prices so that those with inferior coal might survive-but Binney of the Newcastle Wallsend Coal Company, the secretary of the various Newcastle coal associations for more than thirty years, argued that 'the idea of

letting them sell at any price they like, subject to a limit in quantity, would not be workable'.51

He went on to discuss the idea of a uniform price in these terms:52

all large buyers say it is not so much the actual price of coal they care about so much as that no one else shall buy at a less price than that buyer is paying, this would be within your own [Gregson's] knowledge so far as the inter-colonial trade goes and I know the same operates in the foreign trade.

After further negotiations and pressure from the union, seven more companies, usually referred to as the non-associated, agreed to maintain the declared price of 10s. and the corresponding hewing rate of 3s.10d, per ton in 1892. Within four months this arrangement was terminated because of breaches by the non-associated collieries but all the large producers except the Browns and the Stockton Coal Company signed a modified agreement in July. This organisation succeeded in maintaining the declared price until July 1893 when it was reduced by one shilling per ton, but personal antipathies between the proprietors and the overcapacity of the industry in a deepening depression made this difficult. Indicative of the long memories of some of the coalowners was their refusal to allow Thomas Croudace, who had been appointed general manager of the Scottish Australian Mining Company, to sit on the association's board: their quarrel dated from 1867. His company resigned at the next opportunity to the detriment of the organisation. Similarly, T. Cowlishaw was blackballed when he sought to join, presumably because of his responsibility for Stockton's defection in 1888. Towards the end of 1893, amid a flurry of resignations, the Vend dissolved, removing the last barrier to a flood of competition and inspiring widespread debate about the feasibility of its restoration.53

The leading proprietors were inclined to doubt whether another vend would be justified or practicable in an industry which had expanded and diversified so much since 1882. Reviewing the record of member collieries, Gregson commented:54

the first thing that strikes one .. is the large amount of money which has passed between the several members as compensation for deficient trade and which is indicative of the value attached to the influence of the Association in maintaining the price of coals.

He marvelled at the payment of £20,000 to two collieries of small capacity, Ferndale and New Lambton, "whose power to assist the association or whose hostility were alike of little account. Having been pensioners continuously from the first they can be credited with exemplary loyalty as members - which is something."

An acid comment upon disunity among the proprietors came from the editor of the **Newcastle morning herald** who advocated free trade so that the industry could be managed normally and not by 'a pampered and artificial body, with half their number in council as retained attorneys in the front parlour, and the other half in the back parlour playing in and out of all the other regulations'.56

Henceforth the leading producers consistently denied that a vend was possible and they were supported by many others not directly involved in the industry including the premier, George Reid, who argued that 'if the value of coal was going down they could not fight against it... No amount of manipulation here, nor any combination would affect it'.57

A similar point of view came from W.Abbott of Wingen who attacked the 'press writers' of Sydney for unanimity 'almost imbecile in its helpless fatuity'. They were urging that a conference between the employers and the miners be arranged to raise the price of coal.⁵⁸

The lowest price at which the buyer can get the coal he requires in any part of the world must determine the selling price of coal at Newcastle, and the proprietor of a coal mine there must either take that price or shut down. The course advocated by the leading dailies of Sydney is impossible unless a ring could be formed to include all the mines of Australasia and the East, and then that ring could only raise the price by so much as it would cost to bring coal from Europe or Eastern America, and that only temporarily until new mines could be opened; and the result, if success were attained, would only be to victimise every other industry for the temporary advantage of coal-owner and coal-miners. The vend cannot be revived.

Nevertheless there were some proprietors who considered that a vend or something similar would assist in raising and maintaining the price of coal, particularly in the Australian Colonies, and the unionists were also reluctant to reject such a solution to their problems. At a conference to discuss the state of the industry in 1895 Adam Cook, the miners' president, and James Curley advocated a central agency which would control all sales and shipments of coal and thus ensure a 'fair vend allowance to every pit' and render underselling impossible.⁵⁹

It is not surprising that the collapse of the system occurred during 1893, for the colony's foreign, intercolonial and domestic consumption of coal had fallen below 1892 levels by 119,000 tons, 158,000 tons and 146,000 tons respectively. All the Australasian colonies, except New Zealand, had taken less coal from Newcastle but the only substantial reduction, of 147,000 tons was in shipments to Victoria. That was partly due to the opening of the Gippsland mines which were supplying coal to the Victorian railways and partly to the depression.⁶⁰

Reduced shipments to a wide range of foreign ports suggests a shortage of tonnage, probably related to a slackening of imports, but also connected with the expansion of Japanese coal exports and events in South America where the largest reduction, over 70,000 tons, occurred. The British consular service recorded the rapid spread of Japanese coal through Asian ports, particularly its use by steamships coaling at Singapore, which took 20,000 tons less from Newcastle in 1893. Japanese coal was also penetrating the San Francisco area and the Pacific Islands which were taking less Hunter River coal. Finally, a civil war in Chile appears to have contributed to a business slump from which recovery was so slow that shipments from Newcastle dropped by 50,000 tons in 1893, a dismal year in the foreign trade.⁵¹

The reduced home market may be attributed in part to the depression; not one brick had been made at the brickyards leased from the A.A. Company in the previous year, and in 1893 coal sales were much reduced in Sydney as consumers responded to economic or climatic factors. Perhaps they were preferring the slightly cheaper coals of the southern field which was less affected by the slump than Newcastle.⁶²

The Vend finally collapsed because of the oversupply problem: far too many suppliers were struggling for a share of the market in a year when total northern output was 650,000 tons less than it had been in 1891. Thus the **Newcastle morning herald** suggested that, with the exception of the Stockton Colliery, every mine in the district had the capacity to double its yearly output and so yield in excess of four million tons of coal per annum. James Curley made a similar prediction based on the number of miners employed in the district in 1890.⁶³

Increases in the number of producers reduced the power of the leading firms to control the industry: it had been difficult to obtain the agreement of eight firms to associate in a vend in 1881: it was even more difficult to persuade fifteen to combine in 1893 and subsequently. Animosity between some proprietors, the diversity of coals and the sheer spread of the industry over a vast area in the Hunter Valley rendered combination for any purpose difficult and made combination to regulate price and or to apportion trade, almost impossible.

Proposals for amalgamating the mines

An awareness of the inadequacy of the vend system for coping with the problems of excess capacity caused a renewed interest in schemes for amalgamating the major collieries. Looking once again to English practice the associated proprietors considered a plan for working all the collieries in the north as one large syndicate. There was no result but at the end of 1889 a committee of mining experts and merchants, chosen because they were not immediately involved in the industry, was established to arrange the amalgamation of the northern mines. This also failed but the associated proprietors finally produced a scheme which would 'have the effect of welding nearly all the collieries of the Newcastle district into one prosperous, solid undertaking'. C.F. Stokes, the secretary of the committee, estimated that £300,000 would be needed to implement the scheme and another £100,000 would be wanted for working capital. The negotiated value of each of the participating collieries was to entitle it to a proportionate share in the 'United Collieries Company' which would have a capital of £1,553,000. It is noticeable that four of the most powerful firms, the A.A., the Newcastle Wallsend, J. and A. Brown and the Scottish Australian, were not willing to participate but eighteen others had submitted to valuation. The objection of the four destroyed the scheme, leaving the industry in the hands of the individual proprietors. 64

The advantages of amalgamating the collieries were summarised in 1889 by M.C. Cowlishaw who foresaw two main benefits - lower costs of production and improved industrial relations. After an amalgamation, mines that were costly to work because of impurities in the coal seam or their distance from the port, would be closed, one management would suffice for the whole field, collieries would not be worked intermittently and more effective planning would reduce shipping costs by avoiding delay in loading. These savings would amount to at least £70,000 per annum. As it would be possible to maintain uniform wage levels throughout the field, to share out the work equally, to minimise intermittency and to avoid the disputes caused by dirty seams, he anticipated a big reduction in industrial disputes. This in turn would engender confidence among shippers and consumers and lead to increased trade, higher returns on capital and regular, well paid employment for mine workers.⁶⁵

The rock upon which such proposals always foundered was the valuation of the various coal companies and the fierce independence of some of the leading producers. Thus in the 1892 proposal an unexplored Redhead property was listed at £180,000 while an established colliery with known reserves of marketable coal was valued at half the figure. The owners of exhausted mines put high values upon them and uncertainty about the life of the delta collieries added to the complexity of the task. The inaccuracy of valuing procedures was shown up very clearly after this scheme had been abandoned when the Burwood mine for which the owners had claimed £120,000 was sold by them for less than a quarter of that sum. Whether such an amalgamation could have succeeded without the support of large producers such as the A.A. Company and J. and A. Brown is also problematical. How the miners' union would have reacted to the creation of such a large employer is also unknown: given the experience of the industry the likelihood of the smooth relations envisaged by Cowlishaw seems rather remote.⁶⁶

The effects of the depression

After the collapse of the Vend the mining industry in the Newcastle district had to endure the most difficult conditions in its history. Production continued to increase but prices reached their lowest point; profits dwindled or disappeared; many companies failed; wage rates bottomed and unemployment reached the highest levels of the century. The industry plunged into a depression so deep that neither the owners nor the miners had the power to salvage it.⁶⁷

Prices continued to drift downwards, reaching 6s.9d. for some coals in August 1895,

and there were further mine closures. Some proprietors had shut down for lengthy periods in the previous year and the trend strengthened in the higher costs pits. Other producers were able to continue by forcing wage rates down for there was little the union could do as the alternative was to close the mines. Union morale was so low that for the first time in eighteen months no strikes were in progress despite low wages and poor working conditions. However, record production in the first half of 1895 made a recovery seem possible until demand slackened in the second half. Consequent reductions in prices, wages and profits, increasing unemployment and a renewal of industrial strife stimulated further vain efforts to establish an employers' organisation to regulate the industry.⁶⁸

Faced with falling profits, the proprietors endeavoured to reduce their costs, principally the hewing rate. Following the abandonment of the district agreement at the end of 1893, several coal owners had proposed tonnage rates ranging from two shillings to 3s.2d. when the declared selling price of coal was eight shillings. The district union had reluctantly accepted 3s.2d. with the proviso that the miners would be called out of every mine offering less. Unfortunately this resulted in 1,341 miners being sacked at the beginning of 1894 and thus made dependent upon the union for support. In order to pay these men 10s. per week 10% was levied on the wages of all members, putting a new strain on the organisation. Within three months, though some had gone to work at other collieries and others had left the district, there were still 900 men to support and so many members were refusing to pay their share that its officials admitted the union was collapsing. However, the membership rallied and it survived one of the most difficult years of its long history.⁶⁹

If allowance is made for the impact of long stoppages in 1888 and 1890, the output of the Newcastle mines increased steadily between 1881 and 1892. There was a sharp reduction in 1893, probably because of a want of ships, but the following two years brought recovery without the usual growth. From 1895 records were set each year with the only exception being 1899, and district outputs were reaching 3.5 million tons by the turn of the century. However, the recovery in terms of tonnage is misleading for the falling price of coal resulted in a sharp drop in total income. The annual value of coal peaked at £1,178,027 in 1891 but then declined sharply, bottomed in 1895 and did not exceed one million pounds again until 1900. This was a reflection of the lower prices prevailing under unrestricted competition.⁷⁰

In 1894, the A.A. Company's Court of Directors wrote to their Newcastle representative that they had heard two complaints from South America to the effect that J. and A. Brown were ruining the Valparaiso coal trade by undercutting with intent to drive other merchants out of business. In 1898 John Brown was outbidding the other proprietors who were active in the London freight market in chartering vessels for the West Coast of South America. Such competition was quickly reflected in profit margins as the results of the leading companies indicate.

In return for 357,000 tons of its coal the Newcastle Wallsend Coal Company earned a profit of £19,402, about 13d. per ton, in 1894 and two years later there was £469.3s. less to divide among shareholders after a strike had reduced output to 297,000 tons. Dividends in that year amounted to £1.15s. per share, a disappointing result for investors who had grown accustomed to a return of five pounds per annum under the Vend. The A.A. Company had managed to maintain its regular price at eight shillings in 1895 and, though it paid the highest hewing rate in the district, profit per ton was not much under two shillings. In contrast the Scottish Australian Mining Company found it necessary to reduce to 6s.9d. during the year and paid no dividend in the first half. The much younger Newcastle Coal Mining Company led the field in output, 369,000 tons, but its profit was down to 13.2d. per ton.⁷²

The financial problems of the proprietors were intensified by their inability to control certain costs. They had reduced wage rates sharply but all were affected to some extent by rail charges and they were undiminished. Many also had to pay royalties, 10d. per ton by the Co-operative Coal Company and one shilling per ton to the Crown for coal taken from under the estuary or sea by various producers. Thus the capilalists were not as free as the unionists were inclined to think: they, too, were caught in an industry which was out of control. For them, certainly, the personal consequences were often not disastrous, as they were for the workers, but there were plenty of casualties. Speaking to reporters, one proprietor referred to the companies known to him have failed in this period:⁷³

Look here at the list of collieries which have gone into liquidation or been snuffed out during the last three or four years - West Wallsend, Monkwearmouth, Burwood East, Burwood, Dudley, Waratah, Young Wallsend and Greta, and we must not include Maitland, North Stockton or New Wallsend as they were never opened and were 'boom' pits.

Some proprietors and unionists still thought that the union might be the means of lifting the floundering coal owners from the morass. It was suggested once more that if the miners would strictly enforce a higher hewing rate their employers would be obliged to raise the price of coal thus restoring a degree of prosperity to the district. With the approval of a majority of their members, the union leaders proposed a strike in support of a fourpenny increase in the tonnage rate but the A.A. and Newcastle Wallsend Coal Company miners withdrew their support and the plan collapsed. The union was reported to be dying and there was little hope of reconstruction while unemployment was so high: 'the miners, realising that others are only too willing to take their places in the event of a strike, are loth to join a lodge, or, indeed, do anything to jeopardise their employment'.74

Deteriorating industrial relations

Most miners were forced to accept the lowest wage rates since the days of convict mining without protest. Those who did resist, for example the Minmi miners, were ruthlessly crushed by tactics as severe as the industry had ever witnessed and successes were rare. There seemed to be no way to arrest the downward spiral of prices and wages. Late in 1895 the Co-operative Colliery initiated another round of wage reductions, prompting the comment that⁷⁵

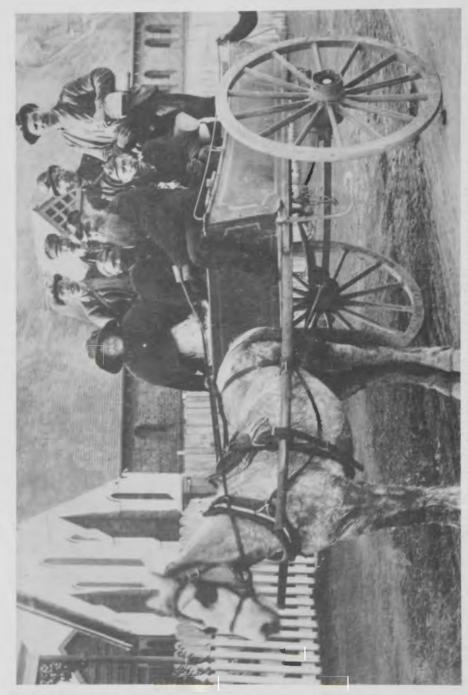
the general feeling is that in their blind efforts to ruin each other the colliery managements of this district are not only overstepping the limits of reasonable retrenchment, but are inflicting upon the people of Newcastle a most grievous wrong.

When approached for their comments, the leading proprietors, who with one exception wished to remain anonymous, were unable to suggest a solution. John Brown would only say^{76}

that things were very mixed in the coal trade, and he had asked his miners to voluntarily accept another reduction in their wages simply because the Cooperative Colliery was only paying a hewing rate of 2s.2d. while his firm paid 3s. to cut the same seam of coal. He refused to make public the intentions of the firm, had no faith in a vend as a means of ending the present struggle: knew nothing of any project to establish one, and considered that the low price of coal had most certainly brought trade to the port.

Another, the manager of a large company, attributed the problems of the industry to the policy of the miners' union in 1888:77

Tell the miners this: They started the competition which is now crushing them



Miners going home from work at a Lambton pit, c1890. A. Snowball collection

when they so fiercely attacked the Colliery Proprietors' Association in the strike of 1888. Their leaders crowed when they prevailed upon Stockton Company to break the pledged words and even bonds of their managers and directors, and retire from the association. The miners went to work, and Stockton stole - there is no other term for it - the Melbourne Metropolitan contract from the A.A. Company. We still kept up the association, and fought against underselling, but it forced us one by one to depart from the stringent provisions of the vend scheme, and take a hand in the fight for trade. While we held together the output of the non-associated pits increased, while we who tried to sell at a fixed rate were being driven to the wall. In the end we each went on our own hook, and see the result. It is ruin for all but the strongest, and as the miners for years blindly hurried us on to introduce a system of cut-throat competition, under which the fittest would only survive, they must now see the result.

The third proprietor consulted replied that he could only forsee one end to the difficulties besetting the industry: the miners would have to intervene to force the proprietors to combine to restore prices to an acceptable level:78

He held that another reduction will have to go round, and even round again, until at last the limit is reached under which the men will strike and the companies working at a loss will cease competing and, getting together, a new association will be formed under a vend or even a trust system.

'The miners will have to combine', said another general manager, and until they do the present state of things will continue.

Aware, perhaps, of the inertia of the proprietors and the improbability that the helpless district union could save its members from unemployment, poverty and victimisation on a grand scale', let along stage a general strike, the city fathers intervened. However, very few of the proprietors, and none of the major firms, were represented at the conference called to stop 'the policy of cut-throat competition'. It was adjourned until a report could be obtained of a trust proposal that was under discussion and then news was received that collieries producing almost two thirds of the Newcastle output had agreed to enter a reorganised vend if the A.A., Newcastle Wallsend and Newcastle Coal Mining Companies would also participate. However, the managers of these companies refused to join in a project which they considered to be unsound. Their views were put by Jesse Gregson in a letter to the Daily telegraph:⁷⁹

Association in the coal trade has been tried in the Newcastle district for a number of years and in a variety of ways. Our experience of these efforts to maintain the price of coal shows us that "it is impossible to devise a plan which is not open to objection": that while it binds some of those who are parties to it, there are others whom it fails to bind.

In a despatch to his directors Gregson was more explicit about his objections to another vend, 'It is entirely due to the establishment of Association that the trade of Newcastle has been so much disorganised by the development of collieries in excess of the requirements of the demand for coal,'80

A more moderate but similar view was put by the four coal owners who had participated in the Newcastle Council's conference:81

We are aware that associations have in the past been tried in the coal-mining interest of the Newcastle district, and for a time were undoubtedly attended with immense benefit to every shareholder in every company: but, unfortunately, a number of human frailities together with a disregard of natural and commercial laws produced disruption and attendant evils, including the present great depression. Notwithstanding all this we believe that an arrangement can be

devised whereby a material improvement can be made in the condition of the general interests involved.

At least one other coal owner was still convinced of the desirability of a vend. In January 1896, Alexander Brown of New Lambton remarked, 'Is it not possible for our proprietors to form some agreement where it would not pay to be dishonest to one another? Any other basis that this is only a rope of sand'. The **Newcastle morning herald** also took the view that prices could be raised if only four large firms would support an association for that purpose:⁸²

So far as can be seen the benefit of thousands rests with these four gentlemen - a consideration which while it undoubtedly raises them to an extremely high pedestal af influence, also increases the responsibility they bear to their fellow men.

During the first three months of 1896 the demand for coal was so strong that there was a general optimism about the future of the industry. Ships began to accumulate in the port, the mines worked full time and loading operations were carried on by night and day at record levels. Observing this improvement in demand, the Waratah miners initiated a move to increase the hewing rate by fourpence per ton and to restore the general agreement governing conditions of work. They were supported by the district union and the proprietors were given notice of a general strike if the miners' demands were not conceded. When they showed no sign of agreement, the Premier was invited to intervene by the City Council and agreed to summon the coal owners and their miners to a conference. It met in April when there were sixty one deep water sailing vessels in port waiting to carry away almost 140,000 tons of coal and as many more vessels were expected to arrive. The prospects of the industry, commented a local newspaper, had never been better.⁸³

The Premier stressed the serious consequences of a strike for the community and emphasized the danger of damaging the future of the industry. He also questioned the miners' delegates closely about their earnings and probed the employers' reasons for refusing to raise the price of coal. Claiming that higher rates had prevailed when vends were operating, the miners argued that there was no justification for existing low prices and wages. However, the owners pointed to the continuity of work which enabled miners to earn almost as much as in the days of regulation when intermittency reduced the effects of higher hewing rates. They argued that because of lower wage levels in the colony and reduced prices, the miners were no worse off than they had been. 'No class of labouring men now earned as much as the miners ... Indeed no class was now earning as much as in 1892', said W. A. Hutchison of Hetton. Average earnings at the various mines were quoted and, as usual, considerable discrepancies emerged between the larger and smaller employers, old and young pits, thick and thin seams, etc., because of different conditions in the various parts of the coalfield. Hewing rates varied from 2s.2d. to 3s.3d. and actual earnings were stated to range from about 4s.4d, to 13s, per day.84

The proprietors at the conference were unanimous on one point: they could not immediately increase the price of coal because they had contracted to sell at that level in the current year. Moreover they would not accept the union contention that the price of coal could be increased without adversely affecting the demand. Many companies were unable to pay dividends and therefore increased wage rates were not possible until prices could be raised. Noting their implacability the Premier suggested, and the union delegates agreed, that the miners should be asked to continue work with no more than an assurance of another conference in September and a promise that rates would not be reduced before the end of 1897. The proceedings were amicable and the threatened

strike seemed to have been averted. However, the miners rejected the recommendations of their delegates by a large majority and the strike commenced on 27 April.⁸⁵

The decision to strike was based on confidence that the owners would concede the increase rather than lose trade and a determination to strike back at employers who had behaved tyrannically during the years of depression and union impotency. As James Curley said,86

The proprietors, by their despotic actions, had almost ground the soul out of the men. It was now the workman's chance to obtain freedom by the weapon of a general strike No one wanted a war, but it would have to be resorted to to check tactics such as these.

During the strike Peter Bowling advocated 'scientific socialism' as the only permanent solution to the problems of the coal industry and suggested that an investigation into 'the almost criminal competition that has cursed this district might prove that, individually or collectively, the proprietors were morally unfit, or commercially incompetent, to have the welfare of the community at their disposal',⁸⁷

The principal coal owners co-operated closely in the conduct of the strike so that a united front could be presented to the union and after three months they were rewarded: the miners returned to work with a humiliating reduction in the hewing rate of one penny and on individual agreements with their employers. As the union had also failed to secure employer action to raise the declared price, there could be no quick solution to the problems arising from low prices, reduced wages and minimal profits. Some of the proprietors still favoured an association to regulate the industry but the largest producers considered that such an organisation would not be in their best interests: without the A.A., Newcastle Wallsend and Newcastle Coal Mining Companies there could be no Vend.⁸⁸

The growth of demand

The failure of the 1896 strike signalled the end of efforts to arrange an artificial solution to the problem of overcapacity: demand would have to grow to absorb much more of the supply before prices could be raised. Despite the loss of three months' output from all but two collieries in a normally busy season and the departure of thirty two vessels without cargoes, Newcastle production increased in 1896 by more than 200,000 tons. After the strike the scarcity of experienced miners seriously hampered the colliery proprietors, some of whom employed inexperienced labour, but in the following year Newcastle production grew by another 300,000 tons and the average productivity of mine workers increased by 18%, from 379 to 447 tons. Twice in that year the miners conferred with their employers about increasing their pay but nothing of substance was conceded. The contention that prices had risen and that trade was profitable was met with the reply that the foreign trade was so competitive that an increase could not be granted.⁸⁹

The year 1898 brought a further but more modest increase in district output though production per man declined as the supply of labour began to outrun the demand for coal once more. Again the union tried for an increase arguing that competition among local producers was continuing to depress prices which were rising in the United Kingdom, Japan and Canada. They found considerable support from the proprietors who were prepared to admit that 6s.9d. per ton was too low: it left no margin for profit said Croudace, and prices would have to go up, agreed John Brown. However, the leading producers, who were paying their men 2s.11d. per ton, were critical of the union for permitting its members to accept as little as 1s.10d. in other collieries. After initially stipulating that an increase in price would depend upon the same hewing rates being enforced at all collieries, an impossibility given the various grades of coal and the relatively low price suggested, eight shillings per ton, they relented, announcing that a

proportionate increase in the hewing rates throughout the district would be acceptable.90

Negotiations soon bogged down over the proposed general agreement governing conditions of work and establishing a sliding scale of wage rates based upon the price of coal. The owners wanted a 4'6" minimum height and a hewing rate of 2s.10d. when coal reached seven shillings but neither of these were acceptable to the union. Eventually an agreement was negotiated and the declared selling price for 1899 was raised to eight shillings with a corresponding hewing rate of 3s.2d. Moreover the committee of proprietors and unionists continued to meet and in 1900 played an important role in avoiding strikes and negotiating new agreements.⁹¹

Newcastle produced over 300,000 tons less in 1899 because of a drop in New South Wales consumption and more competition from other northern collieries and the southern coalfield. However there was no change in he declared price or the hewing rate and productivity per mine worker remained comparatively high. In the following year production surged ahead to approach 4 million tons for the first time and in boom conditions the owners and the union arranged to restore prices and wages to the levels

prevailing in the 1880s.92

The need for consultation within the industry about the implementation in 1900 of the 1897 Coal Mines Regulation Act requiring that the miners be paid for all coal 'gotten' ensured periodic meetings between the proprietors and the union. Absent from the ranks of the former were Gregson and Keightley of the A.A. and Newcastle Coal Mining Companies but otherwise the meeting was fairly representative of the district. The union continued to send W. Bower, J. Curley and J. McFadyen, its president, secretary and treasurer, as well as the tull board of delegates, to conference meetings which were described as amicable during 1900. Thus a new district agreement was signed in February providing payment for all small coal obtained by the miners, though it was not immediately implemented by many proprietors, and at successive meetings the union pressed for an increase in the price of coal and wage rates, arguing that the price of British coal, their main competitor had risen to 13s. per ton and pointing to the forest of masts in the harbour as evidence of the strength of demand.

With the greatest reluctance the proprietors conceded that prices might be raised at the end of the year but the miners would not be put off. In June, when the newspapers referred to the 'present phenomenal rush' and the 'extremely bright outlook', a general strike seemed likely. The owners were enjoying a most profitable period but fought to keep down the declared selling price in order to avoid increasing costs because much of their coal was sold on contract at fixed prices. So strong was the demand, induced mainly by the Boer War, that proprietors and businessmen who engaged in speculative shipments to foreign ports enjoyed one of their best years. Eventually the miners obtained the substantial increase in prices and hewing rates they had long sought.⁹¹

From January 1901 the declared price would be 11s. per ton with a corresponding hewing rate of 4s.2d. This announcement caused the local newspaper to predict that a continuation of the 'enormous trade' of 1900 would increase the value of the district's coal by £10,500 per week and place an extra £7,000 in the miners' fortnightly pay packets as well as increasing the wages of other mine workers. It is not surprising that the final conference of the year was very cordial and that more mine owners were in attendance. Output had been high, prices had been rising and they were about to lift the declared selling price by almost 40%. In these conditions they could fraternise very well with the miners' leaders whose moderate but firm policies had helped to increase prosperity without further strikes.95

The capacity of the industry to produce had dwarfed the demand for its coal in the middle of the 1890s and the effect on the district justified the comments of a

correspondent of the Newcastle morning herald:96

the present awful condition of affairs all over this continent is the direct result of 50 years of the uninterrupted rule of the mining speculator, the land boomer, and the bank boodler - who might be termed the Trinity of Corruption'. They are learning by bitter experience what a gruesome and disastrous failure 'private enterprise' - the god of Individualism - has made of our coal industry.

By the turn of the century the demand was beginning to match the potential of the mines and amicability prevailed. The tremendous potential of the Greta Seam was the latent force about to disturb the always precarious balance between supply and demand in the industry.



The Scottish Australian Mining Company's 'A' Pit at Lambton, ci 885.

Newcastle Region Public Library



Burwood Colliery, c1885. Newcastle Region Public Library.



The Newcastle Coal Mining Company's 'A' Pit at Merewether, c1890, Newcastle Region Public Library



The Stockton Colliery in 1887, Its 336 feet shaft tapped the rich Borehole coal seam, Newcastle Region Public Library.



The A.A. Company's Sea Pit sunk in 1888 where Bull and Brooks Streets now intersect in Cooks Hill.

Newcastle Region Public Library.



Wallsend Colliery, 1885. Newcastle Region Public Library.

CONCLUSION

By sheer chance the site chosen by Governor Phillip for a settlement in New South Wales was roughly in the centre of a vast coal basin. Thirty miles to the south and sixty miles to the north, coal outcropped on the coast where English seafarers could not fail to notice it. When the northern seams were reported almost a decade later, the discovery was not particularly significant because the southern outcrops had already been recognised but the fact that the former were close to an estuary was important. It was its greater accessibility to shipping that made the Newcastle district the premier coalfield of the colony in the nineteenth century. Nevertheless the dominating feature of the Lower Hunter region was its proximity to Sydney. The rapid development of that city provided both the raison d'etre for Newcastle and a major limitation on its growth.

With abundant good quality coal and a workable port so close to the major Australian market the Newcastle colliery proprietors were in a strong but not impregnable position. To some extent they would control their own destiny but other powerful forces were also helping to shape the pattern of exploitation of Hunter River coal.

British technology, introduced by immigrant miners, had an enormous influence, as it did on all other aspects of colonial life, and the widespread reproduction of place names from the coalfields of the old country in the Hunter District was far more than symbolic. In both tradition and techniques this was to some extent a 'transplanted' coal industry. Moreover the parallel expansion of British shipping and coal exports from the United Kingdom curbed Newcastle's foreign trade and deprived her of some of the advantage of her situation on the seaboard of the vast Pacific region which was slow to exploit its other coal resources.

Within the colony there were equally significant influences. The existence of the southern coalfield was important, especially after the Vend developed, because it offered cheaper coal but most significant was the relatively open entry into the industry in the lower Hunter Valley. There was so much coal land and the railway made it so accessible that overcapacity was endemic for most of the second half of the century. Consequently rational exploitation of coal reserves and control of prices, wages and profits proved to be unattainable. Admittedly there is little reason to believe that such aims would have been realized in an age heavily influenced by liassez faire concepts but both civil servants and industrial spokesmen were aware of the need for some control by 1851 and forty years later, as the Crown continued to add to the capacity of an industry already in gross oversupply, the Newcastle morning herald pointed out that:

the facilities given under our land laws to open out coal-bearing land, have been too liberal for the good of the country. It is said that the laws of supply and demand ought to regulate national industries, and that an easy policy on the part of the State with regard to her coal measures is the best for all concerned. With regard to mining for coal, however, it is to be remembered that the carboniferous storehouses, if once exhausted, cannot be filled. A reasonable care for that which cannot be replaced should not be regarded as folly on the part of either men or nations. The condition of the industry at the present time is such as to tend to the rapid exhaustion of the coal measures with the minimum of advantage to the proprietors, the miners, and the State. North, south, and west the competition is carried on in a fashion which would be regarded as reckless in mining centres in other parts of the world.

Such a policy, combined with the wasteful methods employed in the collieries, resulted in the permanent loss of large quantities of coal. Of course alternative policies may have raised costs and hence the price of coal to consumers with adverse effects upon Australian industrial and urban development. It also remains to be seen whether, in the long run, the loss of some millions of tons of New South Wales coal in the last century will prove to be significant.

Of more immediate concern was the problem of maintaining rewarding prices and wage and profit levels, while the power to supply coal tended to outrun the demand for it. As new producers, whose coals were often not significantly different from others already on the market, usually reduced prices in order to establish themselves, the expansion of capacity tended to be accompanied by declining prices. Since the chief cost of production was the price paid for labour, and since wage rates were to some extent tied to the declared selling price of coal, prices tended to sink to very low levels, impoverishing all those dependent upon the industry.

The other important influence was the high degree of organisation which developed among both miners and proprietors. Unionism in the industry was partly the result of its

British heritage, but it was also affected by colonial experience.

Industrial strength, which came initially through the scarcity of trained men, enabled the miners to achieve levels of remuneration and a degree of independence rarely achieved by colonial workers, some years before fully developed unionism appeared in the Newcastle district. After the formation of the first district organisation in 1860, again in the 1870s and finally during the first half of the following decade the miners' union flourished to such an extent that the traditional powers of the colliery proprietors over prices, wages, 'hiring and firing' and working conditions were strongly challenged. Thus the miners, who from the 1840s onwards, had considered themselves as subcontractors, outside the Master and Servants Law, continued to press for recognition of their right to share in the wealth of the industry and to demand that the owners manage their estates in the interests of the whole mining community.

In response to union pressure the normally individualistic colliery proprietors were forced into collective action with significant effects on the industry. One result was that counter-attacks on the union, with periods of exploitation of the workforce in the late 1860s, in 1880, in the mid-1880s and again in the last decade of the century, became a feature of life in Newcastle. The employers were assisted in this by the industry's power to attract additional labour from the United Kingdom and from the colonies after the initial influence of gold had subsided. Instead of the constraints which the shortage of miners had imposed for much of the first half of the century, labour was so plentiful that the proprietors were usually able to employ far more men than were required. They were encouraged to do this by seasonal variations in the demand for coal, by the competitive nature of their business and by the pressure put upon them by their customers. Ironically the miners did not discourage over-employment as wholeheartedly as they might have done because, as individuals, they liked to find jobs for their relatives and enjoy time off from the pits. However, the long term effect of an overlarge workforce was to reduce average earnings and to weaken the union.

Even more important, perhaps, was the tendency of the proprietors, having been brought together to resist union pressure, to co-operate in pursuit of higher prices and the sharing of trade. Again reflecting British experience, they formed the Vend, thereby achieving during the 1870s a level of prosperity which remained the goal of the district for the remainder of the century. Their failure to restore equivalent conditions after 1882 may be regarded as the chief local reason for the gradual appearance among miners of a new attitude: the demand for state ownership and the abolition of inequality instead of their traditional appeal for controlled exploitation and a share in

the resulting profits.

It is likely that the various monopolistic solutions favoured by the mine owners would have introduced more orderly development of the Newcastle seams but the availability of other colonial coals would have limited this possibility unless the two New South Wales coastal fields had been brought under joint control. However this state of affairs did not begin to develop until the twentieth century.

Within these limits the achievements of the Newcastle mining industry during the nineteenth century are impressive. That over sixty million tons of coal were raised in the district reveals the importance of the collieries but surely the most important single industrial event in the Australian Colonies in that period was the application of steam power to sea and land transport, and most of the necessary fuel came from the Hunter River district. Other industrial applications, for example in gas making and smelting, were also of the first importance for the developing manufacturing sector of the colonial economies. To this should be added the contribution of the industry to export income and its role in facilitating the development of shipping services to Australia by providing a useful export cargo.

APPENDIX: THE TERMS OF THE 1828 AGREEMENT BETWEEN THE SECRETARY OF STATE FOR THE COLONIES AND THE AUSTRALIAN AGRICULTURAL COMPANY.

H. Twiss to J. Strettel Brickwood, 31 July 1828, as printed in 'Report from the Select Committee on the Coal Inquiry', N.S.W.L.C. V. & P., 1847.

Downing Street, 31st July, 1828.

Sir.

In reply to the letter which the Australian Company addressed to the Secretary of State on the 13th ultimo, relative to a Tract of five hundred acres of land on the bank of the Coal River, which the Governor of New South Wales was instructed to place at the disposal of the Company, but of which he had delayed the Grant, I am directed by Secretary Sir George Murray to acquaint you, that he has addressed definitive instructions to the Governor upon this subject, to the following effect, viz:-

First, That a Grant be immediately made to the Company of a Tract not exceeding five hundred acres on the banks of the Coal River, at Newcastle, and that their agent be permitted to select the land which they may consider best adapted for the purpose of their dealing in Coal, being allowed such a proportion of frontage to the water, as the convenient shipping and working of the produce of the mines, opened or to be opened, may liberally require in that situation.

If, however, the Company have already been allowed to take more than one thousand five hundred of a Tract of two thousand acres on the banks of the Coal River, of which Lord Bathurst's instructions to Sir Thomas Brisbane, dated 18th May, 1825, authorised the Grant to them, then the Company will, on receiving the now proposed Grant of five hundred acres, be expected to give up whatever part of the last mentioned Tract they may already possess beyond one thousand five hundred, so as that their whole possession, under the instructions of the 10th of May, 1825, and under the present instructions coupled together, shall not exceed two thousand acres in the aggregate. If, on the other hand, the Company have received no part, or a part less than one thousand five hundred acres of the Tract of two thousand acres mentioned in the instructions of the 18th May, 1825, the Governor will grant to them, in addition to the five hundred acres, so much land as they may wish to have, not exceeding, with the five hundred acres, the aggregate of two thousand; and in this last case, the Company's agents are to be allowed to select the land, which in addition to the five hundred acres, is so to be granted to them, in the same manner, and subject to the same restrictions as to frontage, which have been already specified with respect to the five hundred acres.

Secondly. That in the five hundred acres now proposed to be granted, the works which have hitherto been carried on by the Government be included, should the Company wish it.

Thirdly, That although the assitance required by the Company in regard to Convict Laborers must necessarily depend upon the means which the Colonial Government may have at its disposal for affording it, yet, as the Government will cease to raise the Coal which may be required for the general purposes of the Colony, every possible facility and encouragement for this object be afforded to the Company, so that no scarcity of this article may take place; and the quantity raised be, as far as depends upon the assistance of Convict Labor, at all times, if possible, adequate to the demand.

By the original agreement which it was proposed to enter into with the Company, they were to receive a lease of the Coal Mines at Newcastle, in New South Wales, for the term of thirty-one years, on payment of a portion of the produce, not less than a twentieth, nor more than a fifteenth, at the option of the Government; as the footing upon which this question now stands has been materially changed by the substitution of a Grant of a

comparatively small number of acres, for a lease of the Coal Mines at Newcastle, the

Secretary of State has deemed it sufficient,-

Fourthly. That the five hundred acres, as well as the other one thousand five hundred, taken or to be taken, be charged with the usual Quit-Rent, the annual amount of which is to be determined by the Surveyor General according to the value of the land for an ordinary superficial occupation, and not with reference to its value as mine land; which Quit-Rent, however, as to the five hundred acres, and as to so much more of the land to be compromised in the aggregate of two thousand, and not already granted to the Company, as shall consist of Coal land, is not to be redeemable.

Fifthly, That a condition with reference to the five hundred acres, and to any other Coal land not already granted, be inserted, that all such ground may be resumed by the Crown, with the permission of His Majesty's Government in England, if in any year the Company shall raise a less quantity of Coal than two-thirds of the weight which, on an average of the three years ending the 31st December, 1828, has been yearly raised from the Mines which are now wrought by the Government, together with the further stipulation that Government shall be entitled in perpetuity to all Coal wanted for its own consumption, not exceeding, in any case, one-fourth of the average annual produce of the Mines included in the five hundred acres, to be delivered at the pit's mouth, at prime cost.

Sixthly, That as the Company will have incurred a great preliminary expense for a public benefit, which expense they ought to have a fair opportunity of repaying to themselves, no Governor will for the next thirty-one years, grant or convey any Coal mine, or land containing any Coal Mine, without a specific exception of the Coal in such grant or conveyance, nor afford any assistance in Convict Labor for the working of any Coal mine to any other Company, or to any individual, or individuals, without the previous sanction of the government, a sanction which would probably be granted, if the Company should avail themselves of their monopoly to impose an exorbitant price upon Coal, the produce of their mines.

As the arrangement acquiesced in by all parties, at the interview in this Office on Saturday, has been strictly adhered to, in all but one or two slight particulars, I, of course, anticipate no objection on behalf of the Company; but I shall be glad to be acquainted by you, in a formal manner for the information of the Secretary of State, that the Company are satisfied with these conditions, in order that the Despatch may be completed accordingly, which will not² be done on Wednesday next, the 6th of August, unless I receive from you before that time any communication to warrant a further delay.

I am.

Sir.

Your obedient servant (Signed) HORACE TWISS

J. Strettel Brickwood, Esq.,

12, King's Arms Yard.

NOTES AND REFERENCES

- J.Hunter had reported the discovery of coal at the Hawkesbury River and at a small bay 'a little to the southward of Port Stephens, either at the entrances of the Hunter River or Lake Macquarie to Sir Joseph Banks, 20 Aug. 1796, Hunter's 'Letters'. p. 14. This report appears as a postscript to Hunter to Portland, 25 June 1797, H.R.A. I, Vol. 2, p. 33, though it was meant to form part of Hunter's separate despatch of 6 July 1797 and Portland's acknowledgement suggests that it did do so. ibid. p. 82. Both despatches were acknowledged on 18 Sept. 1798. Hillsborough sailed from Gravesend, in Nov. 1798, reached Capetown in April and Sydney in July 1799. C. Bateson, The Convict Ships 1787-1868. pp. 150-1. Portland to Hunter, 21 Dec. 1798, H.R.N.S.W., Vol. 3, p. 519.
- Portland to Dundas, 17 Dec. 1798, H.R.A. I, Vol. 2, p. 242. This coal appears to have cost £8.3s.8d. per ton at the Cape. However, King sailed on Speedy which did not call there. J. S. Cumpston, Shipping arrivals and departures, 1788-1825.
- 3 G. J. Abbott, 'Staple theory and Australian economic growth, 1788-1820', Business archives and history. Aug. 1965, p. 152.
- 4 Hunter to Banks, 15 Aug. 1797, Hunter's Letters, op. cit., Hunter to Portland, 4 July, 1797, H.R.N.S.W., Vol. 3, p. 689.
- 5 Hunter to Portland, 4 July 1799, H.R.A. I, Vol. 2, p. 369; J. S. Cumpston, Shipping arrivals and departures, 1788-1825, p. 37.
- 6 J. Thompson to Schank.8 Sept. 1799, H.R.N.S.W., Vol. 3, pp. 716-7; Cumpston, Shipping arrivals and departures, p. 34. D. J. Ryan refers to the Hillsborough's coal cargo for the Cape in 'The discovery and first settlement of Newcastle', J.R.A.H.S., Vol. 9, pt. 5, 1923.
- 7 King to Banks, April 1801, H.R.N.S.W., Vol. 4, p. 359.
- B. R. Hainsworth, 'The New South Wales shipping interest, 1800-1821: a study in colonial entrepreneurship', Australian economic history review. March 1968, p. 29; King to Portland, 14 Nov. 1801, H.R.A. I, Vol. 3, p. 326; Paterson to Brownrigg, 24 Aug. 1831, enclosure in King to Portland, 5 Nov. 1801, ibid., p. 289; King to Paterson, 21 Aug. and 8 July 1801, ibid., pp. 169, 116; King to Banks, April 1801, H.R.N.S.W., Vol. 4, p. 359, Lord's Anna Jospeha had returned with 150 tons of coal on 29 May, and went back for more on 18 July 1801. J. S. Cumpston, Shipping arrivals and departures, 1788-1825, p. 38.
- 9 Banks and Navy Board correspondence 21-7 March 1799, HRNS.W., Vol. 3, pp. 649-51; King to Banks, April 1801, ibid., vol. 4, p. 359.
- 10 King to Portland, 10 March 1801, H.R.A. I, vol. 2, p. 14; King to Banks, 20 Nov. 1800, H.R.N.S.W. vol. 4, p. 258; Banks to Navy Board, 25 March, 1799, ibid., vol. 3, pp. 650-1.
- 11 King to Banks, 28 Sept. 1800, ibid., vol. 4, p. 206. For his intention of settling Port Stephens, ibid., p. 197.
- 12 Paterson, 'Journal at Hunter River', HR.A. I, vol. 3, pp. 175-6; Grant, 'Journal at Hunter River', 4 July 1801, ibid., pp. 169-70, 172; King to Portland, 8 July 1801, ibid., p. 116; King to Paterson, July 1801, HR.N.S.W., vol. 4, pp. 428-9.
- 13 Paterson, 'Journal at Hunter River', op. cit., p. 176.
- 14 Grant, 'Journal at Hunter River', op. cit., p. 172; King to Paterson, July 1801, H.R.N.S.W., vol. 4, pp. 428-30. The dues were 2s.6d. per ton for home consumption, and one pound per thousand feet square on timber for home consumption: these rates were doubled on exports.
- 15 Tennant paid for the coal in iron at the rate of £2.5s.0 per chaldron which approximates £1.16s.0 per ton, a high price for what must have been some of the worst Newcastle coal ever sold. King to Portland, 21 Aug. 1801, HRA.1, vol. 3, p. 169; King to Banks, mid-April 1801, HR.N.S.W., vol. 4, p. 359; King's account of the settlement, King papers, vol. 6, pp. 9-10; Australian dictionary of biography, vol. 2, p. 213; King to Portland, 1 March 1802, 5 June 1802, H.R.A. I, vol. 3, pp. 406, 528.
- 16 Menzies to King, 19 April 1804, H.R.N.S.W. vol. 5, pp. 367-8, enclosure in King to Hobart, 14 Aug. 1804, H.R.A. I, vol. 5, pp. 81-2.
- 17 Mason to King, 24 Oct., 21 Nov. 1801, HRNS.W., vol. 4, pp. 597, 627.
- 18 Menzies to King, 19 April 1804, op. cit.; D. R. Branagan, 'Geology and coal mining in the Hunter Valley 1791-1861', Newcastle history monographs no. 6, p. 23.
- 19 B.T. p. 300 of mtm roll 107.

- 20 Thompson to Campbell, 30 Dec. 1814, and Wallis to Campbell, 29 March 1817, CS.LL
- 21 Wallis to Campbell, ibid. 'The air is very much confined below unless a south wind blows. A fire at the bottom of the shaft only worsens conditions: Benjamin Grainger to Bigge, B.T., box 1. p. 408, Menzies to King. 28 Nov. 1804, H.R.A. 1 vol. 5, p. 424.
- 22 Grainger to Bigge, op. cit., pp. 496-500; Morisset to Goulburn, 11 Oct. 1821, C.S.I.L.; John Busby, Report. in Busby to Goulburn, 5 May 1824, ibid., Busby was appointed Mineral Surveyor and Civil Engineer to the colony in 1823.
- 23 Mason to King, 21 Nov. 1801, op. cit., p. 627; Purcell to Campbell, 5 May 1810, C.S.I.L. Thompson to Campbell, 14 May 1814, ibid.; Morisset to Goulburn, 11 Oct. 1821, ibid.; Busby to Goulburn, 5 May 1824, ibid.
- D. R. Hainsworth, 'The New South Wales shipping interest, 1800-1821', op. cit., p. 123; John Evans to Bigge, B.T. box 28, p. 2394. Of nineteen cargoes of coal shipped in private vessels in 1816, the largest was fifty six tons, N.S.W., Colonial Secretary, Records, 4/5606.
- Skottowe to Campbell, 17 Oct. 1811, C.S.I.L.: Purcell to Campbell, 9 Feb. 1811, ibid., Newcastle appears to have won a reputation as a place to be avoided with amazing rapidity. Margaret Catchpole, writing when the settlement was only six months old and five weeks after she arrived in Sydney, commented: 'thay hav thar poor head shaved and sent up to the Coale river and thear Carry Coals from Day Light in the morning till Dark at Knight and half starved... it is a very Cruel inded norfolk islet is a Bad places naf to send aney poor Cratuer'. Letter of Margaret Catchpole, 21 Jan. 1802, Australian dictionary of biography. vol. 1, p. 215; K. M. Dallas, Review of G. J. Abbott and N. B. Nairn, 'Economic growth of Australia, 1788-1821', Tasmanian Historical Research Association, Papers and proceedings. May 1970, p. 103.
- 26 A. G. L. Shaw to the author, 4 March 1975.
- 27 J. W. Turner, 'Newcastle as a convict settlement', Newcastle history monographs no. 7, pp. 19-20.
- 28 Ibid., pp. 14-7.
- 29 HRA I, passim. Convict musters occurred at irregular intervals.
- 30 J. W. Turner, 'Newcastle as a convict settlement', Newcastle history monographs, no. 7, pp. 14-20.
- 31 Purcell to Campbell, 12 March 1811; Thompson to Campbell, 23 July 1814: Skottowe to Campbell, 20 April 1811; Wallis to Campbell, 3 Nov. 1816, 7 May 1817, 20 March and 3 April 1818.
 C.S.I.L.; Morisset to Bigge, B.T. box 1, p. 471.
- 32 Table 1; Morisset to Goulburn, 11 Oct. 1821, C.S.I.L.
- 33 King to Portland, 15 Nov. 1801, H.R.A. I, vol. 3, p. 342; Macquarie to Liverpool, 17 Nov. 1812, ibid., vol. 7, pp. 601-2. Macquarie failed in another attempt to replace wood as the domestic fuel of the public service in 1815. S.G. 2 Sept. 1815 and 19 June 1819.
- 34 G. P. Walsh, A History of manufacturing in Sydney, 1788-1850. pp. 43-4; quarterly return of labour at Newcastle, 1819, B.T. mfm roll 107, pp. 282-3.
- 35 S.G. 25 March 1804; King to Hobart, 14 Aug. 1804, H.R.A. I. vol. 5, p. 111; 'Account of the produce of N.S. Wales as exports', enclosure no. 12 in King to Hobart, 9 May 1803, ibid., vol. 4, p. 342; enclosure no. 6, Hobart to King, 29 Aug. 1802, H.R.A. 1, vol. 3, p. 572.
- 36 S.G. 29 Dec. 1825; G. P. Walsh, A History of manufacturing in Sydney, 1788-1850, p. 31; King to John King, 8 Feb. 1800, H.R.N.S.W., vol. 4, p. 51. The high price, two pounds or more per ton, put upon its surplus coal by the Commissariat would have militated against its use in private industries such as salt making or lime burning. B.T., box 1, p. 56.
- 37 The estimated minimum consists of 12s.6d. for the coal, 2s.6d. duty and five shillings for freight and unloading at Sydney; J. T. Bigge, Report of the Commissioner of Inquiry into the state of agriculture and trade in the Colony of New South Wales. pp. 87-8.
- 38 'An Inquisitive Observer' to S.G. 1 May 1803, 'The colliery at Hunter's River opened an invitation to adventure, as it offered a freightage not altogether contemptible, J.S. Cumpston, Shipping arrivals and departures, Sydney, 1788-1825, pp. 24-124.
- 39 Ibid., Campbell to Macquarie, 26 Oct. 1818, H.R.A. 1, vol. 10, p. 405; Campbell to Macquarie, 13 Nov. 1819, quoted in Steven, Merchant Campbell, p. 256; Benjamin Grainger to Bigge, 23 Jan. 1820, B.T. box 1, pp. 499-500; S.G. 3 Jan. 1818; Government and general order, 17 Aug. 1817, Proclamations, N.S.W. Colonial Secretary, Records, 7/255, p. 631.

- 40 This agreement was probably arranged in 1812, Campbell to Skottowe, 8 June 1812, C.S.O.L. Macquarie to Bathurst, 2B April 1814, C.O., 201/72; M. J. E. Steven, 'Exports other than wool', in G. J. Abbott and N. B. Nairn, Economic growth of Australia, 1788-1821, p. 286, quoting letter of 19 Jan. 1816 in East India Company papers, Calcutta.
- 41 R. Dutt, Economic history of India under early British rule. p. 286, Great Britain, Report of the Select Committee of the House of Lords on the state of the coal trade in the United Kingdom, appendix 1, p.286.
- 42 For evidence of private export see Blaxcell's sale of 500-600 tons to an India-bound ship, Campbell to Skottowe, 16 May 1812, C.S.O.L. m. j. e. Steven, 'Exports other than wool', in G. J. Abbott and N. B. Nairn, Economic growth of Australia, 1788-1821, p. 303.
- 43 Eagar to Bigge, 19 Oct. 1819, B.T., box 19, p. 3079.
- 44 Bigge attributed the decrease in exports to the price charged for surplus coal, J. T. Bigge, Report of the Commissioner of Inquiry on the state of agriculture and trade in the colony of New South Wales, p. 93, For the duty and its variations see King to Banks, April 1801, H.R.N.S.W., vol. 4, p. 359, General Order, 11 April 1808; H.R.A. 1, vol. 6, p. 276; General order, 9 May 1822; S.G., 10 May 1822; G. J. Abbott, 'Government works and service', in G. J. Abbott and N. B. Nairn, Economic growth of Australia, 1788-1821, p. 320. For the nature of the monopoly see D. R. Hainsworth, The Sydney traders, pp. 14-5.
- 45 Ibid.
- 46 Return of coal, lime, salt and timber production at Newcastle, 1805-1819 and 1820, C.O. mfm roll 107, pp. 300, 302, 307; B.J. box 25, p. 5442.

- The wool trade was thrown open to all by proclamation, S.G. 8 May 1823, the remaining stock of timber, 900 cedar logs and spare boats were for sale without reserve, S.G. 8 July 1824, P. Cunningham, Two years in New South Wales vol. 1, pp. 184-9.
- John Busby, 'Report', May 1824, and J. Busby to J. Bowman, 18 Feb. 1926, A.A.C.R. J. Henderson, 'Report on the Newcastle coalfields', 24 March and 8 May 1827, ibid.
- 3 Ibid. The Eclipse was seized in 1825, enclosure 53 in Bourke to Glenelg, 10 May 1836, H.R.A. 1, vol. 18, pp. 414-8.
- 4 John Busby 'Report', 5 May 1824, op. cit.
- John Busby to George Busby, fragment, 14 Oct or 8 Dec 1826 and 15 Oct 1827. John Busby. Letterbooks, W.E. Parry, Journal, vol. 1, pp. 144-5. He also remarked that 'the town is so entirely on the decline, that I shall be able, if necessary, to buy it all for £500 in a twelve month'.
- 6 John Busby, 'Report', W. E. Parry, *Jjournal*, vol. 1, pp. 240, 248, the task of the twelve hewers or 'getters' was two and a half tons per day, J. Henderson, 'Report on the Newcastle coalfields', 8 May 1827, op. cit.
- Minutes of an interview with Francis Allman, 10 April 1829, and J. Henderson, 'Report on the Newcastle coalfields', 8 May 1827, op. cit. p. 326, the Newcastle Bench Book for 1829 has since been lost but sections were printed in the Newcastle morning herald. 13 March 1897.
- 8 John Busby, 'Report', 5 May 1824, op. cit.
- 9 SG 29 Dec 1825
- 10 'A return showing the quantity of coals 'raised by the government', N.S.W. Colonial Secretary, Records, 2/2314; NSW blue books
- 11 The Auditor General's totals for 1826-8 were averaged by the Crown for implementing the agreement with the A.A. Company
- 12 M.J.E. Steven, 'Exports other than wool', in G.J. Abbott and N.B. Naim, *Economic growth of Australia 1788-1821*, p. 283, S.G. 3rd June 1824, 30 Oct 1825, 16 Jan and 14 June 1826, J. Busby 'Report', opcit., J. Jervis, 'The rise of Newcastle', JRAHS, vol.21, p. 147, quoting the Sydney monitor monitor.
- 13 W.E. Parry, Journal. vol 1, p. 146.
- 14 In rather a surprised tone, the Sydney gazette announced the sale of a cargo at Hobart at 45s per ton on 13 Sept. 1826; Parry, Journal vol 1, p. 264, Government order, S.G. 10 May 1822, coal f.o.b. Newcastle, eight shillings per ton plus the same dues as hitherto levied on home consumption. J.S. Cumpston, Shipping arrivals and departures, 1788-1825, passim.
- 15 D.S. Macmillan, 'The rise of the British Australia shipping trade, 1810-1827', in Birch and Macmillan, Wealth and progress' studies in Australian business history, p. 15.
- 16 J.S. Cumpston, Shipping arrivals and departures, 1788-1825, pp. 139-147, John Macarthur Jr to James Macarthur, 21 Nov. 1825, Macarthur papers A2911, NSW blue book 1829.
- 17 Australian, 5 Aug, 1831
- 18 W.E. Parry, Journal, vol 1, pp. 214-5, Australian 5 Aug 1831
- 19 Lithgow to Committee, N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry. pp. 49-50
- 20 Brisbane to Bathurst, 14 May 1825, HR A 1, vol. 11, p. 587, J. Busby to J. Bowman, 18 Feb. 1826, op. cit; p. 92.
- 21 W. E. Parry, Journal, p. 18, Court of Directors to N.S. W. Committee, 13 Jan. 1826, Macanthur papers
- 22 J.T. Bigge, Report of the Commissioner of Inquiry into the state of agriculture and trade in the Colony of New South Wales, p. 93; Bathurst to Brisbane, 31 July 1823, HRA 1, vol. 11, p. 101
- 23 Brisbane to Bathurst, 14 May 1825, op. cit.
- 24 J.S. Cumpston, Shipping amvals and departures, 1788-1825, p. 154, S.G. 22 Dec. 1825, Darling to Hay, 3 Feb. 1826, CO. 323/146; this 'complete and injudicious monopoly' was denounced by the Australian. 16 March 1826.
- 25 For the formation of the company see J. Achison, *Port Stephens and Goonoo Goonoo. a review of the early period of the Australian Agricultural Company.* For example, see Court of Directors to Lord Glenelg, 22 Dec. 1838, *CO.* 201 280. 'It was in compliance with the expressed desire of the Government that we undertook the hazardous speculation of working the coal mines of Newcastle'.
- 26 J Smith to R. Wilmot Horton, 31 March 1825 Papers relating to the A A Co. CO 280 2

- 27 John Macarthur Jr to Wilmot Horton, 9 April 1825, ibid.; there were five East India Company, directors in the A.A. Company Court of Directors, Achison, op. cit., p. 19.
- 28 Court of Directors to Grey, 4 Nov. 1846. H.R.A. I, vol. 25, p. 269.
- 29 J. Achison, Port Stephens and Goonoo Goonoo, pp. 12-4.
- 30 S.H. 28 Aug. 1840; W.L. Woodward, The age of reform, pp. 633-4; J.W. Turner, 'The entry of the Australian Agricultural Company into the New South Wales coal industry', J.R.A.H.S., Dec. 1972, p. 234; Australian dictionary of biography, vol. 2, pp. 149-52.
- 31 Australian Agricultural Company, Report to proprietors, 21 July 1825.
- 32 G. Harrison to Wilmot Horton, 23 May 1825, Papers relating to the A.A. Co., CO. 280/2.
- 33 Court of Directors to Bathurst, 27 April 1825. Court of Directors to Wilmot Horton, 13 May 1825. Hay to Court of Directors, 7 July 1825, ibid.
- 34 Court of Directors to Bathurst, 6 July 1826, C.O. 201/273; Bathurst to Brisbane, 18 May 1825, H.R.A. I, vol. 11, p. 592.
- 35 Bathurst to Darling, 26 July 1826, ibid., vol. 12, p. 448.
- 36 Darling to Murray, 27 Dec. 1828, CO 201/194; Darling to Hay, 23 March 1827, H.R.A. I, vol. 12, p. 184.
- 37 N.S.W. Committee to Court of Directors, 26 May 1827, Macarthur papers.
- 38 J. Henderson, 'Report on the Newcastle coalfields', 8 May 1827, op. cit., p. 304.
- 39 Australian Agricultural Company 'minute book' I, p. 57, Macarthur papers.
- 40 N.S.W. Committee to Court of Directors, 26 May 1827, op. cit.
- 41 James Macarthur to John Macarthur Jr, 28 May 1827, Macarthur papers.
- 42 Henderson informed the Committee in January 1828, 'I am desirous of waiting until despatches arrive here from the Directors as to their final decision as regards the coal establishment', ibid.
- 43 Court of Directors to Huskisson, 30 Nov. 1827, Macarthur papers.
- 44 Ibid.. The extent to which the Colonial office had accepted the company's interpretation of Darling's position is indicated by an unsigned marginal comment on Darling to Sir George Ramsay: 27 Dec. 1827, 'this shows the caution with which the statements of the Company must be received. I am pretty sure that they stated that the Gov. had refused to put Henderson into possession of any land to enable them to work for coal, etc.', C.O. 201/194.
- 45 J.S. Brickwood to R. Dawson, 29 Dec. 1827, Macarthur papers. Huskisson did not contemplate a monopolistic arrangement with the company as he agreed that Blaxland should mine and sell coal, F. Leveson Gower to Darling, 1 Mar. 1828, HRA 1, vol. 14, pp. 3-4.
- 46 Minutes of a conference, A.A. Company and Sir George Murray, 10 June 1828, Macarthur papers
- 47 Busby to McLeav. 22 Oct. 1827, Busby, Letterbooks.
- 48 Ibid.
- 49 Ibid; thus when the Australian Gas Light Company wanted to know the position it had to address a memorial to the government: 'it being generally understood that the Australian Agricultural Company had received from the Government...the privilege of being the exclusive workers of coal mines in this Colony for a long term of years...your Memorialists felt it their duty...to apply to the local Government for official information as to the extent and duration of such monopoly'. A.G.L. Company to Glenelg, 20 May 1839, C.O. 201/235.
- 50 Murray to Darling, 31 July 1828, ibid., 201/203; Darling to Murray, 27 Dec. 1828, ibid. 201/194.
- 51 Enclosures, Darling to Murray, 27 Dec. 1828, op. cit.. That mispresentation had occurred is borne out by W. Barton to Brickwood, 26 Jan. 1829, AACR
- 52 W.E. Parry, Journal, vol. 1, pp. 155, 181, 240 and vol. 2, p. 87, the 'iron railway' had been taken to the Manning River for possible use on a sugar plantation; S.G. 17 Dec. 1831.
- 53 For Blaxland's mine, operated in association with his saltworks, see J.W. Turner, 'Manufacturing in Newcastle, 1801-1900'. The 1828 Blue book refers to two mines being at work, one public and one private; the 1831 Blue book records the recent relinquishment of the private mine, probably Blaxland's. For Platt's mine see Dumaresq to Court of Directors, 26 April 1836, AACR.
- 54 Return of coal sales, 1827-1831, in Parry to Court of Directors, 6 Feb. 1832, AACR, N.S.W. blue books, A.A. Company Annual reports.

- 55 W.E. Parry, *Journal*, vol. 2, p. 85, James Paterson to Committee, N.S.W. Legislative Council, *Report from the Select Committee on the coal inquiry*, p. 35.
- Dumaresq to Court of Directors, 4 May 1835. King to Court of Directors, 10 Oct 1839, 14 Jan. and 1 May 1841, AACR, King estimated the monthly consumption of the steamers at 250 tons in 1841 when nine or ten were in use. Assuming ten months' operation per annum, 22,300 tons were needed for nine vessels. Captain Phillip Parker King, 1791-1856, Commissioner of the AA Co from 1839 to 1850, was the son og Governor Philip Gidley King, Australian dictionary of biography vol. 2, pp. 61-4
- 57 J Ginswick, 'Foundations of the Australian Gas Light Company', JRAHS, vol. 45, 1959 pp. 226-65; King to Court of Directors, 24 June 1841 and 15 July 1844, AACR
- 58 W.E. Parry, Journal. vol. 1, p. 264; G.G. 20 Aug. 1834; Dumaresq to Court of Directors 10 Aug. 1834, A.A.C.R., Lt. Gov. Franklin to Marquis of Normandy, 31 Oct. 1839, Western Port Committee to Thompson, 10 May 1838, in Glenelg to Solicitor General, 23 Nov. 1839, Gipps to Stanley, 1 Jan. 1844, C.O. 280/110, 201/203, 201/342.
- 59 J. Bach, 'Sea communications between Sydney and Melbourne hefore 1860', JRAHS, vol. 41, pp. 9ff; Hunter River gazette. 25 Dec. 1841.
- 60 NSW blue books.
- 61 D. Pike, Paradise of dissent.
- 62 John Williams began mining coal in Queensland in 1842, Australian dictionary of biography, vol. 2, p.600. The Collie field in Western Australia was not opened up until 1896, F.K. Crowley Australia's western third, p. 135.
- 63 E. J. Tapp, Early New Zealand, 1788-1841, p. 154, Hamilton to Stephen, 20 Apr. 1847, H.R.A. I, vol. 25, p. 522.
- 64 J. Thacker and J. Paterson to the Committee, N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry, pp. 12, 35; N.S.W. statistical returns, 1837-46, CO 201-384, p. 23
- 65 W.E. Parry to Court of Directors, 5 Dec. 1834, King to Court of Directors, 14 April 1841, Court of Directors to King, 18 Sept. 1846, AACR, the Madras report appeared in the Australian. 23 March 1839, Hunter River gazette, 12 Feb. and 28 May 1842. If one rupee equalled one shilling, the price was 22s.6d.
- 66 SH 1 and 26 Sep. 1842. Steamship services had been established on the coasts of Chile and Peru in the early 1840s. Lieutenant Woore to Hydrographer, letter W559, 1845, advising of his success in running this service from 1842 to 1844, Great Britain, Admiralty, Hydrographic Department. Letters from surveyors
- 67 Wall to Committee, N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry
- 68 J. Thacker to Committee, ibid., p. 11
- 69 Ibid., pp. 11-2. The value of the Spanish dollar was approximately 4s.6d
- King to Committee N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry: p. 33; J. Thacker, J.P. MacKenzie, T. Hyndes, J.R. Whittell, J. Struth and A. Huntley to committee, ibid., However, their opinions may have been coloured by the A.A. Company's intrusion into the Sydney coal market to reduce prices between 1840 and 1846. King to Committee, ibid., p. 32. These impurities may have been the conglomerate that overlay the Dudley Seam or what Alexander Berry described as 'beds of clay with vegetable impressions' which lay between the seams. D. F. Branagan, 'Geology and coal mining in the Hunter Valley, 1791-1861', pp. 36–38.
- 71 'Return of average number of convicts employed', HRA I, vol. 14, p. 637, Darling to Murray, 16 Feb. 1829, ibid., p. 647; Dumaresq to Macleay, 10 Aug. 1835, CSIL A1214, p. 289
- 72 Ibid. pp. 289-93; Bourke to Glenelg, 6 Oct. 1835 and enclosures, H.R.A. I, vol. 18, pp. 132-3; table 6
- 73 Appendix 4, N.S.W Legislative Council, Report from the Select Committee on the coal inquiry
- 74 W.E. Parry to Court of Directors, 20 Sept. 1830. Dumaresq to Stanley, 19 Sept. 1833. Bourke to Glenelg, 6 Oct. 1835, C.S.I.L. A1214; Dumaresq to Court of Directors, 20 July 1836 and enclosed memorandum to Croasdill, Dumaresq to McLeay, 1 May, 6 and 12 Aug. 1836. Dumaresq to Court of Directors, 24 Aug. 1837, King to Court of Directors, 10 Oct. 1839, AACR.
- 75 Ibid., 25 May 1839; King to Thompson, 16 Nov. 1839, CS1L. King to Court of Directors, 10 April 1840, AACR. For the Legislative Council's evasion of Glenelg's orders to increase the number of convicts on the company's pastoral, estates, see Achison, p. 233. The fact that Dumaresq was

- related to Darling. Bourke's predecessor, and that Westmacott, who had been Bourke's aide, was permitted to open a mine on land that was clearly affected by the reservation, indicates the difficulty of separating principle from personal preference in the making of coal policy. A.G.L. Shaw Heroes and villains in history. Governors Darling and Bourke in New South Wales, pp. 27-8; It does appear that Gipps' urgent instructions to assign more labour to the company in 1839 met with resistance from within his administration although the problem may have stemmed from the unsuitability of the convicts available. Gipps to Russell, 22 July 1840, CO 201/298.
- Memorandum for William Croasdill, 4 May 1835, Dumaresq to Court of Directors, 25 Feb. and 20 July 1836, Dumaresq to Macleay, 1 May 1836, AACR Bourke's decision is consistent with his 1834 instructions to 'increase the severity of convict discipline, Shaw, Heroes and villains in history, p. 18.
- 77 Dumaresq to Court of Directors, 20 July 1836, Dumaresq to Croasdill, 20 July 1836, Dumaresq to Macleay, 12 Aug. 1836. A A C.R.
- 78 MM 26 Oct. 1844. Yet there were only forty six convicts working in the company's mine in that year, table 7
- 79 MM 22 Jan. and 17 Feb. 1844.
- 80 A.A. Company, Annual reports
- 81 King to Court of Directors, 24 June 1841, AACR
- 82 Dumaresq to Court of Directors, 26 April 1836, op. cit.; 'All who arrive are extremely discontented with fancied grievances they all expect more than can be allowed', King to H.T. Ebsworth, 4 Sept. 1841, AACR
- 83 King to Court of Directors, 30 Oct. 1840 and 19 Mar. 1841 ibid.
- 84 Ibid. 30 Oct. and 13 Nov. 1840, 24 June 1841; Australian dictionary of biography, vol. 1, pp. 298-300.
- 85 M.M., 29 July and 12 Aug. 1843; King to Court of Directors, 30 Oct. 1840, A.A.C.R.
- 86 Ibid
- 87 fbid., 14 Jan and 24 June 1841
- 88 Ibid., 14 Jan and 19 Mar, 1841
- 89 Ibid., I Sept 1842
- 90 MM. 29 July and 12 Aug 1843
- 91 Ibid., 26 Oct. 1844.
- 92 Lindsay had been recommended by the Scottish miners of 1840, King to Court of Directors, 19 March 1841, AACR Maitland Newcastle gaol entrance and description books', N.S.W. Colonial Secretary, Records. For Tulip vs King see the verbal judgment reprinted in NMH 19 Nov. 1881, and SMH 28 Nov. 1846, for other cases see J.W. Turner, 'Newcastle miners and the Master and Servants Act. 1830-1862', Labour history. May 1969, pp. 30-6.
- 93 Court of Directors to King, 18 Dec. 1846, AACR
- 94 For evidence of militancy among mine workers of the north of England, where Henderson and his party originated, see R. Fynes, *The Miners of Northumberland and Durham*; for industrial strife in Welsh mines and for the influence of 8ritish mining on the N.S.W industry R.A. Gollan, *The Coal miners of New South Wales*, pp. 17-8
- The Colonial Government chose to regard 1830 as the commencement of the agreement with the company. Governor's minute on Captain Westmacott's claim, CO 201/286. The importance of coal to the steamship owners ensured that they would challenge the company's monopoly, viz. Westmacott's intention was to supply fuel to a steamer, Eales of H.R.S.N. Company, persistently sought alternative coal sources in the Hunter area and at Moreton Bay, King to Court of Directors, 1 Sept. 1842, A A CR. the Western Port Committee had steamships in mind, and in 1829 the Steam Navigation Committee tried to persuade the Australian Gas Light Company to challenge the A.A. Company, Ginswick, 'Foundations of the Australian Gas Light Company', op. cit., p. 264, fn. 158.
- 96 J.L. Platt, settler, not to be confused with the convict miner, John Platt, Australian dictionary of biography. vol. 2, p. 337, the promoter of the proposed gas and steam company was J.T. Wilson, a prominent Sydney businessman who was later exposed as a swindler. They heard nothing more from Wilson, I believe it to be a hoax', commented Platt on 6 March 1836, quoted by W. Goold in The Borough of Newcastle'. N.H.D.H.S. Journal, vol. 8, 1954, p. 116, W.E. Parry, Journal, vol. 1, p. 180. Dumaresq to Court of Directors, 26 April and 20 July 1836, AACR.

- 97 A.A. Company, Annual report for 1892, p. 11, King estimated that £20,000 plus interest charges would enable the company to buy all the coal lands with frontages to Lake Macquarie and so freeze development there until the demand grew. He also suggested the purchase of the waterfrontage at Ipswich in order to prevent the coal there being exploited, King to Court of Directors, 28 April and 5 Aug. 1843, AACR.
- 98 Gipps to Glenelg, 4 July 1838, C.O. 201/174; Brownrigg to Glenelg, 30 Oct. 1838, ibid. 201/280; S.H. supplement, 28 Aug. 1840; marginal notes on Brownrigg to Glenelg, 30 Oct. 1838, op. cit...
- 99 Glenelg to Brownrigg, 7 Dec. 1838, Normanby to Brownrigg, 27 Feb. 1839, CO. 202/39.
- 100 King to Court of Directors, 11 Oct. 1841, A.A.C.R. Report of Mr Cameron upon the strata of coal at Western Port, Australian, 12 Dec. 1840.
- 101 Gipp's minute on Captain Westmacott's claim, C.O. 201/286, pp. 159-60; Brownrigg to Russell, 7 Dec. 1839, ibid. 201/291; Gipps to Russell, 22 July 1840, ibid. 201/298; King to Court of Directors. 25 May 1839, AACR
- 102 Notes, Russell to Brownrigg. 7 Jan. 1840, CO 201/291.
- 103 W.C. Wentworth and Robert Dawson promoted this company which was to have a capital of £100,000, Australian, 7 and 25 July and 5 Dec. 1840, 30 Jan. 1841; S.G. 5 Sept. 1840.
- 104 Australian, supplement, 10 July 1840.
- 105 Threlkeld's 'discovery' was reported in S.G. on 3 April 1834, but Henderson had described these seams seven years earlier in his 'Report on the Newcastle coalfields', op. cit., p. 322. Threlkeld unsuccesfully offered to lease his property to the Australian Gas Light Company in 1839 and again after his discovery of the 'cannel' coal in 1841. His coal was inferior to Newcastle coal for gas making, Ginswick, 'Foundations of the Australian Gas Light Company', op. cit., pp. 250-1.
- 106 King to Court of Directors, 14 Jan 1841, AACR
- 107 S.M.H. 19 Dec. 1844; Australian, 13 May 1841; Threlkeld to committee, N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry, pp. 13-9.
- 108 Gipps to Stanley, 19 May 1843; Stanley to Brownrigg, 12 Mar. 1844, Stanley to Gipps, 15 Mar. 1844;
 CO. 201/333; King to H.T. Ebbsworth, 4 May 1843, King to Court of Directors, 7 Nov. 1843, AACR.
- 109 For R. Kiddie's mine see M.M. 25 Mar. 1843; for Turner's mine see Hunter River gazette, 18 Dec. 1841; King to Court of Directors, 1 Sept. 1842, A.A.C.R.; J. Paterson to committee, N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry, p. 34; for the Brown's origins see J.W. Turner, 'James and Alexander Brown, 1843-77', Newcastle history monographs no 4; Court of Directors to King, 19 Sept. 1845, A.A.C.R., King to Thomson, 16 Nov. 1844, CS.I.L.
- 110 King complained that C. Cooper Turner, the Civil Crown Solicitor who was a director of the Hunter's River Steam Company...and was a near relation to the principle owner of the Sophia Jane both of which...interests entirely use the coal which is the reserved right of the Crown'. King to Thomson, 16 June 1845, ibid., S.M.H. 25 Aug. 1845; J.G. Legge, A selection of Supreme Court cases in New South Wales. vol. 1, pp. 312-5; Deputy Surveyor General Perry to Committee, N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry, p. 12.
- 111 Even the Attorney-General appears to have been unaware of the nature of the agreement between the company and the Crown. Report of N.S.W. Legislative Council debate in S.H. supplement, 28 Aug. 1840.
- 112 Bushy to Colonial Committee, 18 Feb. 1826; J. Henderson, 'Report on the Newcastle coalfields', 8 May 1827, op. cit. pp.321-31.
- 113 N.S.W. blue book, 1829
- But the company did persuade the Colonial Office that the price to the Government would be eight shillings per ton, and not a lower price than the public paid, Bourke to Stanley, 24 Oct. 1833 and enclosures, C.O. 201/233; expenditure on the mine and the wharf exceeded £15,000, J. Smith to Goderich, 6 Apr. 1832, N.S.W. Colonial Secretary, Records, A1269, pp. 203-5. By 1837 the cost of the colliery establishment had increased to £22,463 and that continued to be the cost placed upon the mines by the company until 1846, A.A. Company, Annual reports. 13th and subsequent; Bourke to Parry, 27 July 1833, CSOL King to committee, N.S.W. Legislative Council, Report of the Select Committee on the inquiry. pp.20, 25.
- 115 King to Court of Directors, 1 Sept. 1842, A.A.C.R. The chief reduction in costs was in wheeling, 1s.4d. per ton: the total reduction of two shillings is an estimate based on this.

- 116 H. Twiss to J. Strettal Brickwood, 31 July 1828, clause 6. Appendix 1, *Macarthur papers*. Expenditure at Newcastle increased in 1840 by £3,716, (one third of the cost of bringing out the miners and £800 for colliery apparatus from England plus wages of hired colonial and immigrant labour). King to Court of Directors, 1 May 1841, *AACR*.
- 117 King to Committee, N.S.W. Legislative Council, Report of the Select Committee on the coal inquiry. p. 24.
- 118 King to Court of Directors, 5 Aug. and 7 Nov. 1843, A.A.C.R.
- 119 Ibid.; Appendix 1, Threlkeld to Committee, N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry, pp. 14, 17. After Leichhardt's visit to Threlkeld's estate he described this coal: 'It burns very well, does not coke, and like wood and peat leaves a fine white ash'. The Letters of Ludwig Leichhardt, ed. by Aurousseau, vol. 2, pp. 606-7.
- 120 S.H. 9 Aug. 1843; K.H. Clouten, Reid's Mistake, p. 54; King to Court of Directors, 5 Aug. 1843, 25 Oct. 1844, AACR.
- 121 King to Court of Directors, 15 and 18 July and 25 Oct. 1844, ibid.; Fitzroy to Grey, 5 Dec. 1848. HRA I, vol. 26, p. 732.
- 122 However the total of £30 per share had been contributed progressively as calls were made; A.A. Company to Grey, 4 Nov.1846, H.R.A. I,vol. 25, p.269. The company calculated the annual return to shareholders at 2½% between 1835 and 1839, Brownrigg to Normanby, 30 May 1839, C.O. 201/291.
- 123 Gipps to Russell, 22 July 1840, ibid. 201/298.
- 124 King to Court of Directors, 12 Mar. 1845, A.A.C.R., R. Knight, Illiberal Liberal, Robert Lowe in New South Wales. 1842-1850, passim, but particularly pp. 8, 99-100: 'He insisted on the need of clearly defining the privileges and rights of the legislature, if that body were to wrest power from the Governor and the Colonial Office'.
- 125 Cour of Directors to King, 18 Dec. 1846, A.A.C.R.
- 126 Court of Directors to King, 19 Feb. 1847, ibid.
- 127 S.M.H. 18 Aug. 1847. The official announcement of the end of the coal reservation did not appear until 1850, M.M. 2 Feb. 1850.

- The gangs and their guards were withdrawn following the completion of the breakwater in 1846. The population of Newcastle at the 1846 census was 1,471 five years later it was 1,340. 'Citizen' to the Editor, *M.M.* 28 June 1848; *M.M.* 20 June 1849.
- 2 N.S.W. blue books and N.S.W. statistical registers.
- 3 N.S.W. blue books, 1848, 1849, 1850; A.A. Company, Annual reports, S. Stutchbury to the N.S.W. Geological and Mineral Survey, 'Observations on the coal district of Hunter River', N.S.W. Colonial Secretary, Records, pp. 12-3; James Mitchell, M.L.C.: was a director of the Australian Gas Light Company and of the Hunter River Steam Navigation Company. He used his influence to ride roughshod over the A.A. Company's rights in forcing a tramway act through the Legislative Council in 1850 with the aid of Stuart Donaldson who appears to have been related to the Donaldsons who were mining the Burwood Estate. Brownrigg to Grey, 2 May 1851, 'Papers relative to Mitchell's Tram Road Act', N.S.W., Legislative Council Journal 1851
- Stutchbury, 'Observations on the coal district of Hunter River, op. cit, only 5' 5" of the seam was being mined, J.D. Lang, An Historical and statistical account of New South Wales, vol. 2, pp. 88-9; W. Keene, 'Our coalfields', in the Australian almanac and country directory, p. 53. The Newcastle Coal and Copper Company won the Australian Gas Light Company contract in 1856 and in 1859, N.C.C., 'Reports', Feb. 1856, Dec. 1859, Martin papers; W.J. Lennon and R. Peel Raymond, 'Report on the Newcastle Coal and Copper Company', July 1864, ibid.
- 5 D.F. Branagan, *The Borehole Seam a particular study of coal formation and utilisation in New South Wales.* p. 3; for the 1856 analysis see E.C. Merewether to Deas Thomson, 31 Dec. 1863, *CS1L* A1533, p. 575. The results were:

Carbon	80.00
Oxygen, nitrogen etc.	9.14
Hydrogen	5.46
Sulphur	0.92
Ash	4.48
	100.00

Specific Gravity 1.326

The sulphur reading was high and ash content low when compared with modern analyses of this seam by the staff of the B.H.P. Company Geology Department

- 6 W. Keen, 'Our coalfields' op. cit, pp. 52-3
- 7 Ibid.
- 8 Ibid., p. 50; Milton to *NM.H.* 23 Aug. 1910. Keene considered coke made from Newcastle coalamap to be of good quality but the Newcastle Coal and Copper Company found it difficult to sell, Keene. op. cit.; p. 54; N.C.C. Reports, 30 June 1856, op. cit.
- 9 *N.S.W. blue books*; *N.S.W. statistical registers*; the *Illawarra mercury* reprintd in *M.M.*, 3 July 1856. Wollongong and Bellambi coals were reported to be competing with Newcastle coal, *N.T.N.T.*, 20 Nov. 1858; *N.C.* 17 July 1861. Wollongong Cove had an artificial basin for loading coal and was capable of sheltering small craft from easterly gales in 1867. Bellambi coal was loaded from jetties, map. A1263 in *Archives* of Great Britain. Admiralty, Hydrographic Department
- 10 Report of the Geological surveyor, N.S.W. Legislative Council, Votes and proceedings, vol. 2, 1854, p. 1385.
- 11. Ibid.; M.M. 9 Sept. 1848, 3 Aug. 1850, 2 June 1856; S.M.H. 15 June 1854. In 1854 Tasmania imported 12,724 tons of coal valued at £36,831 £11,003 from Great Britain and £25,828 from British colonies. By 1857 imports totalled 8,726 tons, 1304 from Great Britain and the remainder from New South Wales, Statistics of Tasmania 1854-1857.
- 12 London morning chronicle, reprinted in M.M. 25 April 1857. Cargoes of English coal were for sale in Sydney in 1853. S.M.H.. 12 July and 15 Aug. 1853; Henry Brown, The Copper industry of South Australia, pp. 26ff; M.M., supplement, 25 April, 1857; P. Cowburn, The Royal Navy and the Australian colonies. 1859-1891, pp. 225-36.
- 13 J.D. Lang, An Historical and statistical account of New South Wales, vol. 2, p. 196
- 14 M.M. 18 Sept, 1850, 22 Nov. 1851; S.M.H. 12 Apr. 1851. It became the Newcastle Coal and Copper Company.
- 15 M.M. 30 Oct. 1850, 15 Feb. 1851. Donaldson chartered the Chief to take Burwood coal to San Francisco and intended to send the Cadet to Panama. For a list of the ships for San Francisco and

Chapter 3
Panama, see M.M. 7 Dec. 1850. K.H. Burley, 'The Overseas trade in N.S.W. coal and the British

shipping industry, 1860-1914', Economic record, vol. 36, Aug. 1960; Brownrigg to Grey. 2 May 1851; 'Papers relative to Mitchell's Tram Road Act', N.S.W. Legislative Council, Journal, Dec. 1851 pp. 228-31; Hodgson to Court of Directors, 11 May 1860, 1/33, 4.4 CR

228-31; Hodgson to Court of Directors, 11 May 1860, 1/33, A.A.C.R.

16 Newcastle's first telegraphic office was opened in 1861 and played an important role in the coal trade, each company devising its own telegraphic code, *N.C.* 2 Feb. 1861; K.H. Burley, 'The Overseas trade in N.S.W. coal and the British shipping industry, 1860-1914', op. cit.; The Coal and Copper Company lost £3,000 on speculative intercolonial and foreign shipments in the first half of 1863, N.C.C. 'Reports', 30 June 1865, *Martin papers*.

- 17 Observer, 26 Feb. 1853, reprinted in S.M.H., 18 June 1853; for Keene's work see Australian almanac and country directory. Sir Daniel Cooper, Sydney merchant anmd ex-speaker of the N.S.W. Council, acted as the colony's Agent General in London after 1861. Australian dictionary of biography. vol. 3, p. 452; for his letter to The Times see S.M.H. 19 May 1862.
- 18 For the expansion of steamship services in the 1860s see John Bach, A Maritime history of Australia, ch. 5; N.S.W. statistical register, 1872; N.C. 2 Oct. 1865.
- 19 N.S.W. Department of Railways, Report, 1861-1898; N.C.C. 'Report', op. cit., 11 Jan. 1858; G.G. 7 June 1859.
- 20 Geelong advertiser, 29 Sept. 1856, reprinted in M.M. 7 Oct. 1856.
- 21 N.S.W. statistical registers
- 22 M.M. 28 Dec. 1853. By 1860 there were 6,000 tons of shipping on the Newcastle register, Hodgson to Court of Directors, 11 May 1860, A.A.C.R.
- 23 M.M. 12 Jan., 6 and 17 July 1850; Maitland and Newcastle gaol entrance and description books, N.S.W. Colonial Secretary, Records, 2/2020.
- 24 M.M. 13 July 1850; A.A. Company, Annual report, 1850, pp. 10-1.
- 25 King to committee, N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry, p. 33; M.M. 17 July 1850; T.A. Coghlan, Labour and industry in Australia, vol. 2, p. 687.
- 26 M.M. 7 June 1851.
- 27 A.A. Company, Annual report, 1854, pp. 22-3; Brownrigg to Ravenshaw, 10 June 1854, AACR.
- 28 The A.A. Company directors decried high prices, asserting that steam navigation would be impeded, new mines would be opened and the willingness of miners to work reduced, Court of Directors to Hodgson, 27 Jan. 1855, A.A.C.R. The Australian Gas Light Company imported 3,000 tons at a landed cost of £3.10s. per ton, Observer, 26 Feb. 1853, reprinted in S.M.H. 18 June 1853.
- 29 Prospectus, appendix A, minutes of evidence, N.S.W. Legislative Council Select Committee on the Australasian Coal Mining Company's Bill, N.S.W. Legislative Council, *Votes and proceedings*, 1853-1854, vol. 2, pp. 525-7. It was erroneously reported that many Chinese were already working as colliers on the A.A. Company's mine at 'wonderfully low terms' of six pounds p.a. plus rations, *S.M.H.* 18 June 1853; *M.M.* 20 Mar. 1852.
- 30 Ibid. Kemp, the father of Charles Kemp mentioned in footnote 63 following, and either Alexander Brown, the A.A. Company overman, or Alexander Brown, the junior partner in J. and A. Brown.
- 31 A.A. Company, Annual report no. 28; Brownrigg to Court of Directors, 15 June 1853, A.A.C.R. for the articles of agreement of a miner from Aberdare, see N.M.H. 20 Aug. 1910; R.A. Gollan, The Coal miners of New South Wales, p. 29.
- 32 M.M. 28 July 1853; R. Whytte, 'Report', 4 Dec. 1856, AACR.
- 33 However, the low 1855 profit appears to have been affected by railway construction costs which may more properly be regarded as capital expenditure, A.A. Company, Annual report, July 1857, p. 21; Court of Directors to Brownrigg, 8 March 1854, AA.C.R.
- 34 Various witnesses had stressed the high costs of this company's colliery department in 1847, but their evidence is suspect: they opposed the monopoly. N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry. pp. 3, 46-7, Whytte, Report, op. cit.; A. Hodgson to Court of Directors, 5 Oct. 1853.
- N.C.C. Report, 20 Jan. 1855, op. cit; Lennon and Peel Raymond, 'Report on the Newcastle Coal and Copper Company', op. cit.; N.T. & N.T. 15 Jan. 1859.
- 36 R.F. Holder, Bank of New South Wales, vol. 1, p. 268; J. Bingle, Past and present records of Newcastle, New South Wales, p. 30; The Australian portrait gallery and memoirs of representative colonial men, p. 122.

- 37 M.M. 27 Nov. and 4 Dec. 1856; Newcastle Chamber of Commerce, Annual report, 1856-7, for the effect of tonnage dues, see 'Alpha' to N.C. 7 June 1865. A bill to provide a coal meter had been rejected by the Legislative Council, S.M.H. 11 Nov. 1854; N.T. 26 Sept. 1857.
- 38 N.T. & N.T. 16 Feb. 1859; Newcastle Chamber of Commerce, Annual report, 1856-7, pp. 6,14; N.T. 15 July and 12 Sept. 1857; N.C. 8 and 15 Nov. 1862.
- Rain affected roads between local collieries and Morpeth forced Hunter River steamers to coal at Newcastle for the first time ever, in 1863, N.C., 11 may 1863. An example of this problem at its most acate occurred in the South Australian copper smelting industry where haulage of coal to, and ore from, the mines was suspended during the winter. H. Brown, The Copper industry of South Australia, p. 59; N.S.W. Legislative Council, Report from the Select Committee on the coal inquiry, pp. 39-40; M.M. 11 June 1853.
- 40 Ibid. 20 Nov. 1852: Lennon and Peel Raymond, 'Report on the Newcastle Coal and Copper Company', op. cit., p. 139, M.H. Ellis, A Saga of coal, pp. 55-6
- 41 For the A.A. Company vs Mitchell, see 'Papers relative to Mitchell's Tram Road Act', N.S.W. Legislative Council, Journal, Dec. 1851; M.H. Ellis, A Saga of coal, p. 56; James Mitchell vs James Brown et al, S.M.H. 10 June 1854; N.C.C. 'Reports', Dec. 1861, June 1862, Martin papers; A.A. Company Annual report, 1854; Newcastle branch of the Bank of Australasia to its London office, 27 Oct. 1854, A.N.Z. Bank archives.
- 42 N.C.C. Report, 18 Jan 1854 and 31 Dec. 1858 notes to accompany report, Martin papers; N.T. 6 June and 16 Dec. 1857. The Great Northern Railway reduced travelling time between East Maitland and Newcastle from as much as five hours by horse drawn vehicle to thirty two minutes; M.M. 2 Apr. 1857.
- 43 Newcastle branch of the Bank of Australasia to its London office, 27 Oct. 1854, 7 May 1855; A.N.Z. Bank archives. This reduction had already been reached in competitive conditions as the approach of summer eased demand, John Bingle's trade circular, M.M., 8 Nov. 1854. Conversely, price rises usually occurred in early winter, e.g., from 18s.6d. per ton to 24s. per ton in June 1854, S.M.H., 30 Sept. 1854; A.A. Company, Annual report, 17 July 1857, p. 21.
- 44 Brownrigg to Court of Directors, 15 May, 13 Sept., 6 Nov. and 4 Dec. 1855, AACR. The transition of the economy from inflation to recession in the second half of 1854 may have strengthened the decline of coal prices, W.A. Sinclair, The Process of economic development in Australia. p. 110.
- 45 The reformed company had a capital of £100,000: it paid £30,000 for the assets of its precursor, plus 600 acres of the Victoria Tunnel seam, Newcastle Coal and Copper Company, 'Prospectus' and 'Report', 26 Feb. 1856, op. cit.; SMH. 21 Nov. 1855.
- 46 Hodgson to Court of Directors, 15 July 1857 AACR; Returns to shareholders of the Coal and Copper Company between 1856 and June 1862 totalled £117,115. Lennon and Peel Raymond, 'Report on the Newcastle Coal and Copper Company, op. cit., p. 117; NT. 14 Oct. 1857.
- 47 Newcastle Coal and Copper Company, Reports, op. cit.
- 48 Ibid., 20 Mar. 1855, 5 July 1856, 30 June 1857.
- 49 Lennon and Peel Raymond, 'Report on the Newcastle Coal and Copper Company', op. cit.
- 50 Deeds of Lodge Thistle Kilwinning, Minmi; Hodgson to Court of Directors, 12 Mar. 1859, AACR.
- 51 Ibid., 10 Feb. and 11 May 1860; Brown's market share is based on the weekly shipping returns in the Newcastle chronicle during 1862; N.C. 14 June 1862.
- 52 Deeds to a portion of Newcastle Wallsend Coal Company's estate. This Alexander Brown was not related to the family which founded J. and A. Brown, M.H. Ellis, A Saga of coal, pp. 52ff.
- 53 Ibid., pp. 53-4
- 54 Ibid., pp. 52-3.
- 55 However it is not clear whether the full capital was raised, Ellis referring only to the subscription for shares to the value of £59,850, within 12 days of the issue of the prospectus. M.H. Ellis, A Saga of coal, pp. 52-6; Australasia to London, 21 Dec. 1866, A.N.Z. Bank archives.
- 56 M.H. Ellis, A Saga of coal, p. 57.
- 57 M.M. 19 Mar. 1856, 29 May 1860; N.M.H. 26 Jan. 1886. A. McLagan found a letter in N.M.H. 12 Feb. 1855 confirming this sequence and naming the officials of the Borehole Lodge as James Fletcher, R.W. Hogg and C. McKeen, A. McLagan, History of Newcastle District trade unions. 1806-1943.
- 58 Gollan, The Coal miners of New South Wales, p. 29; M.M. 19 Mar., 12 and 19 Apr. 1856; N.M.H. 12 Feb. 1855. The A.A. Company miners struck on similar grounds in July 1857 basing their wage claims

- on the sliding scale which was common in Welsh mines, *NT* 25 July 1857; Newcastle Coal and Copper Company, 'Report', June 1857, op cit. Stockpiling was subsequently opposed by the unions but small coal continued to accumulate, e.g. 10,000 tons at one mine, Newcastle Coal and Copper Company, 'Report' 11 Jan. 1858, op. cit.
- 59 M.M. 26 May 1858; Hodgson to Court of Directors, 19 Nov. 1860, A.A.C.R.
- 60 NT & NT 26 May 1858. The 1854 Act 'for the registration and inspection of coal mines in the colony of New South Wales', no. 32 of 18 Vic. was the first of a series of acts by which the Government regulated coal mining. It merely provided for the appointment of an examiner, the registration of mines and the keeping of plans of collieries. N S.W., Parliament, Collection of statutes affecting New South Wales, 1861, N.C. 26 Jan. 1861.
- 61 M.M. 29 May 1860; N.C. 5 Jan. and 23 Feb. 1861; Cheswick to the editor, N.C. 28 Aug. 1861.
- 62 MM. 29 May and 3 July 1860; NC 5 Jan. and 22 May 1861, 13 Sept. 1862.
- 63 Ibid., 4, 6, 8, 11 Dec. 1860.
- 64 N.C. 26 Jan. 1861, minutes of evidence, Select Committee on the Coal Fields Regulation 8ill, N.S.W. Legislative Council, Journal, 1X, pt. 1, 1863, passim. Bourn Russell and James Mitchell were coal owners; Merewether married Mitchell's daughters in 1860 and was appointed General Superintendent of the A.A. Company in mid-1861; Charles Kemp, committee chairman, was not only chairman of the Newcastle Wallsend Company but also sat on the boards of two steamship companies and the Australian Gas Light Company. M.H. Ellis, A Saga of coal, p. 66; Australian dictionary of biography, vol. 2, pp 41, 237, vol. 5, pp. 250-1.
- 65 Ibid., p. 21; Newcastle Coal and Copper Company, 'Reports', 30 June and 31 Dec. 1861, op. cit., report from the Select Committee on the Coal Fields Regulation Bill, minutes of evidence, op. cit., p. 21.
- 66 A. Brown to Merewether, 8 Oct. 1862, AACR
- 67 N.C. 1 June 1861, 25 Aug. 1B68.
- 6B MM. 3 July, 15 Oct., 27 Nov. 1860; £864 had been raised for strike pay, MM 4 Dec. 1860; NC. 5 Jan. 1861; J.W. Turner, 'Newcastle miners and the Master and Servants Act, 1830-1862', op. cit.
- 69 T. A. Coghlan, Labour and industry in Australia, vol. 2, pp. 694-701; M.M. 30 July 1857.
- 70 NT & NT. 20 Nov. 1858. Net immigration into Australia proceeded at an annual rate rarely equalled in its history and there was chronic unemployment, W.A. Sinclair, The Process of economic development in Australia, pp. 84. 89.
- 71 N.C. 23 Feb. and 22 May 1861; Newcastle Coal and Copper Company 'Report', 30 June 1862, op. cit., M. Charlton, Minmi mine manager, stated that the limit on earnings caused the proprietors to take on hundreds more miners, N.C. 25 Nov. 1863.
- 72 Though the Newcastle colliery proprietors' association changed its name from time to time its hereafter referred to for convenience as the Associated Northern Collieries (A.N.C.). A.N.C. Minutes, I. Aug. and 11 Oct. 1861, A.A.C.R.
- 73 NC 12 Oct. 1861 Merewether to Court of Directors, 18 Oct. 1861, AACR
- 74 R.A. Gollan, The Coal miners of New South Wales, pp. 40-4.
- 75 The Tomago Colliery had been started in 1856 a few miles north of Newcastle on the Hunter River, but its output had never been large: the nature of the seam contributed to its failure in July 1863. W. Keene, 'Report on the coalfields of New South Wales' CO 2017538; M.M. 9 Dec. 1856, N.C. 21 Jan. 1863. The Co-operative Company was short of capital, £30,000 nominally, probably only £15,000 and though it had an excellent coal lease, it was not a significant producer until taken over by William Laidley and Company in 1869. Its sale is reported in S.M.H. 8 Feb. 1869.
- Prospectus in Scottish Australian Mining Company Records; A. Hutchinson, The Part played by the Scottish Australian Company in the development of the Newcastle coal field, pp. 26-7; Grainger to Morehead, n.d., S A.M R; Australian dictionary of biography, vol. 2, p. 257. Lambton was named after the Earl of Durham's estate.
- 77 Hodgson to Groves and Broughton, Aug. 1857 AACR; A. Barnard, Visions and profits, pp. 78-9.
- 78 Report to A.A. Company diectors, 2 April 1857, in MM., 16 June 1857; A.N.C. minutes, 1 Aug. 1861. AA.CR
- 79 NSW statistical registers; N.S.W. Mines Department, Annual report, 1881
- 80 P.M. Sweezy, Monopoly and competition in the English coal trade, p. 34, A. Barnard, Visions and profits, p. 79, Grainger to Morehead, 26 July and 26 Sept. 1866, S.A.M.R.

- 81 Merewether to Court of Directors, 19 Jan. 1866, A. Brown to Merewether, 1 and 22 Feb. 1867, A.A.C.R.; M.H. Ellis, A Saga of coal, p. 102.
- 82 Copy of an agreement re the price of coal, 21 Nov. 1866, AACR
- 83 S.M.H. 16 Apr. 1866.
- 84 Fitzroy to Russell, 10 Aug. 1855.. C.O. 201/485.
- 85 Ibid
- 86 The report of the Geological Surveyor for 1853, N.S.W. Legislative Council, Votes and proceedings, vol. 2, 1854, p. 1138.
- 87 The Wallsend Company bought 1,039 acres, the Lambton colliery was established on 1,240 acres of leasehold land and J. and A. Brown also bought and leased large acreages. N.C. 11 Dec. 1861, 19 Feb. and 19 Mar. 1862.
- 88 Lesses were required to spend five pounds per acre on their lots within three years, Crown Lands Occupation Act, 1861, clause 22. The A.A. Company was losing slightly more than one third of its coal; the Newcastle Coal and Copper Company allowed one third as waste. F. Odernheimer, 'Report on the Newcastle collieries', 20 Sept. 1855, enclosed in A.A. Company Annual report, 1855; B. Robson, 'Report', 20 Jan. 1855, Martin papers.

- 1 'Return of coal mines', N.S.W. statistical registers, 1868-1880.
- 2 Agreement regarding the price of coal, 21 May 1868, A. Brown to Merewether, 10 and 14 Dec. 1866, A.N.C. minutes 27 Sept. 1867, AACR.
- 3 Australian men of mark, vol. 2, p. 223; Merewether to Court of Directors, 21 Dec. 1867, Winship to Merewether, 24 Dec. 1867, AACR; Grainger to Young, 1 Sept. 1868, SAMR.
- 4 J.L. and C. Burke to Merewether, 2 July 1868, A.A.C.R.
- 5 Ibid.
- A. Brown to Merewether, 18 Aug. 1868, A.A.C.R.; Merewether had acquired the Stockton land partly to prevent it being developed by a competitor. Coal was found there in 1863 and under the terms of the lease £3,000 had to be spent on it before April, 1870. Early in 1868 he calculated that for £30,000 a mine could be developed adjacent to the harbour. Memorandum by General Superintendent, 9 Jan. 1868, S.A.M.R.; N.C. 21 Jan. 1868; Merewether to A. Brown, 26 Aug. 1868, A.A.C.R. The reference was to A. Young. Morehead's deputy.
- 7 N.S.W. statistical register, 1867-1873.
- 8 The declared selling price of nine shillings in this period usually was not received. The declared price can only be considered as a rough standard for much of the history of the industry but it did tend to establish the basic rate of pay, the hewing rate. Associated Masters to Scottish Austalian Company, 5 Sept. 1868, AACR.
- 9 A.A. Company, Annual reports, 1868-71; Grainger to Morehead, 7 Oct. 1870, S.A.M.R. The Scottish Australian Company's dividend in the second half of 1870 was six per cent, leaving £434 for the profit and loss account, Grainger to Morehead, 23 Dec. 1870, ibid. Bank of New South Wales, 'Minute books' 8 and 9 and 'Inspectors' letters to the Newcastle Manager'; N.C. 8 and 11 Jan. and 23 july 1868, S.M.H. 8 Feb. 1869.
- James Fletcher recognised that Morehead intended to ruin the New Lambton and Co-operative Companies, N.M.H. 22 Dec. 1877; Grainger to Young, 1 Sept. 1868. The Scottish Australian Company's fully paid one pound shares were selling at 13s.9d. in August and its directors were 'roughly handled' by shareholders. Turner to Morehead, S.A.M.R.
- 11 Grainger to Morehead, 4 Nov. and 30 Dec. 1870, ibid...
- 12 Merewether to A. Brown, 11 Sept. 1868, AACR.
- 13 The Co-operative Colliery had failed in 1869 with debts of perhaps £16,000. It was taken over by its mortgagors, William Laidley and Company, and became a much more formidable competitor. 'A Shareholder', to the editor, N.C. 10 Apr. 1869; A. Brown to Merewether, 2 Sept. 1869, A.A.C.R. W. Laidley had a plan for all to combine and 'leave old Lambton out'. Lambton's output in 1871 was 135,000 tons, 20,000 tons less than in the previous year and its lowest since 1865. Table 11; seven and three quarters days of work out twelve 'for Lambton, nowadays, is accounted good', N.C. 16 Mar. 1872.
- 14 Ibid., 27 Jan. 1872.
- 15 Ibid.
- 16 Ibid., 19 Mar. 1872
- 17 Ibid
- 18 Ibid., 23 and 30 Mar. 1872
- 19 N.C. 27 Apr. 1872; Alexander Brown, the nephew of James and Alexander Brown and a junior partner in J. and A. Brown, supported Fletcher's newspaper with £3,000 in recognition of his contribution to the prosperity of the coal industry. Brown vs Fletcher, S.M.H. 26 Sept. and 6 Nov. 1884; N.M.H. 12 Apr. 1897; Australian men of mark, vol. 2, p. 239.
- 20 R.A. Gollan, Coal miners of New South Wales, p. 45. Wage rates are not necessarily a guide to total income because of the tendency for mines to work intermittently. The hewing rate was 30.6d. per ton and the Lambton manager claimed that his miners earned an average of 12s. per shift. 'Report' of the Examiner of Coal Fields, 1870, N.S. W., Legislative Assembly Votes and proceedings, vol. 1, 1870-1871, pp. 889-896; N.C. 16 May 1871. The Lambton miners considered this exaggerated but they raised 616 tons per man in 1869 suggesting an average income in excess of three pounds per man in that year. M.H. Ellis, A Saga of coal, p. 104.

- 21 'Coalfields regulation act', 26 Vic. no. 17, 1862, G.G. 24 Dec. 1862; 'A Miner' to the editor, N.C. 1 Sept. 1868; 'Report' of the Examiner of Coal Fields, 1869, N.S.W. Legislative Assembly, Votes and proceedings, May 1870.
- Grainger to Morehead, 9 Sept. 1870, S.A.M.R. Inadequate ventilation was still a cause of complaint at the aggregate meeting of miners reported in N.C., 14 July 1870. 'Coal fields regulation act', 39 Vic., no. 31, 1876, G.G. 15 May 1876.
- 23 N.C. 11 and 13 Aug. 1868.
- 24 N.C. 17 Sept. 1868
- 25 N.C. 23 Apr. 1820, Fletcher was referring to hewers; total employment in the Newcastle mines in 1869 was 1,767, 'Report' of the Examiner of Coal Fields, 1869, op. cit., vol. 2. p. 434; 'Memo as to caol hewn, AACR'
- 26 H. Pelling, A History of British trade unionism, pp. 71-2. It may be significant that the Lambton men took such a leading role: their mine was not in operation during the 1862 struggle. By 1880 the chief officials of the union had been in the colony, for twenty five and twenty three years respectively. 'Minutes' of Select Committee of Assisted Migration, N.S.W. Legislative Assembly, Votes and proceedings, 1879-1880, vol. 3, pp. 754, 759.
- 27 At an aggregate meeting in August 1868, the accounts for 1865 were approved and a chairman and secretary appointed for following year. N.C. 11 Aug. 1868, 21 and 23 June and 14 July 1870.
- 28 Ibid.
- 29 N.C. 14 July 1870.
- 30 N.C. 14 July and 8 Nov. 1870. In mid-1871 Wood replaced E.N. Brown who resigned as secretary of the disrict union ostensibly because of the amount of criticism he had suffered.
- 31 N.C. 8 Nov. 1870.
- 32 N.C. 9 Mar. and 9 May 1871. The hours of work question was much discussed in 1871 and the hours of colliery operation were reduced by agreement in the following year by eight years later a Wallsend miner deplored the union's lack of interest in the regulation of hours of work. Wallsend miners were free to enter the pit at any hour of the night and stay as long 'as nature will allow'. N.C. 9 Mar. 1871, N.M.H. 22 July 1880.
- 33 Report of an aggregate meeting, N.C. 9 May 1871.
- 34 N.C. 15 June 1872.
- 35 The Scottish Australian Mining Company declined to attend saying that Morehead was not prepared to meet the representatives of the New Lambton and Co-operative Collieries. A.N.C. minutes, 19 July 1872, AACR.
- 36 N.C. 23 July 1872; A. McLagan, History of Newcastle District trade unions, 1806-1943; N.M.H. 24 Feb. 1955.
- 37 N.M.H. 30 July 1872.
- 38 N.S.W statistical register, 1864, 1874; see table 11; N.C. 27 Jan. 1872. The 'Report' of the Examiner of Coal Fields, 1872, reviewed the prosperous conditions of that year. 'The recent high price of coal in England and the increased demand for it in Australia and other parts of the world is inducing people to take up coal land in many new and in most cases, promising localities'. N.S.W. Legislative Assembly, Votes and proceedings, 1873-1874; vol.5, p.77-811.
- 39 A.N.C. Minutes 19 July, 25 Oct. and 5 Dec. 1872, 1 and 28 Feb. 1873, AACR. Minutes of evidence, 'Select' committee on the supply of coal for railway purposes', N.S.W. Legislative Assembly, Votes and proceedings, 1875-6, vol. 14, p. 18.
- 40 Vend assessment and return for 1873, Contributions under Vend, 1974, AACR.
- 41 A.N.C. minutes and Vend returns, 28 Jan. 1874. ibid..
- 42 Records of the Northern Coal Sales Association, ibid.
- 43 N.C. 4 Jan. 1873, price of best coal to be 11s. unsecured 10s., small coal five shillings per ton; A.N.C. minutes, 18 June 1873, AA.C.R.
- A.A. Company profit per ton gradually declined from 4s.9d. in 1874 to 3s.8d. in 1878, After a slight rise in 1879 profit per ton fell to sixpence in 1880, A.A. Company, Annual reports, 1872-1880; Bank of New South Wales 'Board minute book' 9, 10 Dec. 1869, 24 Feb. 1871, and 'Inspector to Newcastle Manager', 10 May 1870, M.H. Ellis, A Saga of coal, p. 122; Vend returns, 1873-1879, AACR, NMH, 14 Nov. 1878.

- 45 D. Joubert to the Committee, minutes of evidence, 'Select committee on the supply of coal for railway purposes', op. cit., p. 25.
- 46 N.S.W. Department of Mines, Annual report, 1872-79.
- 47 for the lower costs of the southern field, see John Brown's statement, N.M.H. 24 June 1893, and N.S.W. Mines Department Annual reports, passim.; a rail link from the southern field to Sydney was proposed by James Manning in 1873 as an alternative to the inadequate and dangerous ports at Bulli, Bellami and Wollongong but was not complete until 1888, J.D. Lang, An Historical and statistical account of New South Wales, pp. 75-6; Australiandictionary of biography, vol. 5, pp. 206-7; Steamship Owners Association to N.C.A.. 10 Feb. 1886, AACR. The western mines came into being as the railway from Sydney approached their locality in 1869. Report of the Examiner of Coal Fields, 1869, op. cit. However, as mountainous route reduced the load of a locomotive to 147 tons between Bowenfels and Penrith; a similar engine hauled up to 880 tons in Newcastle. 'Report' of the Commissioner for Railways, 1870-71, N.S.W. Legislative Assembly, Votes and proceedings, 1871, vol. 3, p. 336.
- 48 Much of the Waratah Company's coal was 'rust' coal, so called because of its discolouration, and this may have caused it to doubt the feasibility of such a high declared selling price. A.N.C. minutes, 18 June 1873, 1 Dec. 1875, AACR., J. and A. Brown tried to reduce the price of coal in July 1976, N.M.H. 13 July 1876.
- 49 Grainger to Shannon, 16 Feb. 1877. Grainger to Morehead, 19 Feb. 1875, 17 Jan. 1879, 8 Oct. 1880, S.A.M.R. To provide for its increasing trade £52,000 was spent on mining plant at Lambton over the fifteen year period to 1880.
- 50 N.M.H. 9 July 1877; see table 11; Vend return for 1877, A.A.C.R. The Newcastle Coal Mining Company, capital £130,000, was formed to mine the Borehole Seam below the Burwood Estate, N.M.H. 23 July 1877.
- 51 Vend return for 1878, op. cit., Bank of Australasia to London, 29 Sept. 1879, A.N.Z. Bank Archives: table 11; the problem of overcapacity was eased by the failure of the Australasia Coalmining Company which won only 9,000 tons of coal after expending £70,000 at Cardiff owing to mismanagement and technical problems. J. Webber, 'The Australasia Coal Company', Australian Railway Historical Society Bulletin, Sept. 1964, pp. 161-4.
- 52 R.A. Gollan, 'Arbitration and the sliding scale in the N.S.W. coal industry in the eighteen seventies', *Journal of industrial relations*, vol. 1, 1959, p. 38.
- 53 Based on the records of the A.A. and Scottish Australian Companies and contemporary newspapers.
- 54 R.A. Gollan, The Coal miners of New South Wales, p. 55.
- 55. Ibid...
- 56 N.C. 11 May 1875.
- 57 Employers and employees also agreed on a joint submission to the Government concerning the proposed coalfields regulation bill which became law in 1876. N.C.A. minutes, 31 Dec. 1873, A.A.C.R. In 1877 the associated proprietors refused to contribute to a fund for the ex-secretary of the union, John Wood, who was mortally ill. R.A. Gollan, The Coal miners of New South Wales, p. 56.
- 58 N.S.W., Examiner of Coal Fields, 'Report for 1869', N.S.W. Legislative Assembly, Votes and proceedings, vol. 1, 1870, pp. 427-434, N.S.W. Department of Mines, Annual report, 1875, 1879.
- 59 Assisted migration was suspended in New South Wales in the 1860s but revived in 1876. A.G.L. Shaw, The Story of Australia, p133; T.A. Coghlan, Labour and industry in Australia, vol. 3, pp. 1431, 1434; N.S.W. Examiner of Coal Fields, 'Report for 1869, op. cit.; N.S.W. Department of Mines, Annual report, 1879.
- 60 Ibid.; the average yearly earnings of A.A. Company colliers were £122 in 1873, £130 in 1875, £117 in 1877 and £99 in 1879. A.A. Company arbitration proceedings, 1881, AACR.
- 61 N.C. 13 May 1876; M.A. 21 Apr. 1875; The following appeared in an English newspaper. 'Our pit [Newcastle Wallsend] has only been working three and a half days per fortnight this past twelve months, but the difference between our pit and the Durham pits is that we make from 15s. to 18s. per day...So you see I have plenty of time on my hands. I spend a good deal of my leisure time with the gun. 'Durham Miner' to his parents, N.M.H. 10 Apr. 1880.
- 62 M.A. 21 Apr. 1875; J.G. Goodenough, Journal, p. 257; Grainger to Morehead, 18 Feb. 1876, S.A.M.R. The prevalence of the 'darg' is difficult to determine; its existence was emphatically denied by the miners appearing before the Select Committee on Assisted Immigration. 'Minutes', N.S.W.

- Legislative Assembly, Votes and proceedings, vol. 5, p.35.
- 63 NM.H. 31 July 1876. After ninety two miners from the Co-operative Colliery had been dismissed by ballot, the union resolved 'that in the event of more men being employed than is necessary, the last men coming into the colliery be the first to go', Coal Miners' Mutual Protective Association of the Hunter River District, 'Minutes', Australian Coal and Shale Employees' Federation, Records; interview between the Minmi miners and the District Relief Committee, N.M.H. 25 Mar. 1880; evidence of W. Davies and J. Dixon, Select Committee on Assisted Immigration, 'Minutes', op. cit., pp. 754-61.
- 64 Associated Northern Collieries to the union, 25 Feb. 1878, Gregson to Court of Directors, 26 Sept. 1878, AACR.
- 65 E. Vickery to the editor of the Maitland mercury in N.M.H. 19 Apr. 1876.
- The Echo, 15 Nov. 1878; N.M.H. 14 Nov. 1878; N.S.W. Department of Mines, Annual report, 1878, p. 137. Average output per underground worker has defects as an indication of income. The number of underground workers included non-miners, some of the coal produced was small coal which was paid for at a lower rate and it does not take 'considerations' payments into account. Nevertheless, since these factors would tend to be fairly stable, the concept can be employed as a guide to income levels. Memo as to quantities of coal hewn, 1862-1881; A.A.C.R.: T.A. Coghlan, Labour and industry in Australia, vol. 3, p. 1431.
- 67 N.M.H. 17 Aug. 1877; Grainger to Shannon, 19 Jan. 1877, S.A.M.R.
- 68 Gregson to Court of Directors, 26 Oct. 1878, A.A.C.R., Circular letter to Newcastle miners, 9 Nov. 1878, S.A.M.R.
- 69 Ibid.
- 70 A letter to the editor of the Newcastle pilot, 23 Aug. 1879, reported graphically on a violent demonstration at Lambton by supporters of the miners' vend scheme, but this was not reported in James Fletcher's paper, the Newcastle morning herald. S.M.H. 12 Apr. 1880.
- 71 Notes for McCarthy, Robinson and Fisher by R. Morehead, 24 Mar., 5 Sept., 13 Oct. 1879, S.A.M.R.
- 72 Hunter River District Union Convention, 'Minutes', 14 Aug. 1879, Australian Coal and Shale Employees' Federation, *Records*.
- 73 Grainger to Morehead, 14 Mar. and 10 Apr. 1879, S.A.M.R.
- 74 J. and A. 8rown's circular, 4 Nov. 1878, Associated Northern Collieries By-Laws, 12 Dec. 1878, A.A.C.R.
- 75 Gregson to Court of Directors, 26 Oct. and 21 Dec. 1878 ibid.; Early in 1880. Howard Smith and Sons, who were supplying A.A. Company coal under contract, laid up three steamers allegedly because that company had exceeded its Vend. N.M.H. 12 Feb. 1880.
- 76 Grainger to Morehead, 17 Jan. 1879, S.A.M.R.
- 77 Gregson to Court of Directors, 10 Apr. and 20 Dec. 1879, A.A.C.R.; Grainger to Morehead, 17 Jan. 1879, S.A.M.R.
- 78 'But this Vend scheme is the wildest, maddest, freak of all and entitles its promoters to an indisputable claim to a front place in the ward for incurables in the nearest lunatic asylum,' D. Hogarth to the editor, N.M.H., 7 Feb. 1880; Gregson to Court of Visitors, 26 Sept. 1879, AACR.
- 79 A.N.C. minutes, 3 Sept. and 26 Nov. 1879, 23 Feb. 1880 ibid.
- 80 Browns' circular, 23 Mar. 1880, ibid.
- 81 Grainger to Morehead, 13 Feb. 1880, S.A.M.R.
- 82 N.M.H. 31 Jan., 20, 25 Mar. 1880; Grainger to Morehead, 16 Jan. 1880; S.A.M.R.

- 83 A.N.C. minutes, 23 Feb. 1880; Gregson to Court of Directors, 26 Sept. 1879, A.A.C.R.: N.M.H. 12 and 26 Apr. 1880; Browns' circular, 23 Mar. 1880, op. cit.; Grainger to Morehead, 30 July 1880; S.A.M.R.
- 84 N.M.H. 20 May 1880.
- 85 'A Newcastle miner' to the editor, N.M.H. 20 May 1880.
- 86 N.M.H. 15 Apr. 1880.
- 87 Reductions at some collieries were particularly severe: at Minmi output per underground worker rose from 287 tons in 1879 to 624 tons in 1882, the highest level reached there before 1900, N.S.W. Department of Mines, *Annual reports*. The union was unable to protect its activists from discrimination in this period, N.M.H. 21 Feb. and 17 June 1880.
- 88 See table 11.
- 89 The high degree of overcapacity in the industry had serious consequences. Thus the average number of days worked by all the northern collieries in the district was only five and three quarters in 1879 for a production of 1,126,000 tons. If they had worked a full eleven days, their output would have exceeded 2,000,000 tons.
- 90 N.M.H. 6 Aug. 1877.

- In calculating growth rates the 1880-1881 and 1890-1891 outputs have been averaged to lessen distortion caused by the strikes of 1880 and 1890
- 2 N.S.W. Mines Department, *Annual reports*; Gregson to Court of Directors, 3 June and 1 July 1881, *A.A.C.R.* The last years of the first vend had convinced Gregson that 'no obligations either of good faith or of lasting self interest could induce them [the proprietors] to maintain a fair and straightforward division of the trade upon any basis' Ibid. 8 Mar. 1881
- 3 N.S.W. Mines Department, Annual reports, 1881-1900.
- 4 Grainger to Morehead, 22 Apr., 15 and 29 July, 4 Nov. 1881, SAMR
- 5 A.N.C. minutes, 22 Nov. 1881, Articles of agreement of Vend, 26 Oct. 1882, AACR
- 6 A.N.C. minutes, Aug Oct 1881, ibid
- 7 Grainger to Morehead, 4 Nov. 1881, S.A.M.R., John Davis, union chairman, at an annual demonstration, N.C. 11 May 1875.
- The Wallsend Company had retired £6 of capital on each of its £10 shares already, Chapter 4, Newcastle Wallsend Company, Reports 1881-7; Gregson to Court of Directors, 8 Mar. 1881, 6 Mar 1883, 4 Mar. 1884, 3 Mar. 1885, 5 Feb. and 2 Mar. 1886, 28 Feb. 1890; A A CR. Newcastle Branch, Union Bank Balances, Aug 1883, Feb. and Aug. 1884, A.N.Z. Bank achive memo for John Brown's lawyers, 1909, during a struggle for control of J. and A. Brown, Brown papers. The Greta Collieries Ltd prospectus, 1890, quoted the earning rates of the leading companies as A. A. Company 2314%. Newcastle Wallsend 50%, Wickham 20%.
- 9 A.A. Atkinson, 'Working coal under the River Hunter, the Pacific Ocean and its tidal waters, near Newcastle, in the State of New South Wales', Institution of Mining Engineers, Transactions, 1901-2, pp. 62B, 644, 649-50; Stockton Coal Company, Prospectus, G.H. Kingswell, The Coal mines of Newcastle, New South Wales, pp. 38-43. The Wickham and Bullock Island Company with a capital of £110,000, was formed in Sydney in 1879 to mine two leaseholds fronting Throsby Creek. The Hetton Company, capital £106,000, was set up in 1885. By 1900 only the Stockton, Hetton, A.A. and Newcastle Coal Mining Companies were still at work beyond high water mark but the Scottish Australian and the Dudley Coal Companies were planning to work sea coal to the south of Newcastle, A.A. Atkinson, 'Working coal under the Hunter River', op. cit., p. 644.
- 10 G.H. Kingswell, The coal mines of Newcastle pp. 29-31, 53, 55; NMH 6 Jan. 1894, N.S.W. Mines. Department, Annual reports.
- 11 Ibid.
- 12 A.N.C. minutes, 7 Feb. and 10 July 1888, AACR., NMH 12 Apr. 1888
- 13 Charles Watt, of the Government Laboratory, commented that Stockton coal was the best he had tested for gas making. Stockton Coal Company, 'Draft prospectus'; A.N.C. minutes, 3 Aug. 1888, 12 Feb. 1889, AACR
- 14 N.S.W. Mines Department, Annual reports
- 15 Both the A.A. and Co-operative Companies arranged special agreements with their miners in 1881, district offices were refused admission to the mines and rejected as members of lodge deputations, A. McLagan, History of Newcastle District trade unions, articles in NMH 17 and 18 March 1955.
- 16 R.A. Gollan, *The Coal miners of New South Wales.* pp. 67-8; Gregson to Court of Directors, 4 Mar. 1883 AACR Vend return for 1882, ibid. The Co-operative Lodge did not rejoin the district union until mid 1884, A. McLagan, *History of Newcastle District trade unions*, articles in *NMH* 17, 18 and 19 March, 1955.
- 17 Ibid., articles of 21, 22 March 1955. The miners' enthusiasm was part of a general interest in unionism. in 1885 coal trimmers, wharf labourers, seamen, ironmoulders and tailors engaged in union activities in Newcastle. *N M H* 1885, pessim. Thus Gregson reported 'that all disputes were tending to become conflicts between Capital and Labour generally', Gregson to Court of Directors 5 Feb. 1886. *AA C R*
- 18 A. McLagan, History of Newcastle District trade unions article in NMH 22 Mar 1955, R.A. Gollan, The Coal miners of New South Wales, p.69; NMH 29 June 1886, Gregson to Court of Directors, 1B Sept 1885, the Agreement to establish N.C.O. Protection Association, AACR
- 19 1bid.

- 20 N.M.H. 29 June 1886; Protective Association cheque book, 21 July 1886, Protective Association Minutes, 12, May 1886, A.A.C.R.
- 21 R.A. Gollan, The Coal miners of New South Wales, p. 72.
- 22 N.S.W. Mines Department, Annual report, 1881, 1882, 1887. Declining work opportunities caused the miners to enforce limits on individual production, e.g. A.A. Company miners were limiting the skips available to each pair of men, N.M.H. 7 Feb. 1890.
- 23 For a glowing account of the 'scarcity' of miners and their 'high earnings' in the colony, see A.J. Swinney, *Collieries, coalfields and minerals of New South Wales, Australia*, pp. 26-7. British miners' clearances were being discussed in Newcastle. *N.M.H.* 20 Feb. 1886, 18 Nov. 1895. Attempts by unionists to correct exaggerated reports tended to be seen as confirmatory evidence, Swinney, op. cit.. John Evans reported that Newcastle miners' real wages were twice as high as the Queensland or in Britain, *N.M.H.* 10 Aug. 1885.
- 24 Gregson to Court of Directors, 27 May 1887, A.A.C.R. Costs rose steadily during the 1880s while prices gradually fell and the resulting squeeze on profit per ton added urgency to the proprietors objection to arbitration. A.A. Company, Annual reports and Out-despatches, 1882-89, passim.
- 25 Protection Association to members, 26 Jan. 1886, A.A.C.R.; ibid., 7 Oct. 1887, S.A.M.R. When this policy was reaffirmed in April 1886, James Fletcher, representing the Wickham Company took the lead; could it be that he had devised this scheme? A.N.C. minutes, 30 Sept. 1887, A.A.C.R.
- 26 Ibid; Wallsend and Plattsburg sun, 24 Aug. 1887.
- 27 N.M.H. 23 May 1887.
- 28 Gregson to Court of Directors, 27 May 1887, A.A.C.R.
- 29 Draft, Unanimity Guarantee Association. By this time Association members were involved in three different financial relationships - the Vend account, the Mutual Protection Account and the Unamimity Guarantee Account. Memo re Wickham and Bullock Island Company's connexion with A.N.C., A.A.C.R.
- 30 Wallsend and Plattsburg sun, 4, 8 and 27 Aug. 1887; N.M.H. 9 and 23 Aug. 1887.
- 31 N.M.H. 13, 16 and 31 Aug, 1888, Thirty coal trimmers were required to load the product of one large colliery such as Lambton, 800 tons per day. J. and A. Brown were to lay up all but two tugs and Daltons were to follow suit.
- 32 Australian Gas Light Company, Report, 31 Dec. 1888; N.M.H., 15 Jan. 1897.
- 33 R.A. Gollan, The Coal miners of New South Wales, pp. 74-5. Miner to annual demonstration. Now before they [the masters] disposed of that which belonged to them, they had to ask the miners' permission, Wallsend and Plattsburg sun 9 March 1887.
- 34 Wallsend and Plattsburg sun, 17 Oct. 1888.
- 'One raised in the crowd', objecting to inequality, demanded a new society: 'The A.A. Co's stipulations are a criterion to adjoining [sic] interests, one and all and to use the terms credited to Mr Gregson, 'We will only get as much as we can wrench'. What would be the profit per centum, think you, for instance of Mr Merewether? Does it amount to 26, or rather does it come short of 600 per cent? He is one of the many who dares to spurn the electors in various ways. But to cite the thousands of drones who are like the hanging millstone to the neck of advancements [sic] would be wearisom, indeed.' Wallsend and Plattsburg sun. 17 Oct. 1888; N.M.H. 17 April 1889. New mining companies, like immigrant miners, were most vulnerable: the delta collieries suffered from high costs arising from drainage problems and 'crushes' and they were particularly concerned to reduce labour costs. 'A Miner' to the editor, N.M.H. 9 Aug. 1888.
- 36 G.H. Kingswell, The Coal miners of Newcastle, N.S.W., op. cit.; G. Blainey, The Rush that never ended p. 150; N.M.H. 12 May 1890.
- 37 Prospectus Wallarah Coal Company, Gt Brit, Board of Trade, Records. BT/4142/26271; N.M.H. 12 Feb and 12 May 1890; G.H. Kingswell, The Coal miners of Newcastle, pp. 57, 62.
- Wallsend and Plattsburg sun, 13 July 1888; N.M.H. 23 Dec. 1893 and 13 Oct. 1894. For the development of the delta mines see the third report of the Royal Commission on Collieries on the Condition of the Collieries Adjacent to Ferndale. For a survey of new developments see Kingsmill, op. cit, passim. N.S.W. Mines Department, Annual reports. Croudace enquired about a coal cutter in 1870, eight years after one was used successfully in Yorkshire. The Hetton Company experimented with a Jeffrey holing machine in 1844 but the A.A. Company found that coal cut by such a machine cost 6s.6d. per ton. N.C. 30 Aug. 1862. cost of cutting coal by machine. 1896. A.A.C.R. Machines came into commercial use in the next decade in the Greta Seam mines.

- Freight rates were more important because they were the largest component in the costs of exporting coal, K. H. Burley. 'The overseas trade in N.S.W. coal and the British shipping industry, 1860-1914'. *Economic record*, vol. 36, Aug. 1960, passim
- 40 Sydney and Wollongong were linked by railway in 1888, but the line from Tempe to Darling Harbour was still only under consideration, N.S.W. Department of Railways, *The Railways of New South Wales, 1855 1955, NMH* 2 May 1888; N.S.W. Mines Department, *Annual reports.*
- 41 F. E. Mauldon, *A Study in social economics*. p. 58, *NMH* 16 Dec. 1902, 25 April 1903, However, it is probable that the Greta Coal Company was the true pioneer of this coal, commencing operations in 1873, *NSW Statistical register*, 1873 By 1889 it was employing the first washing plant to be used in the colony. G. H. Kingswell, *The Coal miners of Newcastle*, N.S.W., p. 32.
- 42 For the amounts produced in the other states, see *Commonwealth year book*, no 1, p. 420; G. H. Kingswell, *The Coal miners of Newcastle, NSW*, p. 38; New Zealand was exporting coal to South Australia in 1890, before the maritime strike, *NMH*, 8 Apr. 1890
- 43 N.S.W. Mines Department, Annual report, 1894, p. 87.
- 44 N.M.H. 11 Sept. 1893, 20 May and 14 Oct. 1895, 12 Jan. 1900.
- 45 K. Burley, 'The Overseas trade in N S.W. coal and the British sbipping industry 1860-1914' op. at., p. 409; J. W. Turner, J. & A. Brown and the overseas trade in New South Wales coal, 1896-1914', *Economic record*, Dec. 1967, pp. 588-99.
- 46 Ibid.
- 47 K. Burley, 'The overseas trade in N.S.W. coal and the British shipping industry', op. cit., p. 381
- 48 NM.H 14 June 1890; Vend returns for 1891, AACR. Mines in the course of development in 1889 were Burwood Extended. Durham. East Greta, Maitland. Monkwearmouth. Newcastle and Stockton Land and Coal Company, Newcastle New Wallsend. Northumberland Coal and Land Company, Redhead Vale, South Burwood, South Greta, Wallarah, West Burwood, West Wallsend and Young Wallsend. Kingswell op. cit., table of contents.
- 49 For the Brown's policies in building up their trade, see J. W. Turner. The Influence of J. and A. Brown on the New South Wales coal industry, 1843-1914, chapters 4 and 5. They became the largest producers in the colony in 1893 for the first time since 1868, NS W. statistical register, 1868-1874; N.S.W. Mines Department Annual report, 1875-1898; A.N.C. minutes, 20 Oct. 1892, 31 July 1893, A.A.C.R.
- 50 Ibid, 20 Oct. 1891.
- 51 Gregson to Binney, 16 Dec. 1891 and Binney's memo in reply, AACR
- 52 Ibid.
- 53 NMH 16 Jan. 1892, 24 Oct. 1893; A.N.C. minutes, 2 Feh., 17 May, 19 and 31 July 1892. AACR
- 54 Remarks on the money results of the working of the Associated Collieries, Feb. 1894. AACR
- 55 Ibid.
- 56 NMH. 23 Dec. 1893
- 57 Ibid
- 58 Ibid., 18 Nov. 1895.
- 59 Report of a conference of proprietors and unionists, NMH 18 Nov. 1895.
- 60 N.S.W. Mines Department *Annual reports.* 1892, 1893, 1894; North Coalville Black Coal Company report, *NMH* 2 May 1893, 6 Jan. 1894.

- 61 N.S.W. Mines Department Annual report; Consular report, Japan, Great Britain House of Commons Accounts and papers, 1893-1894, XCV, p. 25; Consular report, Chile, ibid, XCII, p. 750 and 1895, XCVI, pp. 581, 583; N.M.H. 2 Jan. 1895.
- 62 N.S.W. Mines Department *Annual reports*, 1892-1894; *N.M.H.* 6 Jan. 1894; A.A. Company *Annual report*. 1892. The southern field produced a record 933,000 tons in 1892, its output fell by only five per cent in 1893 and rose thereafter.
- 63 N.M.H. 10 Mar. 1890, 6 Jan. 1894.
- 64 N.M.H. 12 Apr. 1888, 7 Dec. 1892; Stokes to Gregson, 20 Nov. 1889, 25 Nov. 1892, A.A.C.R.
- 65 Cowlishaw was a director of various northern mining companies: his proposal envisaged participation by the public, particularly by miners, consumers and shipping companies who could have become shareholders in a vast co-operative. Cowlishaw to the editor, N.M.H. 9 July 1889.
- 66 N.M.H. 7 Dec. 1892, 3 Jan. 1893, 2 Mar. 1894.
- 67 The district union was in a weak state long before the Vend dissolved. Though it had 5,118 members early in 1892 it was in a critical condition, see report of an aggregate meeting called to preserve it. Though the capitalistic wolves were snarling at the door of the union fold there was severe dissention among the lodges, ibid. 21 Mar. 1892.
- 68 West Wallsend pit closed, 300 unemployed, Co-operative Colliery to close, Wallsend and Plattsburg sun, 8 July 1893; the Browns closed Back Creek pit, N.M.H. 11 Sept. 1893; Dudley Coal Company closed South Burwood, Wallsend and Plattsburg sun, 18 Nov. 1891; Waratah Company closed January 1894, N.M.H. 1 May 1994; strike pay was exhausted and lodges were withholding levies, Wallsend and Plattsburgh sun, 2 Feb. 1895; N.M.H. 1 June 1895.
- 69 N.M.H. 30 Dec. 1893, 16 Apr. 1894; A. Mclagan, History of Newcastle District trade unions, article in N.M.H. 5 Apr. 1955. The A.A. Company by refusing to go lower than 3s.2d. saved the miners from having to accept inferior terms.
- 70 See table 13: railway coal for Sydney cost 6s.6d., for Newcastle, 5s.6d. per ton. Lambton sold at seven shillings in July but reduced by threepence per ton in August 1895, N.S.W. Mines Department, *Annual report*, 1895, p. 95; Scottish Australian Mining Company circulars, 10 July and 13 Aug. 1895, A.A.C.R.
- 71 Court of Directors to Gregson. 3 Aug. 1894, ibid. F. Turner to F. CroudaCe. 19 Feb. 1898, S.A.M.R.
- 72 The A.A., Newcastle Wallsend and Newcastle Companies were the largest producers from 1894 until 1900, Newcastle Wallsend Company Annual reports; A.A. Company 73rd Annual report. Scottish Australian Mining Company circular, 13 Aug. 1895, S.A.M.R., Newcastle Coal Mining Company 'Reports', A.A.C.R.; N.M.H., 9 Dec. 1895.
- 73 N.M.H. 3 Feb. 1895, 23 Apr. 1896; A. A. Atkinson, 'Working coal under the River Hunter, the Pacific Ocean and its tidal waters, near Newcastle, in the State of New South Wales', op. cit., p. 623. By 1900 the Crown had received £97,167 from royalties for this coal. The Stockton Coal Company which was experiencing severe technical and industrial relations problems, raised 283,000 tons but paid no dividends, Stockton Coal Company, Reports.
- 74 Wallsend and Plattsburg sun. 2 Feb. 1895; N.M.H. 30 Oct. 1895.
- 75 See J. W. Turner, 'An Incident at Minmi, 1895', Labour history, May 1964. When the Cardiff Colliery sought to reduce by fourpence to 2s.2d. per ton, the union urged the miners to resist and they succeeded, N.M.H. 23 and 30 Oct. 1895.

- 76 Ibid
- 77 Ibid
- 78 Ibid
- 79 Ibid., 28 Nov. 1895, 9 Jan. 1896
- 80 Gregson to Court of Directors, 7 Sept. 1894, AACR.
- 81 NMH 9 Jan. 1896.
- 82 Alexander 8rown to editor, *N.M.H.*. 10 Jan. 1896. Brown had been urging action by the miners to raise prices since 1895 when he wrote 'Can the colliers not agree for once even in these bad times, that no matter how the coal owners may fight among themselves, the men will be no parties to it? Ibid., 15 Oct. 1895, 3 March 1896. The four were Gregson, Keightley, 8inney and Brown.
- 83 NM.H. 21 Jan., 17 and 25 Apr. 1896, told of the low prices being charged for coal, Reid commented, 'This seems to be a peculiar sort of animal, this colliery proprietor, and I have decided to study him'. Reid to a deputation of miners and citizens.
- 84 Ibid
- 85 NMH 23 and 27 Apr. 1896. Alexander Brown, a proprietor with two decades of experience in the industry, had publicly argued that there was no reason why Newcastle's best coal should not be immediately raised to nine shillings per ton and this appears to have influenced the miners' vote. A majority in 13 lodges favoured the strike; four lodges voted for the acceptance of the conference proposals.
- 86 NM.H 17 Apr. 1896.
- 87 Wallsend and Plattsburg sun. 16 May 1896
- 88 A.N.C. minutes, 16 June, 6 July 1896, AACR
- 89 NMH 7 June and 9 Dec. 1897, 17 Mar 1898. Despite the increase in output there was considerable unemployment among miners in 1897, particularly in Wallsend, Wickham and Merewether
- 90 NMH 27 June, 18 July, 13 Aug. 1898, and weekly series 'Work at the pits', Aug.-Nov. 1898. In August every mine worked full time for the first time on record and demand did not ease appreciably until late November.
- 91 NM.H 5 Sept. and 1 Oct. 1898, 28 Sept. 1900
- 92 NMH 8 Jan 7, 21 and 26 May, 28 Sept. 1900.
- 93 NMH 3 Sept. 1900; A. McLagan, History of Newcastle trade unions, article in NMH 14 Apr. 1955, there were many prosecutions of proprietors for non-compliance with the weighing clause during 1900. There were 107 deep sea vessels in Port in September, when high freights were attracting ships in ballast from various overseas ports.
- 94 The union was so strong that the Minmi miners considered striking over the presence of a few non-unionists in May 1900, NMH, 26 May 1900. The outbreak of the Boxer Rebellion in June 1900 turned Hong Kong into the expeditionary forces' main base, stimulating coal imports which increased by 60% in that year. 'Hong Kong statistical register', 1900, CD Brown's San Francisco representative remarked in 1900 that 'as things stand at present we are

paying the miners 3s.2d. in an 8s. selling price: we have enough ships chartered to keep the collieries going practically all this year: the cargoes are nearly all of them already sold and we are making large profits out of them. In fact the colliery this year by working full time will make Something like & 50.000 R B Hogue to John Brown, n.d. 1900, Brown papers.

- 95 N.M.H., 18, 22, 28 Sept. 1900.
- 96 A. Griffiths to the editor, N.M.H. 21 May 1895.

1 N.M.H. 24 Oct. 1895.

Appendix

- In the dispatch, Murray to Darling, 31 July 1828, C.O. 201/202, the words 'at home' follow 'without the previous sanction of the Government'.
- 2 The word 'not' appears to have been inserted in error.

BIBLIOGRAPHY

CONTEMPORARY MANUSCRIPTS AND ARCHIVES

A.N.Z. Bank, Archives. (In A.N.Z. Bank, Melbourne)

AACR see Australian Agricultural Company, Records

Australian Agricultural Company, Records (In Australian National University)

Australian Coal and Shale Employees' Federation, Records (In Federation Office, Sydney)

B.T. see Bigge, John Thomas, Transcript of evidence given before Bigge, 1819-1821. Bank of New South Wales, Archives (In Bank of N.S.W., Sydney)

Bigge, John Thomas, Transcript of evidence given before Bigge. 1819-1821. (In Public Record Office, London. Manuscript copies made by James Bonwick in the 19th century and later microfilm copies are in the Mitchell Library, Sydney)

Brown Papers. (in Sparke, Helmore and Withycombe, Newcastle)

Busby, John, Letterbooks. (In Mitchell Library)

CO. see Great Britain, Colonial Office, Original correspondence,

CSIL see N.S.W. Colonial Secretary, Records.

C.S.O.L. see N.S.W. Colonial Secretary, Records.

Catchpole, Margaret, Letter. 21 January 1802. (In Mitchell Library)

Great Britain, Admiralty, Hydrographic Department, Archives (Taunton, U.K.)

Great Britain, Board of Trade, Records (In Public Records Office, London)

Great Britain, Colonial Office, Original correspondence (In Public Records Office, London)

King papers. (In Mitchell Library)

Leichhardt, Freidrich Wilhelm Ludwig, *The letters of*------col. and trans. by M. Aurousseau, Cambridge, U.P. 1966.

Lodge Thistle Kilwinning [Masonic Lodge], Minmi, Deeds. (With J. Ford, Minmi)

Macarthur papers. (In Mitchell Library)

Martin papers. (In Mitchell Library)

N.S.W. Colonial Secretaty, Records. (In N.S.W. Archives Office)

Newcastle Wallsend Coal Company, Deeds to a portion of ... Company's estate. Privately owned document sighted by the author)

Newcastle Wallsend Company, Annual reports, (In Fisher Library)

Parry, Sir William Edward, Journal. (In Mitchell Library)

S.A.M.R. see Scottish Australian Mining Company, Records.

Scottish Australian Mining Company, Records (In Fisher Library)

Stockton Coal Company, Papers. (In Fisher Library)

CONTEMPORARY PUBLICATIONS, GOVERNMENT

Bigge, John Thomas, Report of the Commissioner of Inquiry into the state of agriculture and trade in the colony of New South Wales. London, 1823.

Commonwealth year book. no. 1, 1901-1902. Melbourne, McCarron, Bird & Co. 1908.

G.G. see N.S.W. Government gazette.

Great Britain House of Commons, Accounts and papers. 1893-1894. London, H.M.S.O.

Great Britain House of Lords, Report of the Select Committee, on the state of the coal trade in the United Kingdom, London, 1823.

H.R.A. see Historical records of Australia.

H.R.N.S.W. see Historical records of New South Wales.

Historical records of Australia. series I and II, 1788-1848. Sydney, Commonwealth Parliament, 1914-1925.

Historical records of New South Wales, 1762-1811. Sydney, Govt. Pr. 1892-1901.

Legge, James Gordon, A Selection of Supreme Court cases in New South Wales from 1823 to 1882 Sydney. Govt Pr. 1896.

N.S.W. Department of Mines, Annual report, 1880-1900. Sydney, Govt. Pr.

N.S.W. Department of Railways, Annual report, 1861-1900, Sydney, Govt. Pr.

N.S.W. Legislative Assembly, Votes and proceedings, 1856-1872. Sydney, Govt. Pr.

N.S.W. Legislative Council, Journal, 1851. Sydney, Govt. Pr.

N.S.W. Legislative Council. Report from the Select Committee on the coal inquiry, with appendix and minutes of evidence. Sydney, Govt. Pr. 1847.

N.S.W. Legislative Council, Votes and proceedings, 1847-1855. Sydney, Govt. Pr.

N.S.W. Parliament, Collection of statutes affecting New South Wales, containing all the statutes of practical utility to present time, ed. by H. Cary. Sydney, Sands and Kenny, 1861.

N.S.W. Royal Commission on Collieries, Third report on the collieries adjacent to Ferndale. Sydney, Govt. Pr. 1886.

N.S.W. blue books, 1829-1850. Sydney, Govt. Pr.

N.S.W. Government gazette. 1834, 1859, 1862, 1879. Sydney.

N.S.W. statistical register, 1858-1900. Sydney, Govt Pr.

Statistics of Tasmania, 1854, 1857, Hobart, Govt. Pr.

CONTEMPORARY PUBLICATIONS, PRIVATE

Australian men of mark, ed. by E. Digby, Sydney, Charles F. Maxwell, [18892]

The Australian portrait gallery and memoirs of representative colonial men. Sydney, Southern Cross, [1884]

Bingle, John, Past and present records of Newcastle New South Wales Newcastle, Bayley, Son, and Harwood, 1873.

Coghlan, Sir Timothy Augustine, Labour and industry in Australia London, Q U P 1918, (reprinted Melbourne 1969)

Cunningham, Peter Miller, Two years in New South Wales London, Colburn, 1827

Fynes, Richard, The Miners of Northumberland and Durham, a history of their social and political progress. Sunderland, Summerhill, 1873, reprinted 1923

Goodenough, James Graham, Journal of Commodore Goodenough during his last command as senior officer on the Australian station, 1873-1875. London, H.S. King, 1876.

Kingswell, George H., The Coal mines of Newcastle, NSW their rise and progress. Newcastle, the author, 1890.

Lang, John Duttinore, An Historical and statistical account of New South Wales, including a visit to the gold regions and a description of the mines. 3rd ed. bringing down the history to 1852 London, Longman, 1852.

Swinney, Alfred J. G., Colheries, coalfields and minerals of NSW. Australia. London Colhery Guardian. Office, 1884

CONTEMPORARY PUBLICATIONS, SERIAL

Australian, 1826-1841

Australian Agricultural Company, Annual report 1825-1901. London, the Company

Australian almanac and country directory 1863. Sydney, Sherrift and Browning

Australian Gas Light Company, Report, 1888 Sydney

The Echo. 1878

Hunter River gazette, 1841-1842

Institution of Mining Engineers, London, Transactions, 1901-1902 London

MM. see Maitland mercury

Maitland mercury: 1843-1857.

N.C. see Newcastle chronicle

NMH see Newcastle morning herald

NT see Newcastle telegraph

NT & N.T see Northern times and Newcastle telegraph

Newcastle Chamber of Commerce. Annual report. 1856-7. Newcastle, Maxted, 1857.

Newcastle chronicle, 1861-5.

Newcastle morning herald, 1875-1900.

Newcastle pilot. 1879.

Newcastle telegraph, 1857.

Northern times and Newcastle telegraph, 1858

S.G. see Sydney gazette.

S.H. see Sydney morning herald.

S.M.H. see Sydney morning herald.

Sydney gazette, 1815-1840.

Sydney monitor, 1826-27.

Sydney morning herald, 1840-1900.

Wallsend and Plattsburg sun, 1886-96.

LATER MANUSCRIPTS AND THESES

Achison, John, Port Stephens and Goonoo Goonoo a review of the early period of the Australian Agricultural Company. (Ph.D. thesis, A.N.U., 1974)

Branagan, David Francis, The Borehole seam: a particular study of coal formation and utilisation in New South Wales. (Ph.D. thesis, University of Sydney, 1962)

Brown, H., The Copper industry of South Australia: an economic study. (B.Ec. thesis, University of Adelaide, 1960)

Cowburn, P. The Royal Navy and the Australian colonies, 1859-1861. (Ph.D. thesis, University of N.S.W., 1974)

Hutchinson, A., The Part played by the Scottish Australian Company in the development of the Newcastle coal field. (B.A. thesis, University of Sydney, 1958)

McLagan, Alexander, History of Newcastle District trade unions, 1806-1943. [Newcastle, the author, 1950-51.] (In Newcastle Region Public Library)

Turner, John William, The Influence of J. and A. Brown on the New South Wales coal industry, 1843-1914. (M.A. thesis, University of Sydney, 1966)

Walsh, G. P., A History of manufacturing in Sydney. 1788-1850. (M.A. thesis, A.N.U. 1970)

LATER PUBLICATIONS, GOVERNMENT

N.S.W. Department of Railways, The Railways of New South Wales, 1855-1955. Sydney, the Dept. 1955.

LATER PUBLICATIONS, PRIVATE

Abbott, Graham John, and Nairn, N. B., Economic growth of Australia, 1788-1821. Melbourne, M.U.P 1969.

Australian dictionary of biography Melbourne, 1966-1976.

Bach, John P.S., A Maritime history of Australia. West Melbourne, Nelson, 1976.

Barnard, Alan, Visions and profits: studies in the business career of Thomas Sutcliffe Mort. Melbourne, M.U.P. 1961.

Bateson, Charles, The Convict ships, 1787-1868. Glasgow, Brown & Ferguson, 1959.

Birch, Alan, and Macmillan, David Neil Sterling, Wealth and progress; studies in Austrolian business history. Sydney, A & R. 1967.

Blainey, Geoffrey Norman, The Rush that never ended a history of Australian mining. Melbourne, M.U.P. 1963.

Branagan, David Francis, 'Geology and coal mining in the Hunter Valley, 1791-1861', Newcastle history monographs no. 6. Newcastle, Newcastle Public Library, 1972.

Clouten, Keith H., Reid's Mistake: the story of Lake Macquarie from its discovery until 1890. Speers Point, Lake Macquarie Shire Council, 1967.

Crowley, Francis Keble, Australia's western third: a history of Western Australia from the first settlements to modern times. London, Macmillan, 1960.

Cumpston, John Stanley, Shipping arrivals and departures, Sydney, 1788-1825. Canberra, the author, 1963.

Dutt, R., Economic history of India under early British rule. London, 1950.

Ellis, Malcolm Henry, A Saga of coal: the Newcastle Wallsend Company's centenary volume. Sydney, A. & R. 1969.

Gollan, Robin Allenby, The Coal miners of New South Wales: a history of the union, 1860-1960. Melbourne, M.U.P. in assoc. with Australian National University, 1963.

Hainsworth, D. R., The Sydney traders: Simeon Lord and his contemporaries, 1788-1821. Melbourne, Cassell. 1972.

Holder, Reginald Frank, Bank of New South Wales: a history. Sydney, A. & R. 1970.

Knight, Ruth, Illiberal liberal Robert Lowe in New South Wales. 1842-1850. Melbourne, M.U.P. 1966.

Mauldon, Frank Richard Edward, A Study in social economics: the Hunter River Valley. New South Wales. Melbourne, W.E.A. of N.S.W. in assoc, with Robertson & Mullens, 1927.

Pelling, Henry, A History of British trade unionism. London, Macmillan, 1963.

Pike, Douglas Henry, Paradise of dissent. South Australia, 1829-1857. London, Longman, 1957.

Shaw, Alan George Lewers, Heroes and villains in history: Governors Darling and Bourke in New South Wales. Sydney, S.U.P. 1966.

Shaw, Alan George Lewers, The Story of Australia. 3rd ed. London, Faber, 1967.

Sinclair, William Angus, The Process of economic development in Australia. Melbourne, Cheshire, 1976.

Steven, Margaret, Merchant Campbell, 1769-1846, a study of colonial trade, Melbourne, O.U.P. 1965.

Sweezy, Paul Marior, Monopoly and competition in the English coal trade, 1550-1850. Cambridge, U.S.A., Harvard U.P. 1938.

Tapp, Edwin John, Early New Zealand: a dependency of New South Wales. 1788-1841. Melbourne, M.U.P. 1958.

Turner, John William, 'James and Alexander Brown, 1843-1877', Newcastle history monographs no. 4, Newcastle, Newcastle Public Library, 1968.

Turner, John William, 'Newcastle as a convict settlement: the evidence before J. T. Bigge in 1819-1821', Newcastle history monographs no. 7. Newcastle, Newcastle Public Library, 1973.

Woodward, Sir Ernest Llewellyn, The Age of reform. 1815-1870. London, O.U.P. 1838.

LATER PUBLICATIONS, SERIAL

Australian economic history review, 1958.

Australian Railway Historical Society, Bulletin, 1964.

Bushness archives and history, 1965.

Economic record. 1960, 1967.

J.R.A.H.S. see Royal Australian Historical Society, Journal

Journal of industrial relations, 1959.

Labour history, 1964, 1969,

N.M.H. see Newcastle morning herald

Newcastle morning herald, 1954.

Royal Australian Historical Society, Journal, 1955, 1959, 1972.

S.M.H. see Sydney morning herald.

Sydney morning herald, 1910, 1954.

Tasmanian Historical Research Association, Papers and proceedings, May 1970.

INDEX

A.A.Co see Australian Agricultural Company	Banks 62
Abbott, G. J. 22	Banks, Sir Joseph 14
Abbott, W 111	Barges 46
Aborigines 45	Barlow, Mr 76
Achison, John 28	Barracks 20, 24
Adelaide 35	Barrows 17-20, 23
Admiralty 20, 56	Bass, George 13
Africa 14	Bass Strait 44
Agricultural labourers 90	Batavia 25, 27
Agriculture 20, 27, 49, 51	
Alcohol 24	Bathurst 59
Allman, Captain Francis 24	Bathurst, Earl 26-7, 29, 31-2, 133
Alnwick, Thomas 68-9, B2	Beacon 63
Alnwick colliery 70	Bellambi 63
Amalgamated Miners' Association 104	Bellambi coal 55
America 112	Bengal 14, 21
Angerstein 25	Bigge, John Thomas 20, 22-3, 25-9
Anna Josepha 14	Bingle, John 62
Anvil Creek Colliery 80	Binney, Mr 110 Birrell, James 42-3
Arbitration 87-9, 95, 100, 103-6	Blacksmiths 20, 23, 25
Arthur, Sir George 35	Blaxland, John 30, 34, 45-6
Ash 54-5	Blue Mountains 31
Asia 14, 22, 110 Asian ports 21-2, 25, 37, 56, 62, 109, 112	Blyth, Captain Joseph 25
Associated Northern Collieries 85-7, 89, 92-4, 103	Board of Trade 28
Attorney General 42, 46, 48	Boer War 120
Auckland 36	Boothman, John 60
Auditor General 26	Bootmakers 104
Australasia 56, 108, 110, 112	Borehole coal 55, 65, 75
Australasian Coal Mining Company 56, 60	Borehole colliery 103
Australasian ports 57	Borehole Lodge 68
Australasian Steam Navigation Company 66, 79	Borehole Seam 54, 75, 101, 103
Australia 36, 51, 55, 57, 75, 112, 129, 131	Boring rods 14
Australian 25, 45	Botany Bay 13-4
Australian Agricultural Company 32, 38-40, 44-6,	8ourke, Sir Richard 38, 40, 49
48, 50, 52-4, 59, 60, 63-4, 66-7, 70-2, 75-6, 80,	Bower, W. 120
85-7, 91, 94, 99, 100, 103, 112-5, 117, 119, 120,	Bowling, Peter 119
133-4	Bowman, James 30
—Coal 34, 37-8, 53-5, 66, 78, 100	Breakwater 19, 53
—Coal miners 59, 67, 81, 89, 103, 115	Brickmaking 20, 112
—Coal mines 26, 29-32, 33 (illus.), 34-5, 37-9,	Brickwood, J. Strattel 28, 133-4
43-45, 48, 51, 54	Brisbane 35 Brisbane, <i>Sir</i> Thomas 26-7, 133
43-45, 48, 51, 54, 63-4, 66-7, 101, 126 (illus.),	Britain, see Great Britain
133-4 —Entry into mining 24-30, 36, 48-9, 133-4	British coal 21, 36-7, 60, 120
—Industrial disputes 41-3, 59, 66, 70-2, 88	British coal miners 18, 41, 43, 60, 67, 70, 72, 105
—Labour supply 41, 43, 57	British Columbia coal 109
—Land acquisition 29, 30, 44-6, 48, 133-4	British Government 13, 17, 21, 27-9, 31, 36, 38,
-Marketing 32, 34, 37-8, 44, 53-4, 56, 114	44-5, 48, 56, 134
Monopoly 29, 44-6, 48-9, 51-3	Brooks, Dr william 68
—Production 34-5, 38-40, 48-50, 53-4, 62, 65.	Brooks, William 34, 50-1
71, 99, 108, 130	Brown, Alexander 42, 56, 58 (port.), 65-6, 68, 71.
—Profit 62, 78, 65	76, 78, 80, 118
Australian Gas Light Company 35, 38, 54, 60, 66,	Brown, Alexander (under-manager of
107	A.A. Company) 66
Australian Joint Stock Bank 62	Brown, E. N. 82, 92
Australian Mining Company for the Supply of	Brown, J and A. 64-5, 67, 69, 70, 72, 75-6, 78, 80,
Coal 45-6	85-7, 90, 94, 99, 101, 106, 110-1, 11 3 -5
	—Coal mines 54, 63
Bailers 19, 23	Brown, James 46, 47 (port.), 48, 52, 56, 63, 65, 81
Ballast 21-2, 25, 63	Brown, John 101, 114-5, 119
Bank of Australasia 62	Brown Street 32
Bank of New South Wales 62	Brownrigg, Captain Marcus Freeman 59
171	

-- Production 16-8, 20, 22-6, 29, 31-2, 34, 38, **Buckets 17** 48, 53-7, 59, 62-5, 67, 69, 71, 75-6, 78, 81, 84-Buffalo 13-4 7, 89, 90, 93-6, 99-101, 105, 107-114, 117, Bullock Island 63 119, 120, 131 Bunker coal 109 -Quality 20, 22, 25-6, 38, 44, 50, 54-7, 66, 87, Bunkering 36 94, 99, 101, 108-100, 119, 129 Burdwan 21 -Supply 16, 18, 20, 24-5, 27, 35, 37-8, 45-6, Burley, Kevin H. 56 57, 64, 79, 87, 94, 104, 109, 110, 112, 119, Burra 35 121, 130, 133 Burra Company 35 See also Burwood coal 53-4, 65 Australian Agricultural Company-Coal Burwood Coal Mining Company 101 Bellambi coal Burwood Colliery 54, 57, 66, 101, 104-5, 113, 115, Borehole coal 123 British coal Burwood East Colliery 115 British Columbia coal Burwood Estate 35, 54, 56, 64 Bunker coal -Coal mines 53-4, 62, 64, 67, 80 Burwood coal Burwood tramway 63-4 Canadian coal Busby, John 17, 23-4, 26, 31, 48 English coal Gas coal Calcutta 21-2, 25 Hunter River coal Calder 25 Hunter River coal California 56 Japanese coal Campbell, Robert 21 Lambton coal Canada 109, 119 Merthyr coal Canadian coal 14, 100 Minmi coal Cape of Good Hope 13-4, 21-2, 37, 40 Mount Keira coal Capetown 13 New Lambton coal Capital 19, 27, 46, 53, 56, 62-3, 65-6, 71, 73, 78, New South Wales coal 86, 95-6, 99, 101, 107-9, 113 Newcastle coal Carpenters 23 North America coal Carts 17, 20, 23 Screened coal Catherine Hill Bay 108 Small coal Cedar 22, 25 Steam coal Central America 110 Stockton coal Challoner, William 60 Wallsend coal Charcoal 20 Waratah coal Chartism 41 West Hartley coal Chief Judge in Equity 106 Coal Fields Regulation Bill 68-9 Chile 109, 112 Coal industry 3B, 4B, 51, 56-7, 109, 111-5, 119. China 21, 36, 60 120 Chinese ports 36, 109 -Great Britain 18, 36, 43, 55, 60, 70, 82 Christian, John 48 Church Street 32 -Newcastle 9 (map), 53, 62, 64, 67-9, 71-5, Clackmannon 89 78-80, 84, 92, 107, 129-131 Coal Inquiry 37-8, 49, 62, 133 Clarence and Richmond Rivers Steam Navigation Coal loading appliances 62 Company 56 Clarke, Rev. William Branwhite 57 Coal measures 11 Clay 23, 53 Coal miners 14-6, 18-20, 23-4, 29, 30, 39, 40, 42, 49, 53, 59, 60, 62, 65, 68-70, 75, 80-3, 88-90, Clergy 60 92-3, 95-6, 103-7, 111-2, 114-5, 116 (illus.), Clinker 54-5 117-120, 130 Clothing 39, 40 Coal-Availability 13, 73, 88, 101, 129, 129, 131 See also -Demand for 20-2, 24, 26-7, 30, 35-6, 38, Australian Agricultural Company 45-6, 48-51, 55-7, 59, 71, 78-80, 85, 88, 94-5. Coal miners British coal miners 99, 104, 108, 110, 112, 114, 117-121, 130, 113 Co-operative Coal Company -Discovery 13-4, 22, 30, 32, 45, 55, 129 - Coal miners Lambton coal miners -Export 13-7, 20-2, 25-6, 35-8,56-7, 101, 110, 129, 131 Migrant coal miners -- Price 13, 15-6, 21-2, 25-7, 29, 31-2, 35-7, Minmi coal miners 44-6, 48-51, 53, 60, 62-5, 67, 70-3, 75-6, 78-9, New Lambton coal miners

81-8, 93-6, 99-101, 103, 107-115, 117-120,

129, 130

Newcastle coal miners

Newcastle-Wallsend coal miners

Scottish coal miners Coal reservation see Monopoly South Waratah coal miners Coal River see Hunter River Wallsend coal miners Coalfield, Northern 14-5, 20-1, 26, 29, 56, 80, 82, Waratah coal miners 86-8, 107-8, 113, 118, 120, 129, 131 Welsh coal miners Coalfield, Southern 55, 83, 86-7, 108, 112, 120, Coal Miners' Association of Newcastle 68 129. 131 Coal Miners Mutual Protection Association of the Coalfield, Western 86-7, 108, 129 **Hunter River District 83** Coalfields 31, 55-6, 64, 73, 90, 96 Coal mines 9 and 12 (maps), 38, 54-5, 63-5, 70-1, Coalfields Regulation Act 67, 81 73, 84-5, 89, 90, 95-6, 99-101, 104-5, 107-114. Coasters 57 Coke 20, 36, 65 118-9, 131 See also Alnwick Colliery Anvil Creek Colliery Colliers Point 12 Australian Agricultural Company -Coal mines Borehole Colliery Brown, J. and A.-Coal mines Burwood Colliery Burwood East Colliery Burwood Estate-Coal mines Commandants 24 Co-operative Coal Company —Coal mines Commissariat 50 Co-operative Colliery Delta coal mines **Dudley Colliery** Ferndale Colliery Government coal mines Great Northern Colliery Constable 24 Hartley Vale Colliery 3, 115, 133-4 Hetton Colliery Cook, Adam 112 Hexham Colliery Lambton Colliery Lochend Colliery Maitland Colliery Minmi Collieries Moggil Colliery Monkwearmouth Colliery Copper 35 New Lambton Colliery N.S.W. Co-operative Company -Coal mines Corio 65 New Wallsend Colliery Cornwall 41 Newcastle Coal and Copper Company -Coal mines Newcastle Coal Mining Company —Coal mines Cranes 20, 63 Newcastle Wallsend Coal Company -Coal mines Crime 39, 40 Private coal mines Redhead Colliery Scottish Australian Mining Company -Coal mines South Waratah Colliery

Coke manufacture 55, 65 Collieries see coal mines Colliery Proprietors' Association 117 Colonial Government 14, 22-4, 26-8, 30-1, 35, 39, 44-6, 48-9, 52, 73, 133 Colonial Office 27-32, 45, 50-2 Colonial Secretary 24 Colonies, British 14, 25, 37 Commercial Banking Company of Sydney 66 Companies 52, 54, 56, 63, 67, 70, 84-5, 87, 92, 96, 101, 104, 106, 108, 110-1, 113-5, 117-9 Competition 43-4, 46, 48, 50-1, 53, 55-6, 62, 64-6, 70-1, 75-6, 7B, 84, 86-B, 90, 94-6, 99, 101, 108-111, 114-5, 117-120, 130 Convicts 13, 16-9, 21, 23-4, 26, 31, 38-45, 48, 50-Cooper, Sir Daniel 56 Co-operative Coal Company 72, 76, 78, B1, 85-7. 94, 99, 104, 115 -Coal mines 83, 89 Co-operative Colliery 70, 78, 80, 83 Co-operative Lodge 89 Copper smelters 35, 55 Cornwallis see Earl Cornwallis Cottam, Edward 24 Cowlishaw, M.C. 113 Cowlishaw, Thomas 101, 111 Croudace, Thomas 70, 81, 84, 92, 105, 111, 119 Crown Lands Alienation Act 73 Crown Lands Occupation Act 73 Cumpston, John Stanley 21 Cunningham, Peter Miller 23 Curless, George 70 Curley, James 95, 112, 119, 120 Customs Department 36 Depression 35, 38, 46, 49, 50, 53, 64, 78-9, 99-103. 105, 108, 112-3, 118-9 Dibbs. Sir George Richard 62, 71

Denison, Sir William 62 Derwent Bank 44 De Salis, William Fane 56

Coal mining 16, 18, 21, 26-7, 43 -Methods 23-4, 129

Stockton Colliery

Wallsend Colliery

-Coal mines Waratah Colliery

Waratah Coal Company

West Wallsend Colliery

Young Wallsend Colliery

Coal Mines Regulation Act 81, 120

Dibbs, John Campbell 62 Disobedience 24 Disputes 43, 53, 59, 65, 67, 72, 82-3, 87-9, 100, 103-6, 113 Dockyard 20-24 Donaldson, Alexander 53, 56, 62 Donaldson, William 53, 56, 62 Drainage 17, 23, 101 Drays 63 Drilling 54 Drills 14 Drunkenness 24, 39, 40 Dudley Colliery 115 Dudley Seam 16, 32, 38 Dumaresq, Henry 34-5, 39-41, 43-4 Dundas, Henry 13 Durham 70 Dutch East Indies 22 Duty 22, 35 Dyer, John 59

Eales, John 46, 63, 85 Earl Cornwallis 14, 16 East Greta Coal Company 108 East India Company 21-2, 25, 27 East Maitland 46, 56, 63-4 East Maitland Gaol 59 Eastern seas 27 Ebenezer 45-6, 50 Engines, Steam 17, 20, 23, 25-6, 30, 32, 35, 37, 53-4. 109 England 21, 32, 36, 41, 45, 55, 70, 90, 96, 134 English coal 36-8, 55-6, 110 English, Scottish and Australian Bank 66 Escaping 24 Europe 95, 112 Europeans 60 Examiner of Coalfields 54, 72 Executive Council 38, 72-3 Export trades 13-4, 19-22, 25, 30, 53-7

Farms 28, 44-5 Fassifern 108 Ferndale Colliery 86-7, 101, 111 Fife 42, 87 Fires 17, 20, 57 Firewood 20, 24, 26, 37, 50, 57 Fletcher, James 60, 61 (port.), 67-8, 80-1, 83, 93, 101 Flogging 24 Floods 14 Flour 40 Forges 13, 20 Founders 25 Foundry 20-1 Four Mile Creek 34, 46 Francis 15 Freight rates 13, 22, 25, 36, 37-8, 110 Fuel 20, 23-4, 26, 35, 44, 46, 48, 50, 56-7, 131 Furnaces 54, 68

Gambling 24 Ganges River 30 Gaol 20 Gas coal 55, 101, 108 Gas companies 35, 44 Gas making 44, 54, 57, 87, 108-9, 131 Gasworks 59 Geelong 57 Geological Surveyor 53, 73 Georges River 14 Gipps, Sir George 38-9, 44-6, 52 Gippsland 112 Gold 59, 70, 72, 130 Gold miners 70 Gold mining 69 Gold rushes 43, 55-6, 59, 72, 78 Gollan, Robin Allenby 80, 88, 104, 107 Goodenough, James Graham 89 Gordon, Samuel Deane 66 Government coal mines 14, 23, 25-6, 30-2, 34, 44. 57, 133-4 — Management 24, 26, 28 Governments see British Government Colonial Government Indian Government N.S.W. Government Spanish Government Governors 19, 22-4, 26, 31, 38-9, 48, 52, 67, 73, 133-4 Grahame, Mr 42 Grain 37, 95 Grainger 93, 95 Grant, Lt James 15 Great Britain 14, 21, 36, 52, 71-2, 82, 90, 104, 119, 129, 130

Great Northern Colliery 101 Great Northern Railway 57, 64-6, 70-1 Gregson, Jesse 90, 91 (port.), 94, 103, 105, 110-1,

117, 120 Greta Coal and Shale Company 87, 90, 104, 115 Greta Seam 108-9, 120 Grey, Lord 52 Griffith, John 41, 43 Griffith's Flat 82 Groves, Thomas 71

Hainsworth, D.R. 14, 18 Hamilton 63 Harbour for southern coalfield 55, 76 Hartley Vale Colliery 75 Hawkesbury River 14 Henderson, John 29, 30, 32, 46, 48-9 Hetton Colliery 118 Hetton Coal Company Ltd. 101-2 Hewers 42 Hewing rate \$9, 80, 84, 88-90, 95, 103, 105, 111, 114-5, 118-120 Hexham 63, 65, 108 Hexham Colliery 56

Hillsborough 13-4 Hingston, Captain 14 Hodgson, Arthur 70

Groves Paddock 68

174

Honeysuckle Point 64 Hong Kong 37, 62, 110 Horse gin 16, 23, 53 Horses 23, 53, 60, 63, 81 Horton, Robert Wilmot 27-8 House of Commons 56 Houses 20, 69, 72 Hunter, Governor John 13 Hunter 14, 16 Hunter District Miners' Protective Association Hunter River 10(map), 13-5, 21, 27, 29, 32, 36, 44-5, 51, 56, 62, 65, 101, 133 Hunter River coal 14, 57, 109, 112, 129 Hunter River district 129, 131 Hunter River Steam Navigation Company 34, 46, Hunter Valley 26, 64, 112, 129 Huskinsson, William 28, 31 Hutchinson, W.A. 118 Hyndes, Thomas 38

Illawarra mercury 55 Immigrants 40, 42-3, 49, 60, 89, 90 Immigration 39, 41, 43, 60, 68-9, 72, 81, 89, 104 Import Warehouse Keeper 21 Impurities 23, 38, 53, 113 Incentives 38-40 India 19, 21-2, 25-7, 30, 56 Indian Government 36 Industrial relations 38, 72, 88-9, 103, 113-4, 115 Industries, Manufacturing 64 Inspectors 67, 69, 72-3, 81 International Exhibition 56 Investment 101, 107, 114 Ipswich 55, 73 Irish convicts 15 Iron Bark Hill 44 Iron gangs 24, 39 Iron mines 27 Iron ore 13 Iron working 20 Ironbark 57 Ironworkers 104

Japan 109, 119 Japanese coal 109, 110, 112 Jefferies, *Lt* C. 10 (map)

Isle de France 25

Kangaroo 10 Keene, William 54-7, 72-3 Keightley, Stewart 120 Kemp, Charles 66 Kemp, Simon 60 King, Governor Phillip Gidley 13-7, 19, 20, 23 King, Captain Phillip Parker 34, 38-9, 41-6, 48-52, 59 Kingswell, George H. 107

Labour relations 38, 65, 71 Labour supply 15, 23, 38, 43-4, 46, 57, 60, 64, 69, 119 —Shortage 19, 37-9, 41, 43, 84, 130 —Surplus 69, 70, 81, 89, 96, 99, 104-5 Labourers 23, 38-9, 42, 60, 90, 106 Lady Darling 94

Lady Nelson 15 Lake Macquarie 15, 34, 45-6, 50-1, 53, 63 Lake Macquarie coal mines 53 Lake Macquarie Road 69 Lambton 70-1, 82, 92-3, 95, 122 Lambton coal 75, 104 Lambton coal miners 84, 89, 90, 92-4, 104 Lambton Colliery 79, 80, 84, 87, 93, 99, 105, 116 Lambton Company see Scottish Australian Mining Company Lambton Lodge 92 Lamps 17 Land Fund 39 Land grants 29, 32, 45, 52, 133-4 Lang, Rev. John Dunmore 57 Legislation 73, 81 Legislative Assembly 68, 81 Legislative Council 28, 39, 52, 60, 62, 68 Lewis, Thomas 68-9, 81 Lifeboats 63 Lighters 62 Lighthouse 63 Lima 25, 37 Limeburning 20 Lindsay, James 43 Linton, John 60 Lithgow, William 26 Livestock 13 Lloyds of London 66, 99 Lochend Colliery 34, 50 Lockouts 104 Locomotives 57, 63-4, 109 London 25, 28, 32, 37, 44, 51-2, 54, 56, 65, 76, 78, 87, 108, 110, 114 Lord, Simeon 14 Lord Liverpool 27 Lowe, Robert 48, 52

Macarthur, Hannibal 30 Macarthur, James 28-30 Macarthur, John, jr 25, 29, 30 Macarthur, John, snr 30 Macarthur Family 30, 52 McFadyen, J. 120 Machinery 38 Mackenzie, John Piper 38 Macquarie, Governor Lachlan 20-2 Madras 22, 25, 36 Magistrates 24, 39-42, 59 Maitland 53 Maitland coal mines 53 Maitland Colliery 115 Maitland mercury 40, 57 Maitland Road 69 Managers 24, 60, 65, 70, 72, 81, 83, 90, 105, 117 Manila 36-8 Manning River 32 Manufacturing industries 64

Maori Wars 37 Mariner 25 Maritime Strike 110 Market 16, 21-2, 26, 29, 30, 34-8, 45-6, 48, 50, 53. 56-7, 65-6, 70, 75-6, 80, 86, 93, 95, 108-110, 112, 114, 129, 130 Mason, Commandant Martin 16, 18 Master and Servants Act 40, 42, 67-9, 130 Meat 15, 19, 40 Mechanics 38 Meehan, Hugh 14 Melbourne 35, 55, 76, 99, 107-8 Melbourne Metropolitan Gas Company 57, 66, 103, 109, 117 Menzies, Lt Charles A.F.N. 16 Merchants 22, 31, 36-8, 45, 76, 113-4 Merewether, Edward Christopher 76, 77 (port.). 78, 87, 101 Merthyr coal 55 Metal working 35 Metcalfe, Michael 66 Migrant coal miners 39, 41-3, 57, 60, 72, 90, 104-5, 129 Miners see Coal miners, Gold miners Miners' advocate 93 Minerals 28, 57, 73 Mines see Coal miners, Iron mines Mining see Coal mining, Gold mining Mining boom 107-8 Minmi 34, 64-5, 68-9, 71, 76, 90, 95, 104 Minmi coal 55, 75, 94 Minmi coal miners 69, 70 Minmi Collieries 54, 63, 67, 86, 98 (illus.), 110 Mitchell, Dr James 35, 53-4, 56, 64 Moggil Colliery 55 Monkwearmouth Colliery 115 Monopoly 22-3, 27, 29-33, 44-6, 48, 51-3, 62, 72, 99, 131, 134 Moore, John 24 Morehead, Robert Archibald 70, 75-6, 78-80, 84, 87-8, 92-3, 99 Moreton Bay 46, 51 Moriarty, Captain Merion 63 Morisset, Major James 19, 62 Morpeth 46, 63 Morpeth and Maitland Railway 68 Mort, Thomas Sutcliffe 71

Nailers 20
Navy Board 14
New Lambton 95
New Lambton coal 76
New Lambton coal mines 83, 95
New Lambton Coal Company 110
New Lambton Colliery 75-6, 78, 81, 85-7, 91, 111, 118
New South Wales 13-4, 22, 27-8, 37, 43, 52, 57, 66, 69, 96, 101, 109, 110, 120, 131, 133
New South Wales coal 14, 21, 37, 54-7, 109, 110.

Mount Keira 55

130

Mount Keira coal 55

Murray, Sir George 31-2, 133

N.S.W. Government 62-3, 65, 67, 108 New Wallsend Colliery 115 New Zealand 14, 26, 57, 96, 109, 110, 112 Newcastle Beach 41 Newcastle Chamber of Commerce 62-3 Newcastle chronicle 65, 79, 80, 82, 85 Newcastle City Council 117-8 Newcastle coal 11, 15-7, 20, 22, 24, 26, 35-7, 54-7 80, 93, 109 Newcastle Coal and Copper Company 56, 62-8, -Coal mines 54, 67, 69 Newcastle coal mines 59, 67-8, 81 Newcastle Coal Mining Company 87, 94, 110, 114, 117, 119, 120 -Coal mines 55, 124 Newcastle Coal Owners' Mutual Protective Association 164 Newcastle Collieries Unanimity Guarantee 106 Newcastle Copper Company 56 Newcastle Gaol 42 Newcastle Harbour see Port of Newcastle Newcastle morning herald 90, 93, 96, 106-7, 111-2, 118, 120, 129 Newcastle Police Court 42 Newcastle Telegraph Office 107 Newcastle Wallsend Coal Company 54-5, 63, 65, 67, 70, 72, 75, 78, 80, 85-7, 89, 94, 99-101, 108, 110, 113-5, 117, 119 -Coal mines 54, 127 (illus.) Newcastle Wallsend coal miners 115 Newington 45 Newspapers 36, 90, 106-7, 118, 120 Nobby's Island 15, 53 Nobby's Seam 16 Normanby, Marquis de 39, 44 North America 56, 109, 110 North American coal 110 North American ports 109 North Stockton Coal Company 109, 115 Northern Coal Sales Association 85 Northern coalfield see Coalfield, Northern Northumberland 68 Northumberland Coal Company 108 Norwhal 26 Nostra Sonora de Bethlehem 10 Notts 56, 62

N.S.W. Co-operative Company — coal mines 54

Observer 56
Oil 59, 109
Oriental Steam Navigation Company 37
Orphan Fund 15
Overseas 24, 26, 38
Owners see Proprietors
Oxen 17, 23, 63

Pacific islands 110, 112, 129
Pacific ports 25, 37, 56
Pacific Steam Navigation Company 37
Panama Steamship Company 56
Parliament 67-9, 104
Parramatta 30

Rum 21 Parry, Sir William Edward 23-6, 32, 36, 38-9, 44 Running away 24 Paterson, Lt. Col. William 14-5 Russell, Lord John 45 Penal settlement 16, 19, 22-3, 40 Phillipines 37 San Francisco 99, 109, 110, 112 Phillip, Governor Arthur 129 Picnics 89 School of mines 104 Pitch and toss 24 Scotland 41 Platt, John 14-5, 18 Scottish Australian Investment Company 70 Platt, John Laurio 34, 44-5 Scottish Australian Mining Company 54, 70-2. Police 67 75-6, 78-81, 84, 86-90, 93-6, 99, 104, 106, 110-Population 18-9, 53, 69 1, 113-4 Porpoise 13-4 -Coal mines 54, 122 Port Arthur 35 Scottish coal mines 42 Port Jackson 22 Screened coal 72, 75 Port of Newcastle 15, 30, 36, 53-4, 56, 59, 62-6, 71, Screening 23, 65 74 (illus.), 90, 92, 95, 101, 103, 108, 113, 115. Scurvy 19 118, 120, 129 Scuttles 24 Port Phillip 35-6, 44-6 Secretary of State for the Colonies 27-9, 31, 38. Port Phillip Association 44 44, 52, 133-4 Port Stephens 15, 29-32 Secretary of State for War 13, 31 Select Committee on Steam Communication with Port Waratah 34 Portland, Duke of 13 India 56 Ports 25, 35, 37, 56, 63 See also Settlements 20, 34, 35, 52 Asian ports -Brisbane 35 -New South Wales 13, 129 Australasian ports -Newcastle 13, 15-6, 19, 21-2 Chinese ports Pacific ports -Port Phillip 35 Premier 118-9 -Port Stephens 15 Princess Charlotte 25 -South Australia 35 -Swan River 30, 36 Private coal mines 23, 27, 31-2, 34, 38, 44-6, 48, 50-1, 57, 134 -Victoria 36 Leasing 27-9, 32 Settlers 20, 26, 45 Profit 22, 24-7, 44-6, 48-9, 51, 53, 62, 64-5, 70, 76, Shanghai 62 78-80, 83, 86-8, 93, 95-6, 99-101, 103-7, 113-4, Shipbuilding 57 119, 120 Shipments of coal 13-5, 17-9, 21-2, 24-6, 35-6, 46, Proprietors 43, 53-4, 56-7, 59, 60, 62-3, 65-6, 68-50, 55-6, 62, 76, 80, 93, 97 (illus.), 109, 112, 120 73, 75-6, 78-85, 87-90, 92-6, 100-1, 103-5 Shipowners 22, 26, 35, 56, 62, 93 Shipping 21-2, 35, 57, 63, 95, 103, 108, 129, 131, Pumps 17, 23, 26 Punts 65 133 Purcell, Commandant Y. 17 Shipping agencies 62 Ships 13-7, 20-3, 25-7, 30, 34-5, 45-7, 56-7, 59. Quarrying 19 62-3, 65, 95, 114, 118-9 Queensland 109 Shoots 33 (illus.), 45, 62-3, 65 Queensland coal 35, 55 Signal Hill 15, 63 Quit rent 31, 52, 134 Simpson, Mr 83 Singapore 37, 109, 112 Railway men 106 Skips 42, 59, 60, 81 Railways 23, 26, 32, 35, 53, 57, 63, 65, 86-7, 108, Skottowe, Lt Thomas 18 112, 129 Small coal 55, 59, 65, 81, 120 Smart, Thomas Ware 71 Rations 18-9, 24, 39-42, 59 Ray, James 68 Smelters 35, 55 Redhead 63, 113 Smelting 35, 109, 131 Redhead Colliery 55, 65 Smith, Charles 71 Smith, John 27 Redhead Estate 65 Reid, George 111 Smiths 20, 67 Soldiers 15-7, 20, 53 Reservation, Coal see Monopoly Rio de Janiero 25 Sophia Jane 32, 34 South America 25, 37, 65, 70, 109, 110, 112, 114 Roads 67 Robertson Land Laws 68, 73 South Australia 35, 55, 95, 109 South Maitland 108 Royal Navy 56 Royalties 115 South Waratah coal miners 93 South Waratah Colliery 93, 104

Southern coal 56 Southern coalfield see Coalfield, Southern Spanish Government 37 Spars 14 Straiths see Shoots Stanley, Lord 46 Steam 22, 131 Steam coal 54-6, 65, 108 Steam engines 17, 20, 23, 25-6, 30, 32, 35, 37, 53-4, 109 Steamship companies 56 Steamships 20, 22, 27, 34-8, 44, 46, 54-5, 57, 87, Stephen, James 44-5 Steven, M.J.E. 22 Stock market 107 Stockpiling 23, 27, 39, 42, 69, 82, 107 Stocks 24 Stockton 76 Stockton coal 109 Stockton Coal Company 101, 103, 106, 111, 117 Stockton Colliery 101, 103, 112, 125 (illus.) Stokes, Charles Frederick 99, 113 Storekeepers 15, 40, 79 Stores 20, 24 Strikes 41-2, 59, 60, 65, 67-8, 70, 72, 80, 82-4, 88, 95, 101, 102 (illus.), 103-8, 114-5, 117-120 Stutchbury, Samuel 53, 55, 73 Suffrage 68 Sugar 37, 39, 40 Supreme Court 43, 46, 48 Surveyor General 134 Swan River 30, 35 Swanston, Charles 44 Sydney 13-4, 16-24, 27, 30, 34-8, 41, 45-6, 48, 50, 56-7, 66-7, 73, 86, 101, 104, 107-8, 111-2, 129 Sydney gazette 24, 27

Tasmania 55, 109 Tea 39, 40 Tennant, Captain James 14-5 Teralba 101 Thacker, John 37-8 Theft 24 Thompson, B. 28 Thompson, Surgeon John 14 Threlkeld, Rev. Lancelot Edward 34, 45-6, 50-1 Timber 13, 19, 20, 22, 24, 34, 55, 57 Timber cutters 50 Times 57 Tobacco 39, 40 Tomago 64, 67 Tomago Company 70 Tools 16, 19, 20, 24, 32, 67 Trade 13, 17, 35, 52, 59, 62-5, 70-1, 79, 82, 84-5, 94-6, 99, 103, 106, 108-115, 117, 119, 120, 129, 130 Traders 14 Trades and Labour Council 104

Sydney Harbour 45

Sydney monitor 24, 29, 53

Sydney morning herald 59, 93

Sydney herald 37

Tradesmen 59, 90 Tramways 26, 53, 56-7, 63, 67 Treasury 28 Trucks 23 Tug companies 106 Tugs 57, 62-3 Tulip, Mr 43 Tunnels 53, 67, 83, 90 Twiss, Horace 133-4 Unemployment 40, 50, 89, 113-5, 117 Unions 43, 59, 60, 67-72, 75, 80-4, 88-90, 92-6, 100, 103-7, 111-5, 117-9, 124, 130 United Kingdom see Great Britain United States of America 56 Valparaiso 25, 37, 110, 114 Van Diemen's Land 25, 35 Vancouver 109 Vend 71-96, 99-101, 103-4, 106-8, 110-9, 129, 130 Ventilation 16, 19, 67-9, 81, 108 Victoria 35, 44, 57, 104, 109, 112 Victoria Tunnel coal 53-4 Victoria Tunnel seam 53 Victorian coal 44 Victorian railways 94 Wages 20, 39, 41-2, 53, 59, 60, 62, 67-70, 72, 80-5, 87-8, 90, 95-6, 99-100, 103-7, 113-5, 118-120, 129, 130 Waggons 23, 32, 53, 63 Wales 35, 41 Wallarah Coal Company 108 Wallis, Commandant James 16, 19 Wallsend 65, 82 Wallsend coal 55-6 Wallsend coal miners 81, 90 Wallsend Colliery 82, 127 (Illus.) Wallsend Lodge 82, 104 Waratah 68, 71, 83, 104 Waratah coal 75, 118 Waratah Coal Company 54, 66, 70-2, 75, 80, 85-7. -Coal mines 54 Vvaratan coal miners 82-3 Waratah Colliery 82, 115 Water 16-7, 19, 23, 54, 62, 101 Water supply 23, 38 Water transport 44, 63 Watt Street 62 Watt Street Hospital 16 Welsh coal 55 Welsh coal miners 41-2 Wentworth, William Charles 56, 77 West Hartley coal 56 West Wallsend Colliery 101, 115 Western Australia 35, 109 Western coalfield see Coalfield, Western Western Port 44-6, 48 Westmacott, Captain Robert Marsh 45, 48 Wharf labourers 106

Wharves 16-7, 19, 22-3, 26, 32, 35-6, 49, 50, 53,

65-6

Wheelbarrow 17-20, 23 Wheeling 42, 59, 68 Wheels 17, 20, 23 Whitton, John 85 Whytte, Robert 60 Wickham and Bullock Island Coal Company 101 William Penn 25 Wilton, Rev. Charles Pleydell Neale 39 Winder, Thomas 26-7, 29 Windeyer, Richard 46-7, 52 Winding machine 104 Windlass 16, 19 Windmills 20 Wingen 111 Wixstead, Corporal 16 Wollongong 31, 55, 63 Wonders, William 60 Wood, see Timber Wood, John 82 Wool 9 Woolwich Dockyard 54 Workforce 29, 38, 40, 72, 82, 87, 90, 96, 100, 103, Working conditions 19, 24, 40-1, 60, 67, 69, 70, 72, 81-3, 90, 103-8, 114, 118, 120, 130

Yard Seam 16, 53-5 Young, Mr 79 Young Wallsend Colliery 101, 115