

In Search of the Lost Coal Mines of Newcastle

Speaking on ABC Radio recently Professor Michael Gibbons, from University of Sussex, spoke of the need for Universities to produce what he called 'socially robust knowledge', where ideas, research, and community partnerships coalesce and collaborate around an issue of pressing significance.¹ The Coal River Working Party which was formed at this University in February 2003 is engaged in this kind of practice; a hybrid of research and community activities. One of the research issues that the Working Party identified as a priority was defining the exact location of Newcastle's first coal mines. This highly specific technical issue in Newcastle's coal mining history is acting as a lightning rod for a broader appreciation, and even re-appraisal, of Newcastle's convict history. This work goes beyond the typical humanities profile of the lone researcher working in the archives, and the material that I am reporting on in this paper is as much a product of community and commercial knowledge as traditional academic research. Its outlets, at this stage, are not peer-reviewed publications, but the local media, and magazines such as the *Australian Longwall Mining News*.

In Newcastle coal is woven into the threads of everyday life, and is as common as the sight of a coal ship heading in or out of the harbour. This is a familiarity born of a place that exported approximately 80 million tonnes of coal in 2004, and is one explanation for the neglect of coal mining history. Something so common place is easily overlooked. When the Newcastle Museum opened in 1988, a pit frame which forms the western entrance of the Museum had to be brought in from the Hunter Valley.² Newcastle, the birthplace of the Australian coal industry, had grown tired of the pit frames which topped its mines, formed its villages and shaped its urban and cultural development.

For many years too, Newcastle's convict past was actively suppressed. Until very recently Lieutenant John Shortland's 1797 voyage of exploration which mapped the Hunter River and returned coal specimens to Sydney was always the preferred commemorative date over and above the withdrawn convict settlement of 1801, the permanent settlement of 1804, and even earlier European contact with the area.

In what is now almost a mantra of local history, Lieutenant Shortland pursued escaped convicts as far north as Port Stephens without success. A year later Shortland wrote to his father and described 'a very fine coal river' just south of Port Stephens which 'in a little time, will be a great acquisition to this settlement.'³ Reports of European visits to the area from 1791 through to March 1804, not all well-documented, are responsible for Newcastle having a myriad of commemorative dates. Shortland, with a distinguished career in the Royal Navy ahead of him, was deemed a much more suitable founding father of the city than the escaped convicts and fisherman who preceded and followed him: hence the significant commemorative efforts in September 1897, 1947 and 1997.

As one influential regional historian, Wilfred James Goold noted in 1932 when reviewing earlier historical work: 'There seemed to loom up the dark clouds of convictism and transportation. It had not been deemed wise to delve too deeply into the history for fear that some high person might have been found to be among the original convicts.'⁴

¹ Michael Gibbons, Radio National Breakfast, <http://www.abc.net.au/rn/talks/brkfast/stories/s1315873.htm> [30 March, 2005] This paper is a work-in-progress presented to the School of Liberal Arts, University of Newcastle, 1st April, 2005. I acknowledge the contribution of my colleagues on the Coal River Working Party. See www.newcastle.edu.au/coalriver Comments and feedback to the author are welcome: Erik.Eklund@newcastle.edu.au

² Nancy Cushing, 'The City of Newcastle as a Museum', *Public History Review*, 5/6, 1996-97, 49 – 61.

³ Shortland, Jun., To J. Shortland, Sen. *HMS Reliance*, Sydney Cove, Port Jackson, *HRNSW*, Vol.3 pp 481 – 182.

⁴ W.J. Goold cited in Nancy Cushing, 'Writing Local History in the Hunter Region: Trends in the Writing of Hunter History' in Cynthia Hunter ed. *Riverchange: Six new histories of the Hunter*. Newcastle: Newcastle Region Library, 1998, p.4.

Despite the inclination to overlook the obvious and residual anxiety about our convict origins, it is still a remarkable fact that Newcastle's first coal mine, indeed the first coal mine in the southern hemisphere, lies beneath the imposing walls of Fort Scratchley in the city's East End. Here coal and convicts come together: a powerful mix which spelt cultural ambivalence and occasionally official indifference. Any other city would have had a major heritage or tourist facility on site. Newcastle's first coal mines were lost presumed drowned by rising ground water.

Cultural ambivalence about coal and convicts does not entirely explain the lack of interest in Newcastle's first mine. The specialist works by historians on the earliest mines hardly present a flattering picture. This work is underpinned by assumptions that the mines were unimportant, unproductive, and were not mined with the best methods. John Turner wrote in *Coal Mining in Newcastle*, for example that 'coal mining remained small scale and primitive' until 1821. Jack Delaney, another champion of early convict history in Newcastle wrote that: "poor type mining skills, plus inefficient management resulted in very limited coal output."⁵ The story emphasises material shortages, recalcitrant convicts, primitive transport, and a lack of skilled miners. It's an overwhelmingly negative picture of the coal mines as workplaces and as an economic enterprise. These perceptions were shaped by the perspective of the more technically sophisticated and more highly capitalised coal mines which grew from the middle of the nineteenth century. To be fair to these authors, it was these later mines that were the real focus on these histories. The convict miners only formed part of the background context.

Regardless of their productivity or otherwise, however, the coal mines were a crucial part of the everyday life of the colony and a good number of its workforce. Miners lived and died in the mines; they hacked, pushed and heaved its coal onto the colonial sloops and barques that visited Newcastle. The apparent lack of productivity of the mines should not at all undermine their significance in social and cultural history terms.

Further, modest coal output must be seen in contemporary context. The settlement at Port Jackson had only just become relatively self-sufficient in food production by the late 1790s. Later, flood and drought would still threaten its precarious existence. There was a constant tension in the early economic history of Newcastle. Was the settlement a place of punishment or a site of new economic production? Clearly, Newcastle was established to take the rebellious convicts, those who had re-offended in the colonies, and these workers hardly made for a motivated workforce. Apart from a few individuals such as John Platt and James Broadbent (convict workers who oversaw much of the early work) few of the miners had experience in coal mining. Various commandants in the early period lamented the absence of skilled labour. Yet, Governor King and later Governors such as Macquarie had high hopes for coal industry which made its first definite export to Bengal in 1801. Seen in light of these contemporary facts, producing around 420 tons of coal in 1806 was quite an achievement, particularly when labour and tools were in such short supply. This was a reasonable return from a white population of only 96, including 50 male and 22 female convicts.⁶

Overall, the prevailing view of Convict Newcastle remains firmly rooted in a pre-1988 historiography, which emphasised brutality, inefficiency and powerlessness. Granted that Newcastle was place of secondary punishment and its workforce was hardly a model of productivity and flexibility. Nevertheless, the newer historiography has shown that assumptions of inefficiency and brutality need to be at least treated with caution. Overall, convict Newcastle remains outside the revolution in convict historiography that has occurred since 1988. Work by historians such as Deborah Oxley, Stephen Nicolas, Bill Robbins, Alan Atkinson and many others remains disconnected with the Newcastle convict experience.

Compounding this very negative picture of the first convict coal mines was uncertainty about their location. David Branagan's major study of geology and coal mining in the Hunter Valley, published in 1972, placed one of the earliest mines the so-called 'New Discovery Mine' at

⁵ J.W. Turner, *Coal Mining in Newcastle, 1801-1900*, Newcastle History Monographs, No.3, Newcastle, 1982, p.16 & Jack Delaney, *A History of the Greta Coal Measures (1861-1998)*, CD Rom, Introduction.

⁶ General Statement of Inhabitants of His Majesty's Settlements, 12 August 1806, *HRNSW*, Vol.VI, pp.132.

the corner of Hunter and Brown Streets.⁷ Likewise John Turner wrote that the exact location of the earliest mines was difficult to determine precisely.

Coal Mining and Early Colonial Occupation

Coal mining was seen by the early colonial administrations as a possible means to make the colony more financially self-sufficient. Governor Hunter reported that the coal at Coalcliff was inaccessible but the Coal River deposits outcropped at a convenient location at the entrance of Newcastle harbour. Lt Shortland was impressed with the loading and trade potential of the area just to the west of Collier's Point: 'Vessels from 60 to 250 tons may load there with great ease,' he wrote, 'and completely landlocked.'⁸ The extent of resources available to support any mining venture, however, was negligible. Mining was started on the Georges River, just south of Botany Bay, in 1799, with the work being led by a convict with mining experience, John Platt. Platt would play an important role in the establishment of regular mining at Coal River from 1801. Up until that point the exposed coal seams at Colliers Point, and Coal Island, were worked intermittently by private traders. In 1801 an expedition led by Lieutenant Colonel William Patterson entered the Coal River. Following the withdrawal of the initial convict settlement in February 1802, Coal Harbour was visited occasionally by private traders and Government boats in search of coal and cedar.

After the convict rebellion at Vinegar Hill in early March 1804, Governor King resolved to reopen the Coal Harbour settlement 'by sending a number of the most active to the coal works.'⁹ Lt Menzies was appointed as commandant and a Government and General Order concerning Newcastle made all coal and timber in the area crown property, closely regulated the comings and goings of private vessels, and banned alcohol in the settlement.¹⁰ The ad hoc exploitation of the area's resources was stopped. Trade and communication had to be strictly controlled in order to reduce the risk of escape and preserve the isolated and punishing nature of the outpost. Newcastle was designed to be bad. Menzies, six privates, and 34 convicts arrived in three vessels at midday on the 30th March 1804.

Lt Menzies wrote to King, after only twenty days that 'an excellent mine has been opened, the strata of which continues a yard six inches thick'. From geological records, and later detailed descriptions we know this seam to be the upper split of the Dudley seam. The spot they disembarked appears to be the area where the Department of Housing apartments lie along Fort Drive. Menzies described a 'most delightful valley, about a quarter of a mile from the entrance, and close to the mines.' Menzies, with the experienced miner Platt faced a difficult prospect since the 'mines have hitherto been dug by individuals in a most shameful manner. Never have they been at the trouble of leaving proper supports, leaving them to fall in away...'¹¹

From 1811 both coal production and the settlement's population increased. From 73 persons in 1811 the population almost doubled to 134 by 1812. Similarly coal production increased from 800 tons in 1808 to 1400 tons in 1811, and peaked at 2193 tons for that decade. Problems with a new shaft at what became Watt Street, slowed production after 1814. The 111 foot shaft, started in 1814 was not completed until 1817. At the top of the shaft, Newcastle's and Australia's first coal mine shaft, stood a windlass for hauling coal, and transporting men and tools to the coal face. Requests for steam engines, tools and more barrows, were rarely successful. Water was a constant problem and workers struggled to dam seeping water or drain it away down declined tunnels.

The other major problem for the convict miners and their overseers was transport. Underground transport of coal was via barrow which could be wheeled directly out of the tunnel and onto a rough track that run down the length of Collier's Point and terminated at what is now the remains of the Convict Lumberyard. Lt Jerries' 1816 map marks this location as the 'coal yard', a

⁷ D. Branagan, *Geology and coal mining in the Hunter Valley, 1791-1861*, Newcastle, N.S.W. : Newcastle Public Library [in association with Newcastle and Hunter District Historical Society], 1972.

⁸ Shortland, Jun., To J. Shortland, Sen. *HMS Reliance*, Sydney Cove, Port Jackson, *HRNSW*, Vol.3 pp 481 – 182.

⁹ Governor King to Lord Hobart, 16 April 1804 in *HRNSW*, vol.V p.366.

¹⁰ Government and General Order, 24th March 1804 in *HRNSW*, vol.V, pp.363-4.

¹¹ Lt Menzies to Governor King, 19th April in *HRNSW*, vol.V, p.367.

site for the temporary storage of coal before loading onto colonial vessels. After 1817 more coal was moved via the windlass to waiting carts or barrows. The wharf, such as it was, was directly adjacent to the Coal Yard on the river. Well before the construction of the southern breakwater (let alone the much later northern breakwater), this wharf was subject to considerable swell and surge in heavy weather.

After 1830 government mine works ended in the city. By 1831, convicts and free labour were working for the Australian Agricultural company which had a monopoly until 1847. The area that was worked between 1801 and 1824, under Signal Hill and south-west to the future Watt Street and Bowling Green site was abandoned as dangerous, flooded and worked out. There now appears a large gap in the historical record from the 1820s through to 1885. What became of the mines over this period is not clear. They were more than likely stripped of any useful items and roughly sealed. In 1885 Newcastle's convict past was quite literally covered over and most people were very pleased with this development. As the walls of Fort Scratchley were formed, the first coal entrances were covered over. As the *Newcastle Morning Herald* commented: 'their entrances were finally blotted out of sight for ever by a deep thick wall of concrete and masonry.'¹²

What happened to the Convict Mines?

In the 1980s, with plans for the development of larger-scale buildings in the Newcastle central business district, concerns were expressed about undermining and subsidence from unmapped coal mines. In 1981 Professor Branagan warned that there were an estimated 288 mines underneath Newcastle and nearby suburbs and that many of the smaller operations were unmapped and largely forgotten. Tunnels had been discovered under the Newcastle police station, the city morgue and the Medical Sciences Building at the Royal Newcastle Hospital. The workings under the Newmed building were uncovered in 1978. Branagan and another consulting geologist, Professor Moelle found partially collapsed tunnels with timber supports.¹³ Moelle indicated that the Newmed tunnel might lead in the direction of the police station and city morgue, and suggested that they were once linked. Clearly this entire area of east Newcastle was honeycombed by tunnels. In 1943 convict-built tunnels had caused subsidence at the James Fletcher hospital, though a recent *Newcastle Herald* article by Mike Scanlon suggested that these were the remains of an 1840s water reservoir.¹⁴

This series of tunnels, never mapped but occasionally described in colonial correspondence, was begun in 1814. Moving away from the Signal Hill/Fort Scratchley area, a shaft was sunk in the vicinity of the Royal Newcastle Hospital. It took 3 years work, a considerable amount of hard labour and gunpowder, until it was completed in 1817 to a depth of 111 feet. There were also workings south of this area where the coal seam outcropped at Shepherds Hill and later the site of the Newcastle Bowling Club. There were also been tunnels dug into the cliff face for either production or ventilation by the AA company from the late 1820s. Since no detailed maps exist of this area then some of this is speculation however these separate adits, shafts and tunnels may have been connected in an elaborate system that ran underneath what became the city's East End.

Subsequent development of the Taxation office and the Telstra building revealed similar issues. Workings, only partially or inaccurately mapped had to be located and methods for securing the stability of the building investigated. These two buildings, both located adjacent to the corner of Darby and Hunter Streets in central Newcastle, had extensive work carried out on their subterranean foundations. At the Telstra building the yard seam lies approximately 23 metres below ground. Some information from 1989 investigations in the construction of the Taxation Office and mid-1970s drilling work associated with the construction of the Council Round House revealed some information on tunnel depth and orientation. Furthermore there was one plan from the Australian Agricultural Company records which yielded some information on the nature of the bord and pillar method used in the 1830s.

¹² *Newcastle Morning Herald*, 29 January 1885.

¹³ *Newcastle Morning Herald* NH, April/May 1981.

¹⁴ *Newcastle Morning Herald*, 21 July 1943 and February 2005.

These mine workings date from the 1830s once the Australian Agricultural company had taken over all mining in Newcastle. This mine was soon abandoned and flooded by the end of that decade. In the case of the earlier government-operated mines which dated from 1801 at Colliers Point, there were no maps or plans at all apart from the enigmatic and inconclusive 1804 plan by Lt Menzies. The Mine Subsidence Board had no available records. There were some references in the written record and the coal seams did still outcrop in certain parts of the Newcastle's East End, but overall the first convict mines were buried in 1885 in an unknown condition beneath tonnes of fill, concrete and asphalt.

Finding the 1856 Plan and Designing the Search

The initial plan to drill for the coal mines were based on the written evidence of Colonel Paterson, Lt Grant, Lt Menzies and others about coal mining at Signal Hill or what is now Fort Scratchley. The plan was to locate the coal seams and thereby locate the mines. The written evidence described the site in very general terms. There were no known maps or plans.

This initial plan was modified from February 2004 when an 1856 survey of "Flagstaff Hill" was uncovered in State Records by Mr Doug Lithgow. The 1856 survey can be viewed here. [link to the 1856 plan on our web site] Crucially, this plan indicated the site of three 'drifts' or mine entrances. One of our commercial partners, Monteath and Powys, analysed the plan. They determined that the plan was accurate and were able to transpose its information onto an aerial photograph of Newcastle today. They did this by identifying common elements in both representations – the boundary of Susan Ranclaud's 2 acre grant, and the mid line of the Nobbys Breakwater. The analysis can be viewed here [link to Monteath and Powys analysis]

The 1804 Menzies Map

The next piece of evidence uncovered would be rather more spectacular but still quite enigmatic. A copy of the 1804 plan was originally rediscovered by Doug Lithgow off a microfilm copy in the Mitchell Library in Sydney. The original was found in London after an exhaustive search by staff from the British National Archives. The original plan was made in July 1804 by Lieutenant Menzies and sent by Governor King to Lord Hobart in England. It shows the Drives, Headings and Crosscuts made at the coal mine at Newcastle. The 1804 can be viewed here [link to 1804 plan]

The map is clear evidence of the beginnings of a 'bord and pillar' style method of working. The coal mines can be seen as indicative of an early tentative step to industrialise outside of Europe and North America. Research by members of the Working Party also confirmed that the convict coal mines beneath Fort Scratchley, Newcastle were not only the first coal mines in Australia, but were the first coal mines in the Southern Hemisphere. The search for firsts, unique characteristics that mark out one event or place from another, often leave professional historians cold. In terms of public and media engagement however, such claims have a powerful effect. The development of these mines was well ahead of anyone else in our part of the globe. The first South African coal mines were not worked until the late 1830s in Natal province, and only in a systematic way from 1889. I have found no evidence of systematic commercial mining in South America until the twentieth century. This kind of work also enables us to consider the national and international significance of the site, and encourages comparisons with other places

Results of the Ground Penetrating Radar

The Ground Penetrating Radar analysis provided further evidence of unusual densities below locations no.1 and no.2, evidence perhaps of a mine opening covered with fill. At location no.3 there was a large cement cap which jutted out from the concrete façade. Our engineering and surveying experts looked at that and surmised that a void behind the original wall had promoted cracking and that the cap had been placed over the top. This was more circumstantial evidence that location no. 3 was also accurate. We believed that no. 3 was the harbour side opening of the mine named by Lt Menzies 'New Discovery' in 1805. This was the same mine that Professor Branagan,

had placed in Brown St. Branagan's Brown Street location led some in the local community to doubt our press release which was headed 'Rediscovery of New Discovery' near the Fort Drive Roundabout. [Link to Photo of 'New Discovery' location]

Test bore logs

Other pieces of information came to us through University networks, and the links that are forged between students and staff and often continue as students graduate into a professional position. Test bore logs from Robert Carr Associates were acquired through informal channels which existed between a former student of one of the Working Party members. Carr & Associates were completing work on the integrity of the retaining walls and drilled a number of holes to assess the condition of the foundations as part of the refurbishment of Fort Scratchley. This work was carried out on the 4th November 2004 and was made available to us in early 2005. Two of those holes encountered the Dudley seam. One hole 80cm from the wall on the southern side of the fort encountered coal at 1 metre below the road. The drill had travelled through 20 mm of asphalt, almost one metre of road-base fill and then hit a coal seam of 70cm thickness. A second hole on the opposite (or northern side) of the fort struck coal at 2.65 metres below. This larger seam was 2.05 metres thick. The augur drill struck water at 2.8m indicating that this section was locally flooded. The water level rose on completion of the drilling to 2.4 metres.

These findings presented a number of potentially troubling conclusions. To what extent were the workings flooded even at the relatively shallow depth of 2.8metres? And what was the relationship between the two coal seams on the southern and northern sides of the hill given the significant differences in thickness? We had hoped that refurbishment work on Fort Scratchley might have led to more significant drilling straight through the hill to the coal seam level in order to establish a clear stratigraphy of the site. Word in the engineering community was that the complex restoration work of Fort Scratchley was underfunded. The \$5 million figure had been chosen by politicians and not engineers, and costs had been to carefully managed These two modest drill test bores were tantalising but in no way conclusive.

Where to from here?

Guided by the 1856 survey and the ground penetrating radar analysis the Working Party will be drilling at Location no.1, no. 2 and no.3 as soon as the relevant Council approvals have been secured. As at April 2005 we are still waiting on this approval. This preliminary drilling program should provide evidence as to the exact location and state of Australia's oldest coal mines. There are also still unresolved issues that can be followed in the written record. More work can be done on placing the first mine in its proper English context. The first convict miner, John Platt, was from Lancashire and commonly referred to Newcastle's mines as resembling Lancashire mines he was obviously familiar with. Even a brief perusal of the history of coal mines in Durham, Northumberland and elsewhere reveals, for example, that salt pans were a common adjunct to coal mines. This simple fact makes sense of the decision to site a salt pan at Newcastle in 1805.¹⁵ Incidentally the operation of the salt pan casts further doubt over the very negative picture of convict productivity. The salt pan, imported wholesale from England, produced 20,000 pounds of salt in its first eight months of operation.¹⁶ Located at the base of Colliers Point or Signal Hill, an obvious location close to salt water and the coal mines, it utilised poorer quality coal. Likewise the coal-fired beacon, in operation between 1821 and 1857, also used poor quality coal. This coal does not appear to be accounted for in the modest export figures.

Conclusion

A relatively narrow historical and engineering problem such as finding an old coal mine can be a springboard for an effective community engagement as well as encourage a broader re-evaluation of convict Newcastle. This is community engagement is borne of ideas, research, history,

¹⁵ *Sydney Gazette* 3 March 1805, 2b

¹⁶ *Sydney Gazette* 8 September, 1805, 2a

heritage and local identity in the production of ‘socially robust knowledge’. It moves beyond the marketing driven plans for generating income from alumni and regional business. It represents important outcomes that apply academic and commercial expertise to encourage public recognition of Newcastle’s heritage. Its outcomes are measured in the column inches in the local newspaper, and in air time on local radio. The University needs to nurture both its ‘peer-reviewed’ and what could be called its ‘community-reviewed’ research outcomes. Searching for the site of the Newcastle’ first convict coal mine shows University researchers in partnership with community groups and commercial interests. As we evaluate this evidence it throws up broader questions about the nature of convict Newcastle. Ultimately, this project may reveal not only the mine working themselves, but will bring us closer the experiences of its first convicts.

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