THE AGE OF SHOVELLRY IS NOT YET DEAD

YALLOURN 1920-1990

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It is not widely understood in the community that Australia, a country which earns most of its export income from agricultural products and minerals, was, by early this century, a very industrialised country. In the nineteenth century most of our industrial plant and even our railway tracks and rolling stock were imported, but by the 1920s we were self-sufficient in the supply of most of our steel products and engineering plant.1

From the late nineteenth century Australian cities and towns began to establish gas works and electricity plants. Most of these nineteenth century industrial sites survived until the 1980s, even if the stock of buildings and plant has been altered, sometimes irrevocably. The same is true of the later BHP steelworks at Port Kembla and Newcastle, which have remained on the same sites, even though they have expanded. We do, of course, have some spectacular abandoned industrial sites, mostly connected with mining. Examples of these are the tin mines of South Australia and the shale oil mines and plant at Joadja, Newnes and Glen Davis in New South Wales.2

The particular focus of this article is the fate of large industrial plants and related housing projects which have outlived their industrial life, usually because of dramatic changes in technology and, sometimes, in the location of production. The great metropolitan gas works and electricity power stations were built at a time when power was generated close to the consumers, because the technology for transferring power over long distances simply did not exist. Coal fired gas works supplying nearby consumers, whether in metropolitan or provincial urban Australia, have been replaced by natural gas, delivered from thousands of kilometres away via a gas pipe line. The development of economic and efficient means of transferring electricity over large distances has led to electrical power stations now being located where the power supply is, whether coal or water, rather than where the consumers are.3

In this paper we examine aspects of Yallourn, which represents probably the largest complex of industrial plant and associated housing in Australia and one of the most important, charting as it does, changes in the technology and transmission of electrical power. It is also a plant that has had an enormous impact on the landscape through open cut mining on economic and social life through the production of cheap and efficient power and on town planning through the construction and subsequent destruction of the Yallourn township Australia’s first ‘New Town’.

THE AGE OF SHOVELLRY IS NOT YET DEAD

In the mid 1920s when Sir John Monash, then Chairman of the State Electricity Commission (SEC), crafted the pun which serves as the heading of this paper, the ‘Age of Shovellry’ was certainly not yet dead. In the SEC undertakings at Yallourn, many men still laboured with picks and shovels, and horses continued to play a major role. But it was an age which was drawing to a close. In 1925, the item ‘horses’ disappeared from SEC published accounts and was replaced by an item called ‘motor and vehicles’. Horses did, however, continue to be used for some years after this date although in ever decreasing numbers. The present SEC operations in the La Trobe valley do not of course rely upon gangs of sweating men wielding picks and shovels, nor do horses play any part in modern mining or power plant operations. Indeed the men and horses who toiled to construct the new power-related enterprises at Yallourn were creating an industry which would, in time, provide the power for forms of mechanisation which would render them redundant.

The open cut mining operations at Yallourn and the creation and development of the township of Yallourn provide an interesting insight into industrial and social development in Victoria. Electrification, which in Victoria was centred upon Yallourn, revolutionised living and working conditions in the state.
Yallourn was named from a combination of the Aboriginal words Yallen and Lourn, meaning appropriately enough brown and fire. The land upon which the new industry was based was originally part of the tribal lands of Aborigines who belonged to the Woolloom Woolloom division of the Braika lung, a sub group of the Ganai tribe. During the many thousands of years of Aboriginal stewardship of this land their main impact on the landscape consisted of a number of fire holes. Essentially, fire holes were created when Aborigines left a camp fire smouldering on land rich in brown coal. The geologist Gaulton has noted that:

some smouldering patches remain alight for thousands of years. Sizeable craters still burning underneath through a limited supply of oxygen drawn from cracks in surrounding coal become water filled and silted up. Eventually the heat of this process bakes the lower layers of accumulated clay under the water, thus insulating the fire zone from the pond. Apart from the wisps of smoke from the surrounding ground, the flooded fireholes look like anormal waterhole complete with rushes, weeds, algae and wildlife.¹

Gippsland was opened up for white settlers by McKillop in 1835, Hutton in 1838 and McMillan during the years 1839-41. Brown coal was first discovered in Victoria in 1857, and by 1876 it had been located in 32 places, with by far the most impressive fields being in the La Trobe Valley. By 1887 a company had begun to win brown coal at what is known as Yallourn North. The Victorian Government, anxious to end Victoria’s reliance on the expensive and at times unreliable supply of black coal from NSW, offered a fixed minimum price for brown coal. In 1890 the State Government extended its support by offering a 5000 pound bounty for the first 100,000 briquettes produced in the Colony. The Morwell Mining Company set up a primitive plant at this time but black coal was so efficient in comparison with brown coal that demand for black coal remained steady. The Morwell Mining Company ceased operations after a bushfire destroyed its plant in 1899.

During WW1 the demand for power increased and Victoria found its reliance on NSW black coal was a great drawback to its industrial and economic development. Severe coal shortages in 1916 led to the abandoned open cut at Yallourn being re-opened but, due to its poor quality, householders and industrialists were not enthusiastic about purchasing its product. In 1917 the State Government established the Brown Coal Advisory Committee, which
recommended the appointment of State Electricity Commissioners, and in March 1919 three Commissioners were appointed. The major problem faced by the Commissioners was the very high water content estimated at about 48 per cent in the brown coal reserves at Yallourn. Indeed, there was a good deal of doubt as to whether coal with such a high water content was worth exploiting at all because of the technical problems involved in effectively releasing the energy contained in the coal.

At this stage Sir John Monash entered the scene. It was known that brown coal was being successfully mined and used for power production in Germany, the industry being centred upon the Cologne area. The Victorian Government asked Monash, who was still in Europe organising the demobilisation of the AIF, if he could use his influence and authority to have these German operations investigated and a report prepared for the Victorian Government. Monash, with characteristic efficiency, arranged for Major Mulligan, an AIF engineer, to visit the Fortuna plant at Cologne.

When he first visited the plant Mulligan posed as a tourist, but after he had spent some four days taking photographs and attempting to ‘liberate’ the plans of the work, the Germans started to become a little suspicious of their inquisitive Australian guest. Mulligan, not a man to be easily thwarted, reverted back to his military persona and arranged for military assistance. By using what he described as ‘special methods’ Mulligan and his armed assistants, 2 officers and 32 enlisted men, were able to obtain a complete working plan of the whole industrial process and these plans were quickly forwarded to the Victorian Government.

The rather unprofessional, even larrikin nature of this exercise Monash himself described it as a complete system of espionage speaks volumes not only about the level of post-war confidence and vigour in Australia, but also of the lengths to which the Victorian Government was prepared to go in order to establish a brown coal based power industry in the State.5

On his return to Australia Monash was appointed General Manager of the Electricity Commissioners’ operations, and at the beginning of 1921 he became full-time Chairman of the newly formed State Electricity Commission, a body which had been given substantial funding, wide powers and a good deal of autonomy. By February 1921 work had already commenced on the power house site at Yallourn and a new open cut had been started, the old open cut having been found to be unable to supply the quantity of coal required.

When the new open cut delivered its first coal, the officers of the SEC were horrified to discover that the coal had a moisture content of between 65 per cent and 68 per cent. This finding placed the future of the whole enterprise in jeopardy. It had been difficult enough to work out how to burn coal which had a high water content; they now, as a matter of great urgency, had to find a method of burning water which had some coal in it. SEC operatives eventually discovered that wet coal could be used if it was first pre-heated and dried by passing down a series of grates over which hot waste gases from the furnace flowed. Through this adaptation disaster was averted.

By 1929 Yallourn was providing electricity over some 1500 miles of high voltage transmission lines, to almost the whole of the Melbourne metropolitan area, 141 country centres, and hundreds of farms. By the time Monash died in 1931 over nine million tons of coal had been won from the Yallourn open cut.

In 1934 a technical problem of a very different nature literally fell out of the sky. In late November Victoria experienced its highest recorded rainfall. Throughout the State between 10 and 19 inches of rain fell over a period of only three days. By Saturday 1 December the Yallourn open cut which at its deepest was 63 feet below sea level had been flooded by the La Trobe river and had become a lake of some 206 feet in depth, containing over five billion gallons of water. Perhaps it is fortunate that the brown coal in the cut was already so waterlogged that it was physically incapable of absorbing any further water. The SEC had to float three large water pumping pontoons on the open cut to pump the water out. Mining operations could not be resumed until April 1935.

Ten years later another natural disaster threatened the operations, when a bushfire spread into the cut. Gas on the surface of the cut had always posed a serious fire danger and this fire caused a great deal of damage. It took four days to bring the blaze under control. After this nearly calamitous experience the SEC was given increased fire protection control over the Yallourn area.

Today the La Trobe Valley is home to a huge network of power related enterprises. It is an area in which the impact of industrial develop-
ment has been vast and in many ways catastrophic. Some commentators have argued that the landscape is second only to the Ruhr Valley in Germany in terms of industry-created ugliness. It has also been alleged that the Valley has been ‘colonised’ by the rest of Victoria, that its natural resources have been exploited with little or no thought for the environment or for the local inhabitants, including those who owe their livelihood to the SEC. The Valley, which houses possibly the world’s largest deposit of brown coal, is a spectacular industrial landscape: the gigantic open cuts and huge power plants are awe inspiring. The area is either impressive or disturbing depending on one’s point of view.7

THE TOWN BUILT TO GO
The inventions and adaptations of the SEC were not limited to the technological aspects of their work, they also made a bold and imaginative leap into social planning through their decision to construct a ‘new town’ at Yallourn. The town was designed on the then progressive concept of the Garden City, an English idea inspired by Raymond Unwin’s work, particularly his book Town Planning in Practice. A.R. La Gerche, the architect of Yallourn and W.E. Gower, the town planner, were also influenced by the German ‘Bauhaus’ and the ‘International Style’ movements. Yallourn township, like the industry which it was designed to serve, was to be modern in both concept and design, a town of the future. Monash himself stated that Yallourn was ‘a model industrial town, built, organised and administered on what we believe to be the most advanced scientific principles.’

Yallourn enjoys the distinction of being Australia’s first ‘New Town’ designed and built from scratch. Canberra, although designed earlier than Yallourn, was built later and, unlike Yallourn, was not Australian designed.

From the beginning a dichotomy existed in regards to perceptions of Yallourn. Residents generally believed that the town was designed to be permanent, a model environment for workers created to improve the often appalling conditions endured by the industrial working class in the nineteenth century. The SEC, on the other hand, was more ‘rational’ and ‘pragmatic’ in its view of Yallourn. It had envisaged Yallourn as being a transitory industrial community, very much secondary in importance to the industry which it was designed to serve.

The SEC hoped that the provision of a well-planned, pleasant environment within the context of a company town all land, houses and shops were owned and controlled by the SEC would lead to a contented and, in industrial terms, non-troublesome workforce. These two almost contradictory perceptions of Yallourn of those who lived there and saw it as a living and rather special community and those in the SEC who saw it as an adjunct to an industrial complex, part of the plant as it were, explains much of the later developments and the eventual destruction of the town.

The area chosen for the site of the Yallourn industrial development was described by the SEC as being country which ‘except for a few square miles of river flats is covered with timber, mostly messmate and stringybark’. They also noted that ‘the gullies are filled with ferns and undergrowth, and wallabies and kangaroos are sufficiently numerous to be constantly met with in the scrub’. The township itself was built on the easterly slopes of a spur of the Haunted Hills bordering on an area known as the Melbourne Swamp. Perhaps to make up for the rather ominous names linked to the site, the SEC boasted that the township site commanded ‘a view over the Power House and mining areas from which it is about a mile distant.’ It must have been a blessing to those who worked in the Power House and open cut that their homes afforded them such a good view of the site of their labours. The open cut, as it expanded, came closer and closer to the township and by the mid 1960s had reached the edge of the town.

In the aftermath of the 1944 bushfire, a Royal Commission was established to investigate the fire’s origin and causes, and to report on any measures which might be needed to provide better fire protection for the works and the township. Judge Leonard Stretton interpreted his brief widely; so widely in fact that the completed Report included an acerbic analysis of social conditions in Yallourn township. One can imagine the SEC executive’s reaction on first reading the contents of the ‘bushfire’ Report. Stretton’s main critique and his powerful prose style are evident in the following comments about Yallourn which appeared in the Report.

The houses are of various designs. The rents are not high. The domestic services, such as the supply of lighting, power, water, drainage, are good. It is a pleasant town and an asset of very great value, worthy of special fire-protection by the Commission under whose sole management it lies. Here indeed the townsman enjoys all that the heart of man may desire except
freedom, fresh air and independence. He lives his life on a great many days in a fine rain of abrasive coal particles and breathes with them, perforce, the nauseating stench which comes from the neighbouring paper-mill, and against which closed doors and windows offer no defence. Be he never so provident, he can not acquire a home or an equity in a home. He has no authoritative voice in the management of the town, because there is no democratic local government of the town. His wife can not open a shop unless by the unlikely permission of the Commission; nor can she withdraw her custom from a shop unless she be prepared to face the possibility of having to travel some miles to a neighbouring town to do her shopping. There is no competitive spur to the giving of good service by shopkeepers because each has a monopoly in his own field, the most important being the Commission itself. There is no public library. There is no hall where the townspeople may publicly assemble as of right. There is no place where refreshment of any kind may be obtained after six o'clock in the evening. There is a cinema. There is no municipal democracy in Yallourn.10

It might well be argued that Stretton departed from his brief and overstated his argument, but such scathing comments from a highly respected, widely experienced and completely neutral investigator carried a great deal of weight; there is after all 'no smoke without fire'. Within a month of Stretton handing down his report the Yallourn Town Advisory Council was set up. The Council was rather a powerless political forum but did at least represent some progress.

In the 1950s Yallourn township was at the height of its rather grimy glory being visited by both the Queen in 1954 and the English Cricket Team in 1956. It was also, however, approaching the end of its economic usefulness to the SEC. In 1961 the SEC publicly stated that Yallourn might need to be moved in order to mine the coal underneath it, and, in 1968, published the results of a review of the township's future which confirmed that future coal requirements meant this coal would need to be mined.

After a great deal of local agitation by Yallourn residents many of whom had lived there all their lives a Parliamentary public works committee was set up to enquire into the SEC decision to remove the township. The committee reported in 1971 and its findings were that, in the circumstances, the SEC's decision was correct. Alternatives did exist, (there was brown coal in abundance in other parts of the La Trobe Valley), but the destruction of the town made economic sense. In 1971 when the

Yallourn band playing at the 1954 Royal Visit

Churchill Collection
A report was published Yallourn had 3204 residents (compared with a peak of over 5000 in the late 1950s). By 1981 the last resident had been moved out.

Local residents fought the destruction of their homes and their community. One resident who was clearly both very proud of the town and enraged at its demolition wrote that:

Yallourn was an intelligent arrangement of form in space. When the spectacular experiments in utopian models around the world were failing, Yallourn was developing successfully. It was a rare example where a working class population lived in close proximity to heavy industry with dignity for their home lives and the landscape. And while this example was destroyed skillfully, wistfully in silence by the SEC, disastrous examples of urban environments proliferated and were encouraged.

In attempting to understand the processes by which he was being robbed of his home and his community the same writer came to the conclusion that:

the destruction of a town the size, quality and importance of Yallourn could only be achieved in Australia because of the conditions of power and paternalism prevailing in the valley. This calm, uncanny dispossession seemed part of white Australia’s heritage. First the Aborigines, miners’ rights, conscription, ‘slum’ reclamation, Yallourn, the coup of 1975... The efforts made by the people of Yallourn to prevent the destruction of their town were in vain. Yallourn from the SEC perspective was, and always had been, ‘built to go’. The SEC conceived and created the town, it owned it, lock stock and barrel, and rightly or wrongly ownership gave the SEC the power to destroy not only the town buildings but a living community which had developed over half a century, and was home to thousands of people. Yallourn as a community of SEC workers had quite literally “dug its own grave.”

The SEC, like other major industrial employers, organises tours of power plants in the area. The tours take about one and a half hours and are free of charge. They leave from the SEC Visitors Centre in Morwell, on the hour, during business hours, seven days a week. If you do not know the area, it is well worth visiting this grand industrial site, one of Australia’s most dramatic industrial landscapes.
Preservation, reuse or demolition
Most redundant industrial structures that have survived in Australia in areas of high land cost have been reused, like the Ultimo Power Station at the Powerhouse Museum in Sydney or the Walsh Bay Wharf which has been reused as a live theatre. Some of these structures have been appropriately documented before partial demolition and reuse, while others have not.\textsuperscript{13} The heritage lobby has rarely been satisfied with reused structures, but on the whole prefers them to re-created industrial settings, such as Sovereign Hill in Ballarat, or Timbertown near Wauchope in NSW. Demolition is actually much more common than reuse.

Notable demolitions in the last few years include the W.D. and H.O.Wills cigarette factory at Kensington in Sydney. The cigarette plant is an interesting case in point, representing a form of industrial activity which now commands less and less community support. How many people would be prepared to see their rates increased to support a tobacco museum, an obvious and sensible, if not economically viable, use for such a site.\textsuperscript{14}

The battle over the Emu Brewery site in Perth is typical of recent heritage disputes over valuable industrial sites. The brewery, built between 1936-38, has been gutted of almost all its plant, losing, under Burra Charter principles much of its significance. The site, however, has been associated with brewing since 1837, and the remaining 1936-38 buildings constitute one of Australia's greatest examples of Art Deco industrial architecture.\textsuperscript{15} Should such a plant, or part of such a plant, be kept? The owners of a site reputed to be worth more than 100 million dollars, if the site is used for an office tower, understandably aren't keen. This of course raises the difficult nexus, rarely resolved by either coherent legislation or bureaucratic control, that many heritage decisions, especially in central city areas, also have enormous implications for town planning, traffic management and the social structure of an area.

In the case of the Emu Brewery the developers attest, though they haven't conducted a survey, that most residents of Perth think it ugly, and that such an industrial structure has no part in a modern city.\textsuperscript{16} The notion that a city ought to reveal all or most aspects of its history to its residents is really pretty arcane. Many people are more interested in what will replace a structure than in preserving what is there. It is often only after demolition and rebuilding that they miss the old. Australia abounds with such much missed structures: Cloudland and the Bellevue Hotel in Brisbane and the Australia Hotel in Sydney to name a few. None of these, significantly, are industrial structures. Buildings associated with drinking, dancing and other leisure activities often capture public memory.

Yet some of the most notable heritage battles in Australia have taken place over commercial and industrial structures. In Sydney, the battle to save the Art Deco Rural Bank in Martin Place; in Geelong, the battle to save the Bow Truss building; and in Newcastle, the battle to save almost anything in the central city area over 50 years old, have become part of our historical folklore.\textsuperscript{17}

Endnotes
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2. See, J. Birmingham, I. Jack and D.N. Jeans, Australia's Pioneer Technology: sites and relics...towards an industrial archaeology of Australia, (Melbourne: 1979) and also the same authors publication Industrial Archaeology in Australia: rural industries, (Melbourne: 1983)


6. Brown Coal Study Group, Fuel for Unrest: People Power and Planning in


13. See Don Golden’s report on the Ultimo Power Station, Powerhouse Museum site, 1984


