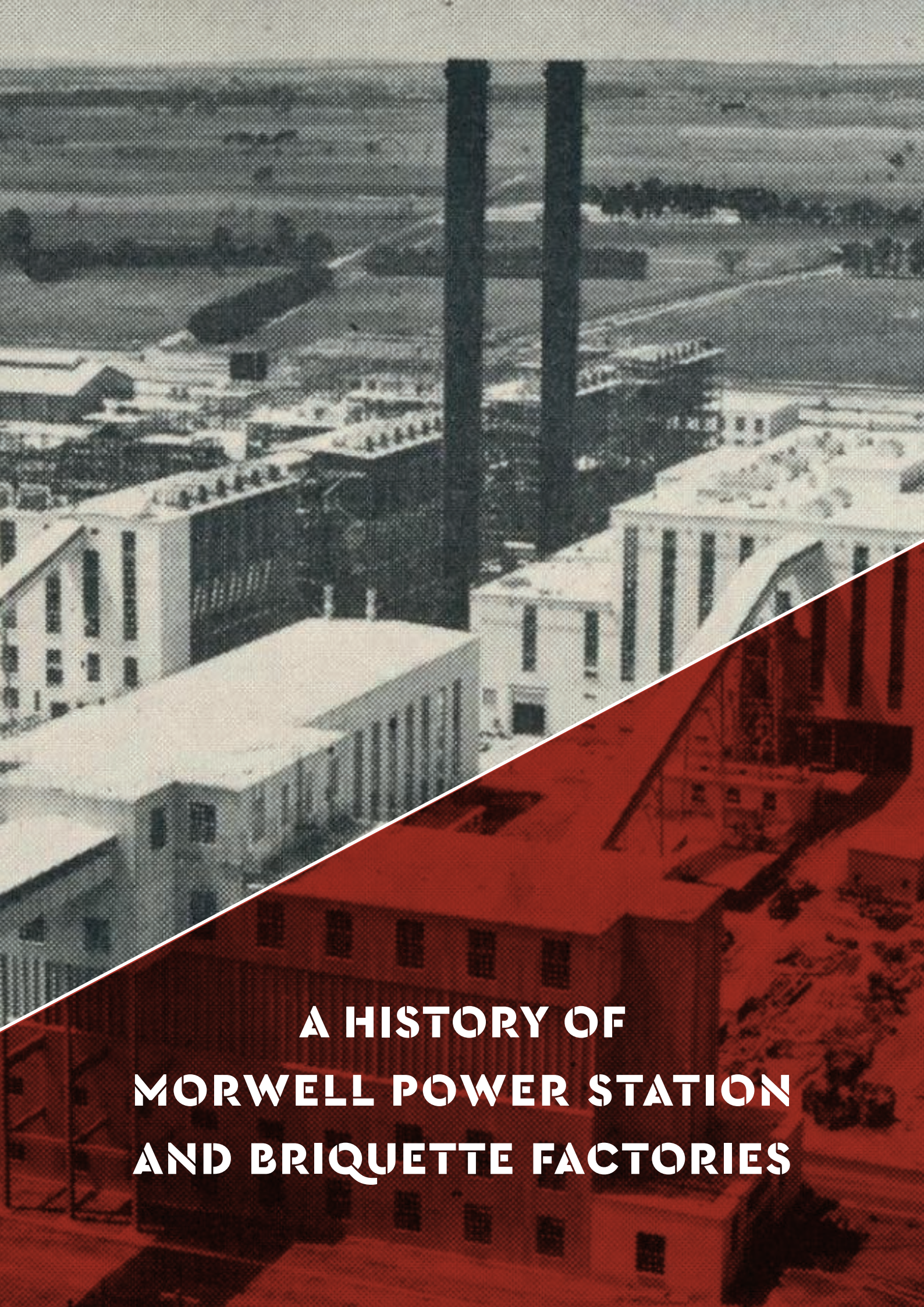

A HISTORY OF MORWELL POWER STATION AND BRIQUETTE FACTORIES

AUTHORS:

Alinde Bierhuizen
Meg Foster
Beatrice Harris
Dr Caroline Hubschmann

EDITORS:

Nicola Henriksson
Sue Hodges

(Cover page) Power Station and Briquette Works, Morwell, 1959
State Electricity Commission of Victoria

(Contents page) Machinery on the Boiler House roof
Jackie Malter, SHP (Sue Hodges Productions Pty Ltd)

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Native bark canoes, c. 1866
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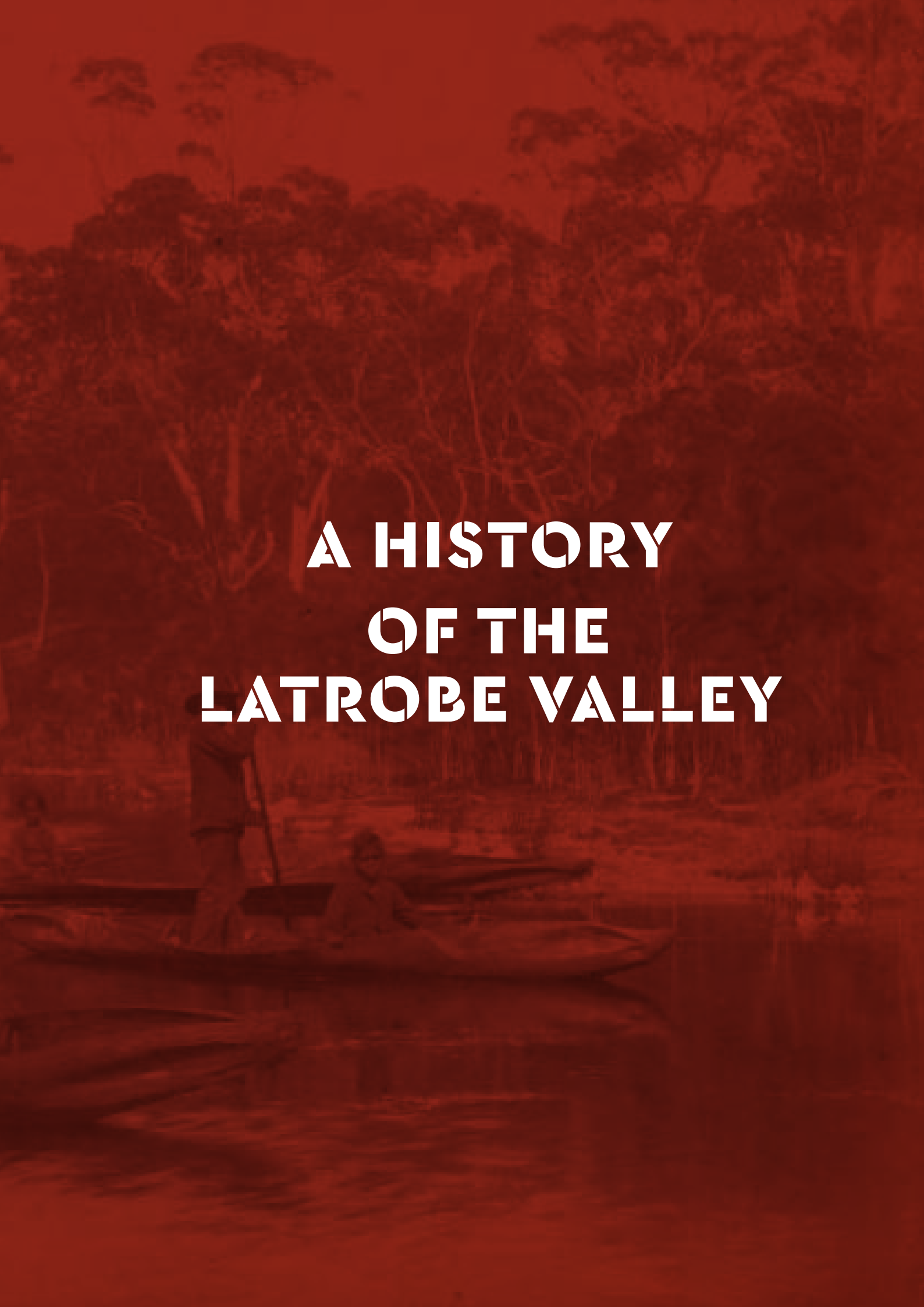


A HISTORY OF THE LATROBE VALLEY

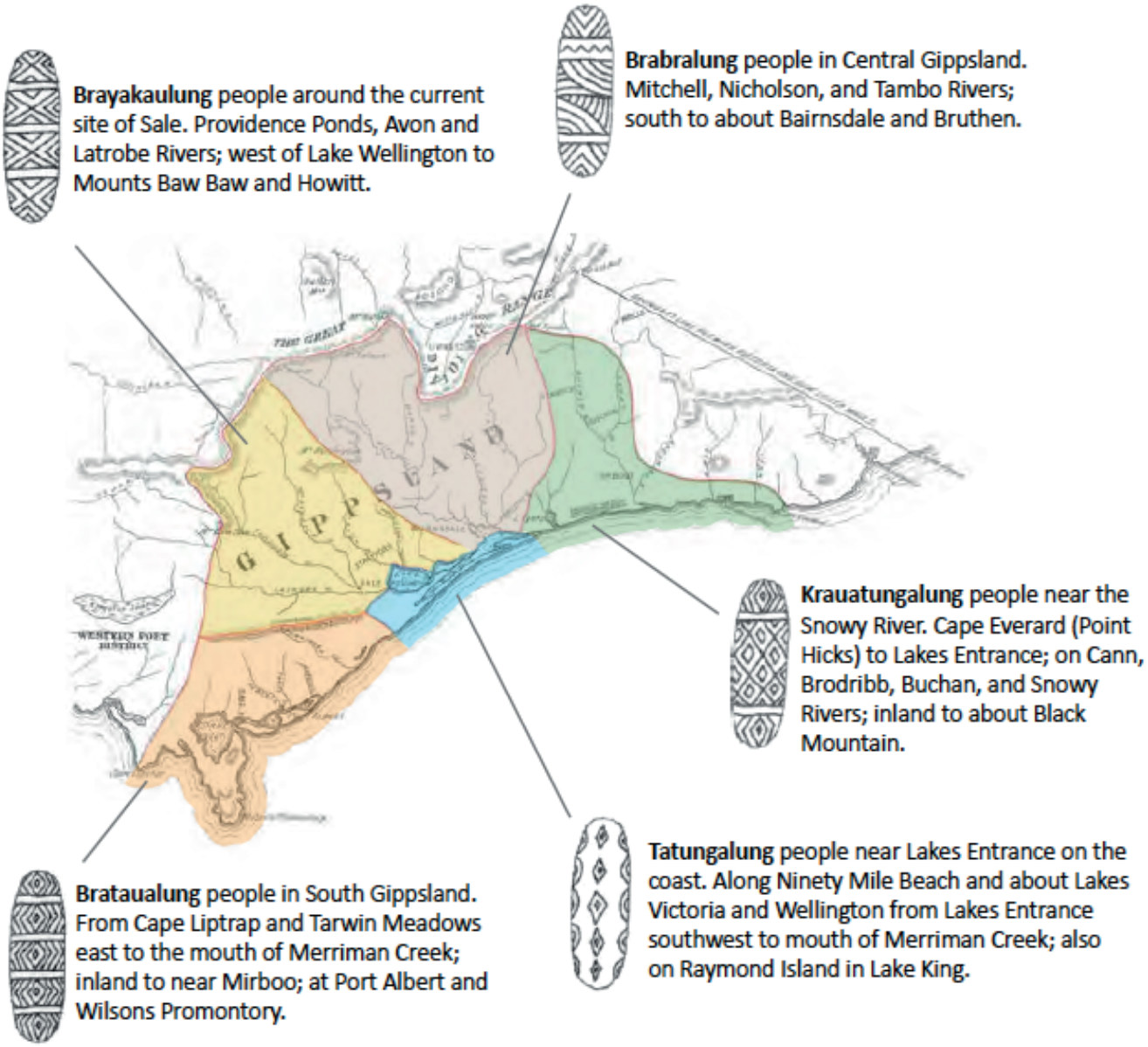
AN ABORIGINAL HISTORY OF THE LATROBE VALLEY

Aboriginal people have lived in southern Victoria for at least 36,000 years.[1] The Gunaikurnai people are the Traditional Owners of the Latrobe Valley, with the Brataualung clan the custodians of the region below the Latrobe River including the town of Morwell.[2] They have lived in this area for at least 18,000 years.[3] Brataualung Elders today recall the origin story of the first man and woman on the land:

> There was a time when the first Gunai, who was Borun the Pelican, came down from the mountains of the northwest and reached the level country. He crossed the Latrobe River near Sale and continued his journey to Port Albert; he was alone carrying a bark canoe on his head. As he was walking he heard a constant tapping sound but, look as he may, he could not find the source of it. At last he reached the deep waters of the inlet and put his canoe down. Much to his surprise, he saw a woman sitting on it.
>
> She was Tuk the Musk Duck. He was very pleased to see her and she became his wife and the mother of all Gunai.[4]

Lake Tyers, Gum Leaf Band, c. 1895-1910
National Library of Australia

The Gunaikurnai developed their customs and ways of life over many thousands of years through intimate knowledge of Country. The open grasslands, mountains, tidal flats and oceans provided bountiful sources of food such as waterbirds, eggs, seafood and reptiles. They moved around their land season by season, travelling on canoes through waterways such as those described in the origin story of Borun and Tuk, and moving without noise through the high grasses to hunt marsupials such as kangaroos, wombats and wallabies. Their diet was supplemented by tubers such as yam daisies and other forms of 'bush tucker'. They used bark for their shelters and cooking tools and plant fibres for weaving mats. Nearby plateaus and mountains provided vantage points for finding prey and keeping a watchful eye on other clans in the area.



Five Clans
'Our people,' Gunaikurnai Traditional Owner Land Management Board, 2018

The Latrobe Valley was, and continues to be, a site of spiritual meaning and identity for the Gunaikurnai. Country is a place of rituals, initiations, ceremonial gatherings and spiritual rites. This relationship to the land is based on reciprocity: Country provides the Gunaikurnai with shelter, nourishment and protection while in turn they maintain and care for it.[5]

At the time of European settlement, it was estimated that between 20,000 and 60,000 Aboriginal people lived in today's Victoria and about 30 languages were spoken.[6] Today, about 3,000 Gunaikurnai live on their traditional lands, with many clan members actively maintaining an ongoing connection to their history and traditions.[7] In 2015 the Gunaikurnai Land and Waters Aboriginal Corporation wrote in their 'Whole of Country Plan' that:

> Our heritage is strong across our landscape, and Aboriginal cultural sites and artefacts can be found along our songlines, and trade routes, mountain ridges and waterways. They remind us about the ways of our ancestors and show our close and continuing connection to Country.[8]

Aboriginal Australians at Ramahyuck Mission, Lake Wellington, 1870
State Library of Victoria

ABORIGINAL AND EUROPEAN ENCOUNTERS

The first recorded contact between Aboriginal peoples and Europeans in the Gippsland region was in 1797, when a longboat named the *Sydney Cove* was shipwrecked and washed ashore near Ninety Mile Beach.[9] From this time onward, Aboriginal people had sporadic encounters with white men such as sealers.

In the 1830s, pastoralists from NSW visited the Gippsland area in search of new grazing areas for their cattle. On one such exploratory trip in 1840, a free settler named Angus McMillan chose a piece of land near the Avon River to form a station for his employer, Lachlan Macalister.[10] Explorer Paul Strzelecki was hot upon McMillan's tracks, later claiming credit for 'discovering' the area, which had in fact been the home of the Gunaikurnai for many thousands of years.[11] After another ship was wrecked in 1841, the region captured wider attention.[12] On 3 January, the *Clonmel* steamer veered off course as it travelled from Sydney to Melbourne, eventually running aground near Port Albert. The *Clonmel's* surviving passengers were some of the first Europeans to bring the Gippsland region to public attention.

But Angus McMillan is not venerated by the Gunaikurnai people, for he was also the first squatter to engage in frontier warfare. Responding to reports that Gunaikurnai people had captured cattle on his Nintin Run in 1843, he killed anyone he found on his land, whether they were involved in the cattle theft or not. In retaliation, local Gunaikurnai men killed a

Angus McMillan, c. 1860
State Library of Victoria

man named Ranald Macalister. This was met with unmitigated and unwarranted violence from McMillan, who led a party of settlers who massacred between 100 and 150 members of the Gunaikurnai clan on the banks of Warrigal Creek, north-east of Woodside.[13] For this reason, in 2002 the West Gippsland Reconciliation Group requested that the Federal seat of McMillan be renamed in view of his atrocities against the Gunaikurnai.[14] Further, in around 2016, Cal Flyn, a relative of McMillan's from the Island of Skye, travelled to Australia in the spirit of reconciliation to meet with the Gunaikurnai to learn their perspectives about McMillan.[15]

Violence and diseases introduced by the Europeans also caused the deaths of many Gunaikurnai people.[16] In 1839, the British Colonial Office created the Port Phillip Aboriginal Protectorate and appointed five Aboriginal Protectors to the then-colony of New South Wales. Led by George Augustus Robinson, their job was to provide Aboriginal people with goods such as food and blankets and to protect them from European settlers.[17] The Aboriginal Protectors formed large stations for Aboriginal people at Narre Narre Warren, the Goulburn River, Mount Rouse and Franklingford. At the same time, the government encouraged squatters to occupy whatever Aboriginal land they wanted. European settlers disliked the Protectorate for many reasons, especially when Aboriginal Protectors sided against them in disputes with Aborigines.[18] Despite the protective actions of the Aboriginal Protectors, however, settlers caused widespread death and dispossession of Aboriginal people throughout the Colony, including in the Latrobe Valley.[19] The Aboriginal Protectorate system folded in 1849.

Although Lieutenant–Governor Charles Latrobe made one of the five original Aboriginal Protectors, William Thomas, the 'Guardian of Aborigines', in January 1850, the colonial government did not then have a significant policy on Aboriginal people.[20] In 1858,

Aboriginal Australian women and canoe - Kitty Johnson and Nellie Blair at Lake Tyers,1930
State Library of Victoria

journalist and politician Thomas McCrombie convinced the Victorian Legislative Council to create a Select Committee to investigate the condition and needs of Aboriginal people. Following requests from members of the Kulin nation that they needed their own land,[21] Thomas argued for a system of reserves, where land would be set aside for Aboriginal people to use as hunting grounds. In June 1860, the Victorian Government created a reserve and rationing system that was overseen by a Central Board. Each reserve would be run by either the government or Christian missionaries.

The Gunaikurnai guided the missionaries' choice of land for two reserves in Gippsland, Lake Wellington and Lake Tyers.[22] In 1863, Reverend Friedrich August Hagenauer established the Ramahyuck Aboriginal Mission on the shores of Lake Wellington, near the mouth of the Avon River.[23] People of the Brayakooloong and Tatungooloong clans of the Gunaikurnai tribe were moved there for their 'protection'. However, Reverend Hagenauer also forbade the Gunaikurnai from speaking their language and practising their ceremonies, laws and other traditional ways of life.[24]

From the late 1860s, the Victorian Government used oppressive laws to control the lives of Aboriginal people, including the 1869 *Aboriginal Protection Act.* Under the imposing eye of the Victorian Central Board for the Protection of Aborigines, the Act regulated every aspect of Aboriginal people's lives. The Board had the power to dictate where people could live, how they could be employed, whom they could marry and even whom they were allowed to socialise with.[25] Authorities were also allowed to remove 'neglected' children from their families and place them on a reserve.[26] These laws were devastating to Aboriginal people: they tore families apart, forced families onto reserves away from their homes and took away their freedom.[27]

In the years that followed, the Board for the Protection of Aborigines persuaded the government to reduce the number and size of reserves to reduce costs. The Ramahyuck

(Left)
George Augustus Robinson, n.d.
State Library of Tasmania

(Right)
William Thomas c.1860
State Library of Victoria

Aboriginal Mission's land shrank to 4,000 hectares and the mission eventually closed in 1908. Many Gunaikurnai living at Ramahyuck went to Lake Tyers, but some left the mission system.[28] The Board made Lake Tyers the main reserve for Victoria's Aboriginal people in 1917 and closed the other reserves, sending their residents to Gippsland.[29]

Victoria's Aboriginal populations were decimated by decades of violence, disease and enforced family separation. By 1927, only 514 Aboriginal persons remained in Victoria.[30] In 1937, the Commonwealth Government decided that Aboriginal people should be absorbed or 'assimilated' into the wider population, a policy which continued until the early 1960s. The 1961 *Policy of Assimilation* says:

> The policy of assimilation means in the view of all Australian governments that all aborigines and part-aborigines are expected eventually to attain the same manner of living as other Australians and to live as members of a single Australian community enjoying the same rights and privileges, accepting the same responsibilities, observing the same customs and influenced by the same beliefs, hopes and loyalties as other Australians. Thus, any special measures taken for aborigines and part-aborigines.'[31]

One tragic and long-lasting consequence of this policy was the forced removal of Aboriginal children from their families. Today, this is known as the Stolen Generations (or Stolen Children).[32] Federal and State government agencies such as church missions removed

'Ramahyuck Mission Station, Gippsland, Victoria, c. 1900
State Library of Victoria

babies and children from their mothers and placed them in institutions where they were often made to do domestic or hard labour. They were not allowed to speak their languages or practise their traditions. The exact number of stolen children is unknown, but estimates suggest that between 20,000 and 25,000 children were removed between 1905 and the 1970s.[33]

In 1997, the *Bringing Them Home* enquiry into the separation of Aboriginal and Torres Strait Islander children from their homes revealed the extent of the abuse and loss suffered by the children of the Stolen Generations and their families:

> We may go home, but we cannot relive our childhoods. We may reunite with our mothers, fathers, sisters, brothers, aunties, uncles, communities, but we cannot relive the 20, 30, 40 years that we spent without their love and care, and they cannot undo the grief and mourning they felt when we were separated from them. We can go home to ourselves as Aboriginals, but this does not erase the attacks inflicted on our hearts, minds, bodies and souls, by caretakers who thought their mission was to eliminate us as Aboriginals.[34]

Group standing in front of Church and State School Group standing in front of a Church and State School, Ramahyuck Mission c.1900
State Library of Victoria

On 13 February 2008, Australian Prime Minister Kevin Rudd issued an official apology to Australia's Aboriginal peoples for the suffering they endured:

> We apologise for the laws and policies of successive Parliaments and governments that have inflicted profound grief, suffering and loss on these our fellow Australians.
>
> We apologise especially for the removal of Aboriginal and Torres Strait Islander children from their families, their communities and their country.
>
> For the pain, suffering and hurt of these Stolen Generations, their descendants and for their families left behind, we say sorry.
>
> To the mothers and the fathers, the brothers and the sisters, for the breaking up of families and communities, we say sorry.
>
> And for the indignity and degradation thus inflicted on a proud people and a proud culture, we say sorry.[35]

In spite of this tragic history many Gunaikurnai survivors maintain a continuous connection to their land. In 2010 this was finally officially recognised when the Gunaikurnai received Native Title rights to much of the Gippsland region.[36]

There is still a long way to go.

Young Gunaikurnai woman
'Our people,' Gunaikurnai Traditional Owner Land Management Board, 2018

EARLY EUROPEAN SETTLEMENT

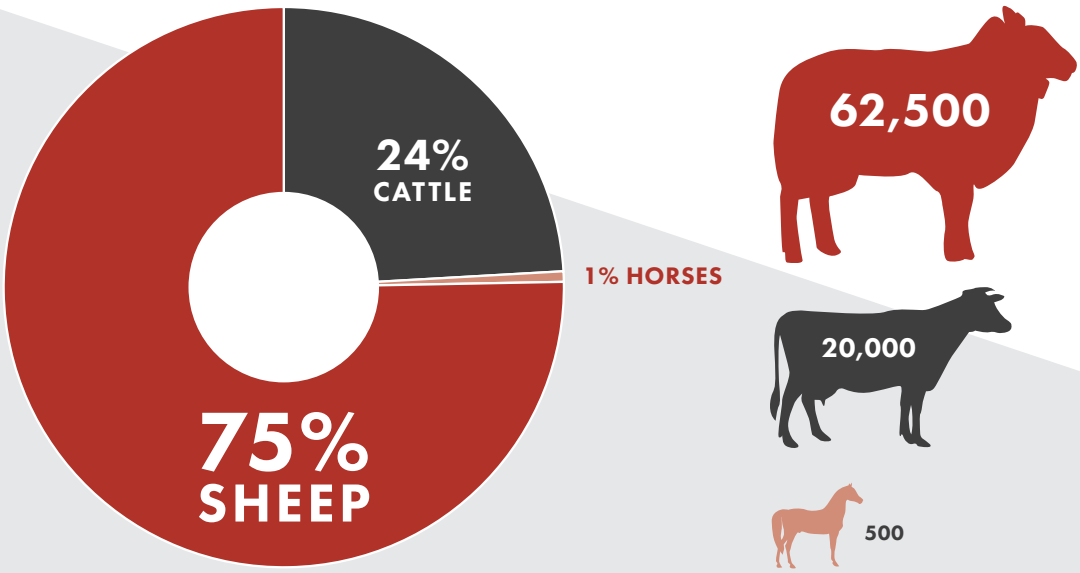
Named 'Gipps Land' by Polish explorer and geologist Pawel Strzlecki, the region officially became a squatting district in 1843. This allowed settlers to take possession of large tracts of land in exchange for a £10 annual licence fee.[37] The first pastoral stations in the Morwell district opened in the 1840s at Maryvale, Hazelwood, Merton Rush and Scrubby Forest.[38] By 1844, there were 20,000 head of cattle, 62,500 sheep and 500 horses in the Gippsland area[39] and 'all of the open country in the Latrobe valley was occupied'.[40]

Although the rugged hills of the Latrobe Valley provided a natural barrier to European exploration and settlement, those hardy pioneers who ventured past them forged new routes into the district.[41] One of the most important of these was the route to Port Albert. Wool was shipped from this port to the rest of the colonies and the live cattle trade between the region and Tasmania was also lucrative.[42]

During the Victorian gold rushes of the 1850s, thousands of new migrants flocked to the newly-formed colony of Victoria in search of riches.[43] Following the population boom, the government passed several Land Acts in the 1860s to end the squatters' monopoly on the land. These acts put forward the policy of 'Selection', which split large pastoral stations into many smaller runs that new settlers could use for farms. Following the Land Acts, the region experienced the most intensive land clearing it had ever seen.[44] Huge swathes of country became open plains with fertile soil for farming and were soon snapped up by farmers.

Before the 1860s, Morwell was a fledgling town, made up of several vast squatting runs. Although a hotel was built over the Morwell River in 1858, it was only after the Land Acts

INTRODUCED ANIMALS IN GIPPSLAND, 1844



FARMING AND EARLY INDUSTRIES

were passed that the area's population grew. By 1876, there were enough residents to support the first government public school, Hazelwood, and in 1879 land allotments opened up in the township of Morwell itself.[45] The completion of the railway to Morwell in 1877 made journeys to the town much easier and gave settlers even more reason to try their luck there.[46]

From the 1870s onwards, dairying became Gippsland's major industry. It began as a small-scale cottage industry, but advances in manufacturing technology, transport and refrigeration for export to Britain saw the industry expand,[47] with the area's 'rich pastures' and railway transport making it a perfect location for the trade.[48] Cheese and butter factories and creameries sprang up in dairying areas. These included the Morwell Butter Factory, which was established in 1880 – the same year the government offered a bonus to encourage the burgeoning trade.[49]

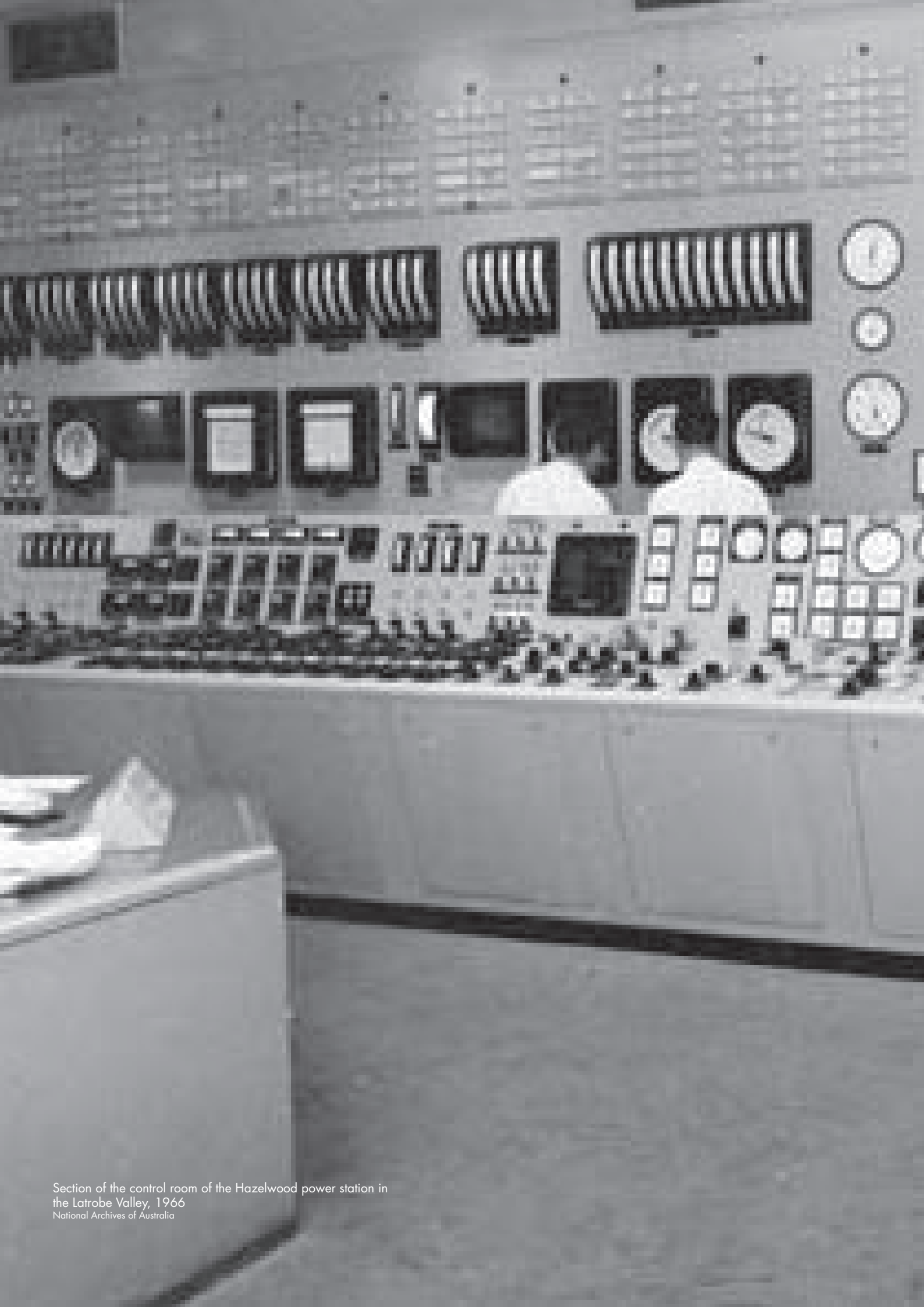
Morwell progressed rapidly in the 1880s. The town at that stage boasted a Mechanics' Institute, library and hall, post office, hotels, churches, schools and stores. Morwell residents were employed in collecting timber from the dense forests that surrounded the town and in building, brickmaking and pottery.[50] It was during this era of industrial development that Morwell's vast brown coal reserves were discovered, which would change the fortunes of the town and Latrobe Valley forever.

Chimneys, power lines, open cut mines and factories dominate the landscape of the Latrobe

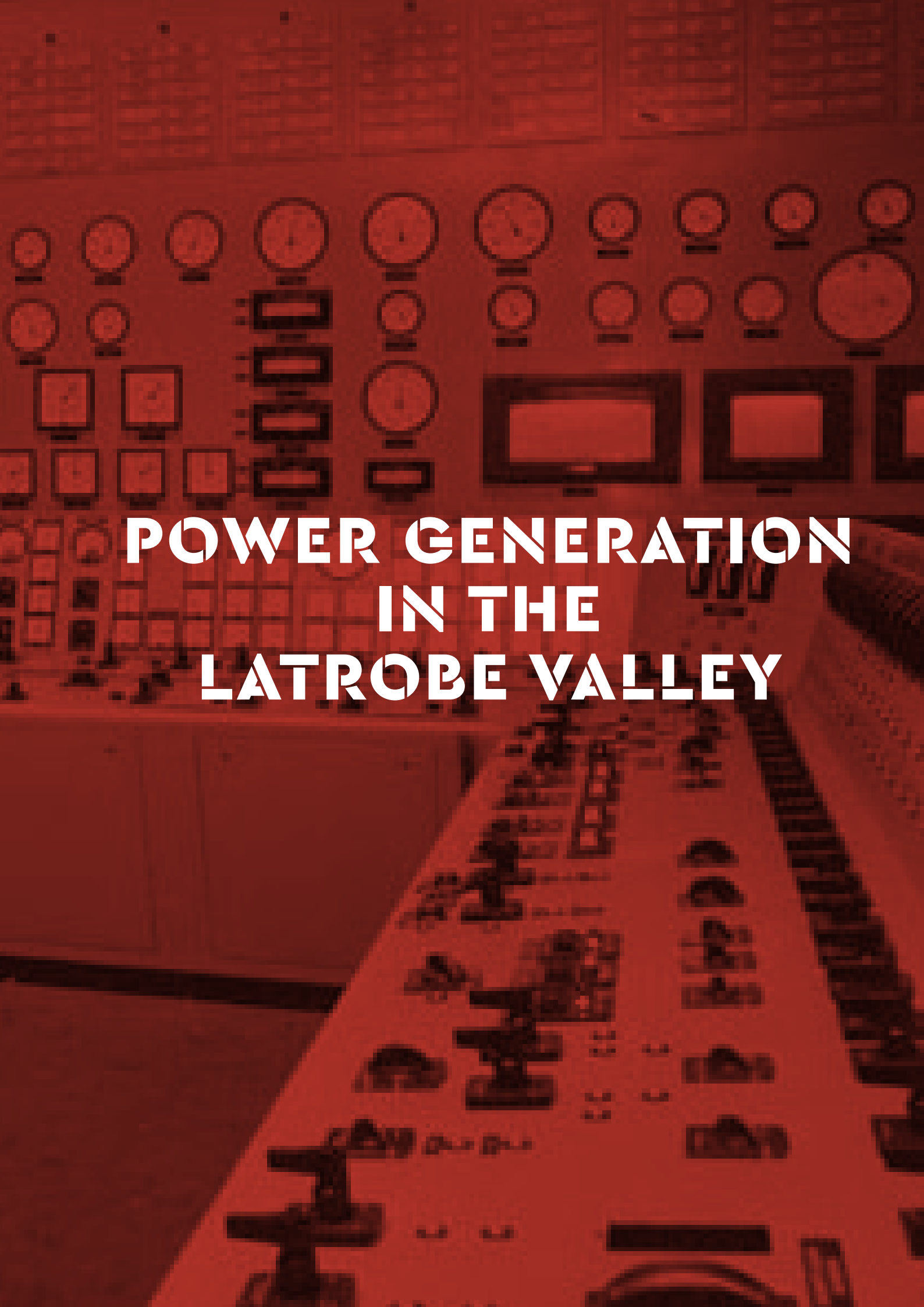
Trees in the Strzelecki Ranges, n.d.
Morwell Historical Society

Dairy cattle in pen, Gippsland, c. 1900
State Library of Victoria

Milking time for the Quigley Family, c. 1889
Morwell Historical Society



Section of the control room of the Hazelwood power station in the Latrobe Valley, 1966
National Archives of Australia



POWER GENERATION IN THE LATROBE VALLEY

THE DISCOVERY OF BROWN COAL

Valley today. But the history of power generation in this area started long ago in 1873, when brown coal (also known as lignite) was first discovered.[51]

Mining was not originally seen as a boon for Morwell. During the 1850s gold rush, the closest goldfields to Morwell were at Walhalla, 45 kilometres away, but these were minor fields compared to those in the rest of Victoria.[52] In the 1870s, however, gold miners who had been toiling away on alluvial mountain streams discovered brown coal in the Gippsland area.[53]

In the 19th century, coal was essential for the growth of the Victorian colony and the rise of 'Marvellous Melbourne': it was the fuel that powered steam engines, which in turn powered industry. Families also needed coal for heating their houses. But coal was supplied by New South Wales, which had vast supplies of black coal in places such as Cessnock, Lithgow, Maitland and Wollongong. For most of Australia's history these districts, along with Blair Athol in Queensland, Collie in Western Australia, Leigh Creek in South Australia, and the Latrobe Valley in Victoria, were the nation's key suppliers of coal.[54]

From the outset, Victorian settlers had searched for coal deposits in their own regions with limited success. Black coal was first discovered at Cape Paterson along the Bass Strait shoreline in 1826,[55] although not in quantities large enough to build an industry. This changed by the late 19th century. The first deposits of brown coal were discovered at Lal Lal, near Ballarat, in 1857. Sixteen years later, the Mines Department undertook a geological investigation. By 1876 brown coal had been found in 32 places,[56] including lignite deposits at Gippsland, and mining leases had been granted to private companies in pursuit of a local alternative to New South Wales' black coal. [57] However, lignite is a younger coal than black coal with a higher moisture content and less efficient to burn, which would later create problems for mining at Morwell.[58]

The area surrounding the Latrobe and Morwell rivers held the promise of vast amounts of brown coal, with little overburden in the way. However, despite the completion of the railway line from Melbourne to Sale in 1879, which made it easier and cheaper to transport coal to Melbourne, most Latrobe Valley companies in the early days of coal mining went broke.

Coal conveyor system transporting coal directly from the mine face to the Morwell power station and Briquette works, 1960
National Archives of Australia

The Great Morwell Coal Mining Company was an exception to this. The company operated from 1889 to 1897 on what later became known as the Old Brown Coal Mine.[59] In the same year that the Great Morwell Coal Mining Company was established, the Victorian Government opened a Royal Commission into Coal. With a growing population and accompanying growing demand for fuel, the need for an independent coal industry within Victoria was pressing. As the *Ballarat Star* reported in 1890:

> A brown coal seam, which is believed to be the largest in the world, has been discovered at Morwell, and was reported to the Secretary for Mines to-day. The locality of the seam is on the Maryvale Coal Company's ground, about 600 feet from a shaft which the company has already put down, and close to the Morwell territory. The largest seam hitherto found in Gippsland is now being worked by the Great Morwell Brown Coal Company, and which is under 200 feet in thickness. Seams of brown coal over 500 feet thick are not known to have been found previously in any country.[60]

Morwell brown coal mine, 1926
State Library of Victoria

The discovery of coal led Morwell to become a 'boom town' by the end of the 19th century. In 1890, the District Inspector of Schools, TW Bothroyd, declared that:

> Morwell is at present the most progressive town in the Gippsland. Workermen are bringing their families to Morwell as fast as accommodation can be provided. New houses are going up in all directions. I was informed that, a few weeks ago, thirty new houses were in course of construction at the same time.[61]

Early mining and pastoral workers were overwhelmingly born either in Australia or the British Isles, with Anglo-Australian migration increasingly encouraged as the Australian colonies moved towards Federation in 1901.[62]

COAL MINING AT MORWELL

In 1889, the Great Morwell Mining Company (GMMC) was formed to mine brown coal and break Victoria's reliance on black coal imported from NSW. Backed by a syndicate of Melbourne investors, this company operated for 10 years before collapsing.[63] Nevertheless, early signs were promising. The first half-yearly report of the GMMC forecast a yield of 250,000 tonnes per year, with predictions that coal could be mined at this rate for 100 years.[64] But it was the difficulty of selling brown coal with such a high moisture content that caused the Company's closure in 1899.[65] The mine itself (the Old Brown Coal Mine) operated unsuccessfully under different ownerships after the GMMC closed.

(Left)
Great Morwell Brown Coal Mine: working at a siding, 1894
State Library of Victoria

(Right)
Great Morwell Brown Coal Mine: the briquette works, 1894
State Library of Victoria

Despite the GMMC's closure, two of its achievements paved the way for further mining in the area: it pioneered both open cut mining techniques and the manufacturing of briquettes in Victoria.[66] However, times were changing. Although the GMMC had mined coal to fuel steam engines, electricity was used to light up the streets from the 1890s onwards and an electric motor pushed the first electric tramway through Melbourne in 1889.[67]

The uses of electricity as a power source were endless: telecommunication, heating, electrical equipment and appliances, as well as lighting and transport. The Royal Commission into Coal (1889-90) recognised the possibilities of electricity and strongly recommended that the State Government investigate the use of brown coal for electricity generation. This had only been done successfully in Germany, but prospects were promising and brown coal would soon become the 'Cinderella of coals'.[68]

Morwell War Memorial, n.d.
Morwell Historical Society

WAR AND THE EARLY 20TH CENTURY

When war was declared against Germany in 1914, a new set of challenges and opportunities arose for the people of Morwell. At the same time as the town's men went off to fight in Europe, the Victorian Government faced a fuel and electricity crisis at home. In 1916, an industrial strike in NSW made it painfully clear how dependent Victoria still was on imported coal. The situation forced the Victorian Mines Department to reopen the Old Brown Coal Mine as an alternative source of coal. Although the strike lasted a week and only 132 tonnes of coal were extracted, in 1917 the mine was also used to compensate for coal being diverted to war industries. Miners extracted around 35,561 tonnes of coal from the Old Brown Coal Mine in that year, far more than in any previous year.[69] In the latter years of World War I, the Old Brown Coal Mine produced up to 101,604 tonnes per day. From 1916 to 1920, recorded production from this mine was 375,937 tonnes.[70]

The need for local reserves of power during the war prompted the Victorian Government to create the Brown Coal Advisory Committee in September 1917. This committee investigated whether brown coal could be used not only to generate the state's electricity but also to create briquettes as a supplementary form of power. Based on its findings, the Committee recommended developing a huge open cut mining and electricity scheme that would serve all of the state's power needs.[71] Investigations into this proposal continued well after the war ended in 1918 and led to the creation of the State Electricity Commission of Victoria in 1920.[72]

Sketch of proposed town square for Yallourn, 1947-50
State Library of Victoria

THE STATE ELECTRICITY COMMISSION AND ITS MODEL TOWN

By the time that Victoria's population passed the 1.5 million mark in1919, local demand for electricity and fuel had increased exponentially.[73] The extent of the Latrobe Valley's coal reserves had been investigated over the years and techniques to produce electricity from lignite were in the process of being perfected in Europe by German engineers. The State Government then took a decisive step to explore the options of mining brown coal on a large scale in the Latrobe region to provide electricity and fuel for Victoria in the long term.

On 7 January 1919, the State appointed three Electricity Commissioners. They presented their report, a 'scheme for coal mining and electrical undertaking to be undertaken in the neighbourhood of Morwell, and the distribution of electricity therefrom', in December of that year.[74] The Commissioners recommended creating a power plant to generate electricity, a briquetting factory that would manufacture hard fuel, and a township to house workers and their families.[75] The State Government took these recommendations on board and ambitious plans began for the area that later became known as Yallourn.

In 1921 the three Commissioners were replaced by a single government body: The State Electricity Commission of Victoria. The State Electricity Commission, or SEC/SECV, was headed by war hero Sir John Monash. Monash, as the SEC's Chairman and General Manager, was instructed to oversee what was then the most impressive power-generating initiative in Victorian history.[76] He had been praised for his military skills commanding the Australian Corps during World War I and admired for his strong leadership and work ethos. As a civil engineer, he was also dedicated to 'reconstruction, to building up rather than tearing down' after the devastating war years.[77] Since then, he has had a university and a local government municipality named after him and his image is featured on the Australian $100 bill. A portrait of the man was painted by *The Herald* on 28 July 1921:

> His brown deep-set eyes look out piercingly from beneath his heavy eyebrows, and his face is that of a master of men. Many men who have risen to heights surprise the observer by their apparent lack of character: Sir John looks the man of action and quick decision and the arbiter of fates of men. There is a strength in his jaw and understanding in his quick smile, which robs his features of their sternness. Amid a welter of after-war criticism, Monash's reputation is one of the few that remain untarnished and unattacked.[78]

But Sir John Monash and his Electricity Commission did not remain 'unattacked'. It took much advocacy on Monash's part to convince the public and members of the State Government that the Yallourn mining scheme would succeed. Initially, many people viewed it as a risky undertaking that would require significant investment in foreign and experimental techniques.

A temporary power station was built at Yallourn in 1921. Fuelled by brown coal from the reopened Old Brown Coal Mine (by this stage in the hands of the SEC) it was later renamed the Yallourn North Open Cut. The temporary power station provided power for both the growing township and nearby industrial sites. In 1923, electric power was transmitted for the first time from Yallourn to the Gippsland region, lighting up the streets of Morwell with a soft glow. A year later, on 15 June 1924, the permanent station opened and power was transmitted to Melbourne. The overburden had also been removed from the deposits at Yallourn's brand new Open Cut mine, which meant that both the Power Station and Briquette Factory had steady supply of coal.

General Sir John Monash, c. 1919
State Library of Victoria

Early excavations at the Yallourn Open Cut mine, 1925
Morwell Historical Society

The township of Yallourn began to take shape from 1921 onwards. The SEC's architect, AR La Gerche, followed the design principles laid out by founding father of the garden city movement, Ebenezer Howard. La Gerche believed that 'providing ideal conditions for [the SEC's] workers would lead to an ideal workforce'.[79] By 1953, the SEC described Yallourn as a town:

> … located within easy access of the power station and briquette factory, and the brown coal open cut from which both are supplied. Yallourn provides up-to-date homes and the amenities of modern town life for Commission employees and their families.[80]

However, although the SEC promoted Yallourn as a model town and shining example of modernity, it has been viewed by other people as an expression of the total control exercised by the SEC over the region and its community. Life in Yallourn was comfortable for the miners, factory workers, engineers and their families, but also controlled and restricted. A Royal Commissioner investigating a fire in Yallourn in 1944 described the town as a place where people 'enjoy all that the heart of man could desire – except freedom, fresh air and independence'.[81]

Yallourn Town Square, 1920-30
State Library of Victoria

The lack of fresh air has been an increasing concern ever since. In the 1950s, scientists around the world issued warnings about the health dangers of smog. At that time, Yallourn and its surrounding region were thought to have the heaviest coal dust in the world.[82] Dust plagued the community. Farmers lost money on their wool and tests taken at a butter factory showed up traces of coal dust in milk from pastures near Yallourn.[83] One local wrote:

> By the time our clothes are half dry on the line they are covered with coal dust. All we can do is let them dry and then shake the dust off, but it can be very troublesome at times.[84]

Once the Yallourn Power Station, Briquette Factory and mine were fully operational, it was clear that the plant needed to be expanded to meet the state's growing demand for electricity and fuel. The original site was adapted for this purpose and in 1929 plans to open a second power station, Yallourn B, were approved.[85] However, while the Yallourn power plant continued to grow, the SEC shifted its focus to a neighbouring area with untouched brown coal deposits: Morwell.

Early excavations at the Yallourn open cut mine, 1925
Morwell Historical Society

MORWELL POWER STATION AND BRIQUETTE FACTORIES

PLANNING

Victoria experienced significant coal shortages during World War II.[86] Power shortages and blackouts were widespread due to rationing on the home front, while labour shortages affected operations at the Yallourn Power Station. The situation was dire. In August 1940, Premier Albert Dunstan told the Chairman of the SEC of his fear that 'one of these days we will find ourselves without supplies of coal for essential transport and industrial services'.[87]

Dunstan called a conference of the Railways, the Metropolitan Gas Company and the SEC to address:

> … the possibility of using processed brown coal to meet some of the fuel demands of essential services and industry if war should stop, or make uncertain seabourne coal supply, and the practicability of using brown coal, processed or otherwise, for all essential needs of the state, with the ultimate object of freeing Victoria from dependence on imported black coal.[88]

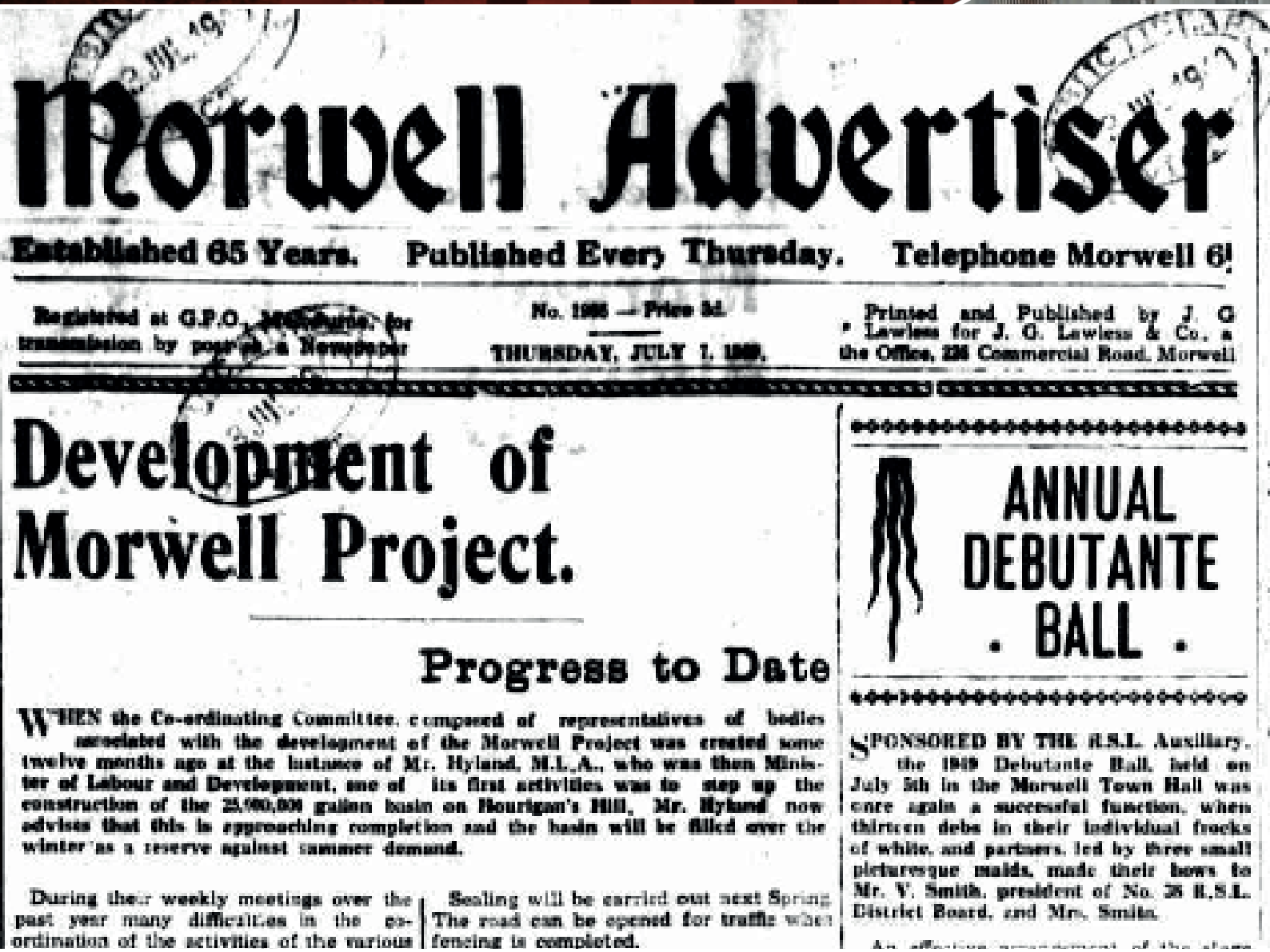
In December of that year, the committee recommended a number of productivity quotas including 2,032 tonnes of coal per day from the Yallourn Open Cut mine and increased output production from the briquette works. In October 1941, the committee recommended that the SEC develop long-term plans and investigate ways to extend its operations.[89] As a result, the SEC concluded that an entirely new open cut mine would be needed to meet the output requirements set out by the committee. In its opinion, this was the best way to exploit the brown coal reserves located immediately south of Morwell.

In August 1943, the State Government announced a series of goals that would create Victorian self-sufficiency in fuel production. At its centrepiece was the development and use of Victoria's brown coal supplies to develop a self-sustaining energy and power-producing industry in the Latrobe Valley.[90] The Morwell Power Station and Briquette Factories was a vital part of these plans, as was a new Morwell Open Cut mine. This 'Morwell Project' was undertaken by the SEC with the aim of generating electricity and producing briquettes for Melbourne's homes and industries.[91]

Three years later, the SEC reported on the projected outcomes for the Morwell Project. It suggested that four factories could produce 2.64 million tonnes of briquettes a year and argued that the cost of building four factories was much more economical than the cost of building two. This, the SEC said, would result in an 11% cheaper price for briquettes.[92] However, by the time the first stage of the Morwell Project was approved in 1948, cost estimates had risen dramatically.[93]

(Top)
Morwell Open Cut mine, 1957
National Archives of Australia

(Bottom)
Work in progress during 1957 on a new power station and briquette works at Morwell, Victoria, where a major brown coal open cut is being developed by the State Electricity Commission, 1957
National Archives of Australia



Morwell Advertiser

Established 65 Years. Published Every Thursday. Telephone Morwell 6!

Registered at G.P.O., Melbourne, for transmission by post as a Newspaper

No. 1[illegible] — Price 3d.

THURSDAY, JULY 1, 1949.

Printed and Published by J. G. Lawless for J. G. Lawless & Co., at the Office, 236 Commercial Road, Morwell

Development of Morwell Project.

Progress to Date

WHEN the Co-ordinating Committee, composed of representatives of bodies associated with the development of the Morwell Project was created some twelve months ago at the instance of Mr. Hyland, M.L.A., who was then Minister of Labour and Development, one of its first activities was to step up the construction of the 25,000,000 gallon basin on Hourigan's Hill, Mr. Hyland now advises that this is approaching completion and the basin will be filled over the winter as a reserve against summer demand.

During their weekly meetings over the past year many difficulties in the co-ordination of the activities of the various

Sealing will be carried out next Spring. The road can be opened for traffic when fencing is completed.

ANNUAL DEBUTANTE BALL

SPONSORED BY THE R.S.L. Auxiliary, the 1949 Debutante Ball, held on July 5th in the Morwell Town Hall was once again a successful function, when thirteen debs in their individual frocks of white, and partners, led by three small picturesque maids, made their bows to Mr. V. Smith, president of No. 28 R.S.L. District Board, and Mrs. Smith.

Headline from *Morwell Advertiser*, 7 July 1949
Morwell Advertiser

Bill Morrison was the assistant chief engineer in charge of coal supply in Victoria. He had undertaken an extensive amount of research to prepare for the new plant, having travelled to Germany and England in 1946-47 to investigate new and innovative technologies in the design and manufacture of open cut mining equipment. After his visit he brought over two experienced open cut engineers, Hans Mantel and Hans Brodel, as consultants.

Mining began at the Morwell Open Cut Mine in April 1949. In that year, Hans Mantel produced a report evaluating the processes of the early operations at the mine.[94] He made a number of recommendations about the mine's operations aimed at increasing its efficiency and productivity. One of the issues was the quality of the coal. From 1946 until 1952, briquetting tests using Morwell coal were undertaken at Yallourn, with coal tested from surface and test shafts. Dr F Hasse, who analysed the results, found significant inconsistencies in the 'briquettability' of the coal.

In March 1949 Chief Engineer Ernest Bates and senior engineers Horrie Finlayson, Alec Thyer and Bob Parrett, travelled to England and Europe to negotiate the purchase of buildings and machinery for the Morwell plant and briquette factories.[95] They secured a contract of $18 million, which included:[96]

- Machinery for two complete briquette factories to be gradually installed for production by 1955, including the boiler plant for two factories and one spare boiler
- Buildings for four briquette factories, with machinery for the two additional factories to be ordered later
- A power station plant consisting of three Turbo Generators, each of 30MW capacity.[97]

Bates believed that the peace secured after World War II was fleeting and acted quickly to acquire the machinery needed for the proposed Power Station and Briquette Factories from Europe, stating:

> … There is nothing so fatal as having a job to do and no plant to do it with, and I feel that the time available for obtaining plant is relatively limited, and that the future fuel supply of this State may be seriously threatened unless this provision against any disturbance is made.[98]

During the planning and construction stages of the Morwell Project, the SEC provided strong projections of the demand of briquettes for industrial and domestic use.[99] In September 1950, the SEC advised the State Government that the first briquette factory at Morwell would produce briquettes by 1953 and that the second briquette factory would produce briquettes by 1954.[100] However, costs to construct the plants had steadily increased since 1946 estimates and a financial crisis in 1951 meant that government funds were limited. Expenditure slowed and progress with it. The crisis was so serious that, by July 1953, all work on the Morwell Power Station and Morwell Open Cut Mine had come to a halt.

Construction works and mining restarted in mid-1954, but by this time project costs had reached a huge $48 million without any return on the investment.[101] Meanwhile, the market had become dominated by cheaper fuels from oil and natural gas and the market for briquettes was uncertain. As a result, plans for the Morwell Project changed to focus on power production as a priority.

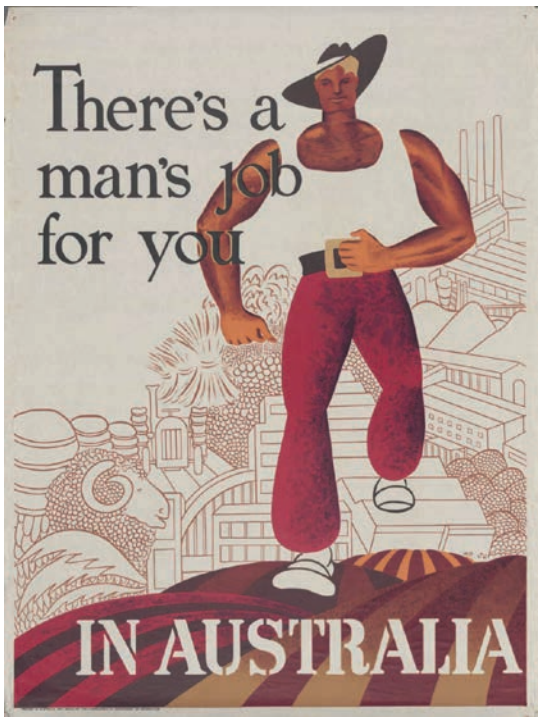
Morwell Power Station came into service in November 1958. It initially operated at 20 megawatts (MW), with this increasing to 50MW in December, 110MW in 1959, and 170MW by 1963. The generators at the plant provided a maximum of 131MW to the state electricity system. The first briquette factory ran its maiden commercial production of briquettes on 8 December 1959, only three months after its first test run. The second briquette factory came into full operation in September 1960.[102]

MORWELL DURING THE POST-WAR BOOM

The 'Morwell Project' coincided with one of the biggest surges in migration in Australian history. 'Populate or Perish' was the catch-cry of Australia's first Minister for Immigration, Arthur Calwell.[103] Immediately after World War II, the Australian Government recognised the need for large-scale migration to Australia in the belief that this larger population would help defend and develop the nation. At the same time, many thousands of migrants from Europe were searching for new homes after the war. In 1945, the Federal Department for Immigration was created by Ben Chifley, Prime Minister of Australia (1945-49), with the aim of boosting the population by 1% every year.[104]

(Right) Migrant Elsje Mallee working as a typist receptionist at the Latrobe Valley Electricity supply project, 1965
National Archives of Australia

Australian Migration Office poster, c. 1955-60
Powerhouse Museum, Sydney



Poster encouraging post-war migration to Australia, 1947
National Archives of Australia

The department's migration program was immensely successful. After the war, the government settled 12,000 displaced persons from Europe and created a number of Assisted Passage Migration Schemes, which encouraged people from Britain, Malta, the Netherlands, Italy, West Germany, Turkey and Yugoslavia to settle in Australia. Hungarian and Czech migrants encouraged to migrate after unrest in their homelands in 1956 and 1968 respectively.[105] The government also made informal migration agreements with Austria, Greece, Spain and Belgium and created treaties with the United States, Switzerland, Finland and Sweden to attract new arrivals. Between 1945 and 1965, over two million migrants arrived in Australia.[106]

Migrants shaped the growth of the Latrobe Valley. Many of them settled in the Latrobe Valley in the hope of securing permanent employment in the region's growing industries. Between 1921 and 1961, the population of the Latrobe Valley increased from 14,000 to 60,000.[107] New arrivals settled in the towns of Morwell, Traralgon and Moe, which had been established before the SEC, as well as in Yallourn.

The town of Morwell developed quickly because of this population boom. The Housing Commission purchased 300 acres of land to be used for housing in Morwell, the Morwell Chamber of Commerce and Rotary Clubs were formed in 1946 and the Morwell reservoir was constructed two years later.[108] In this post-war period, the migrants' main employers were the SEC and the Australian Paper Manufacturers Mill in Maryvale.[109] The Australian Paper Manufacturers also built houses in Morwell for its employees and their families, which included temporary accommodation during the post-war housing shortage.[110]

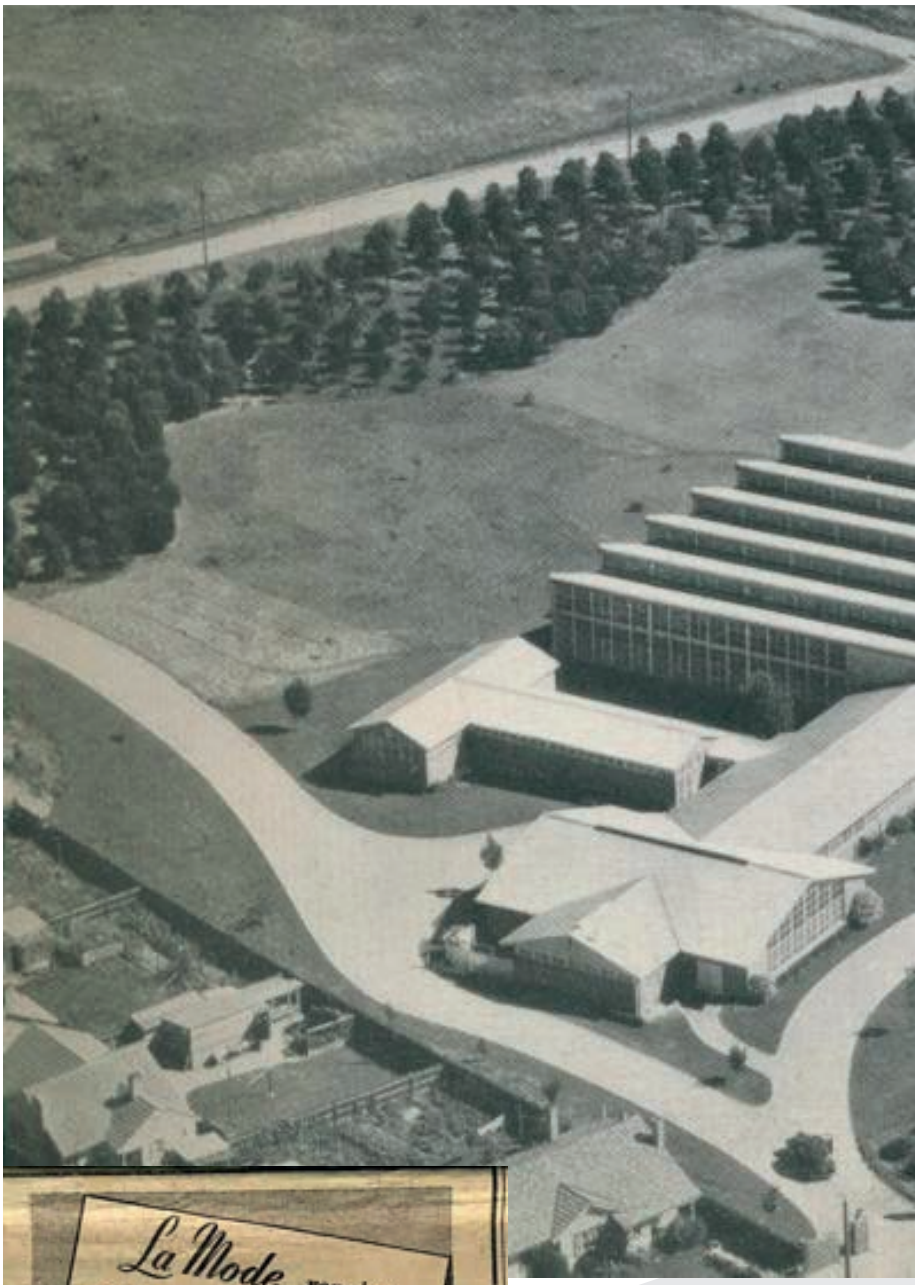
(Left)
Gippsland Park Memorial, 2018
Caroline Hubschmann, SHP (Sue Hodges Productions Pty Ltd)

Many light industries were also established at Morwell to provide local employment for women and children following a lack of jobs for women.[111] According to the *Morwell Advertiser* in 1954:

> An acute shortage of suitable employment for female labour in Morwell was forcing families to leave the area … the Government was aware of the need for light, secondary industries in the Latrobe Valley and that every encouragement was given to industries to come to the area.
>
> Heavy industry was developing at Morwell and families were arriving, with daughters, and in many cases wives, wishing to work.[112]

The LaMode Industries factory at Church Street, which had opened in 1945, was one of the light industries to expand after the war. The company manufactured women's underwear and almost all of its employees were female.[113]

The Morwell Project Co-ordinating Committee was established by the Victorian Government in 1948 to monitor the development of Morwell in the light of its significant growth. The government eventually passed the *Latrobe Valley Development Loan and Application Act* (1958, No. 6290) which provided £1 million to be spent on approved works that would develop the Latrobe Valley.[114]



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LaMode advertisement for applicants, 4 April 1946
Morwell Historical Society

LaMode Industries Factory, Morwell, c. 1952
Morwell Historical Society

Morwell's industries continued to diversify and grow. On 5 December 1956, the Morwell Gas Plant was officially opened by the Duke of Edinburgh. After seeing the thousands of excited visitors who had come from near and far and waited for hours to see him, the Duke said:

> The main importance of this project is that it will provide the citizens and factories of Melbourne with an assured supply of gas. But, quite apart from this, it is worth remembering that, firstly, it was the foresight of various Victorian Governments over the last 10 years which made possible this development of the Latrobe Valley.
>
> The plan is a wonderful achievement for all concerned – designers, engineers, managers, craftsmen and labourers. I offer them my congratulations. This is not the end of the story. It is just the end of the beginning.[115]

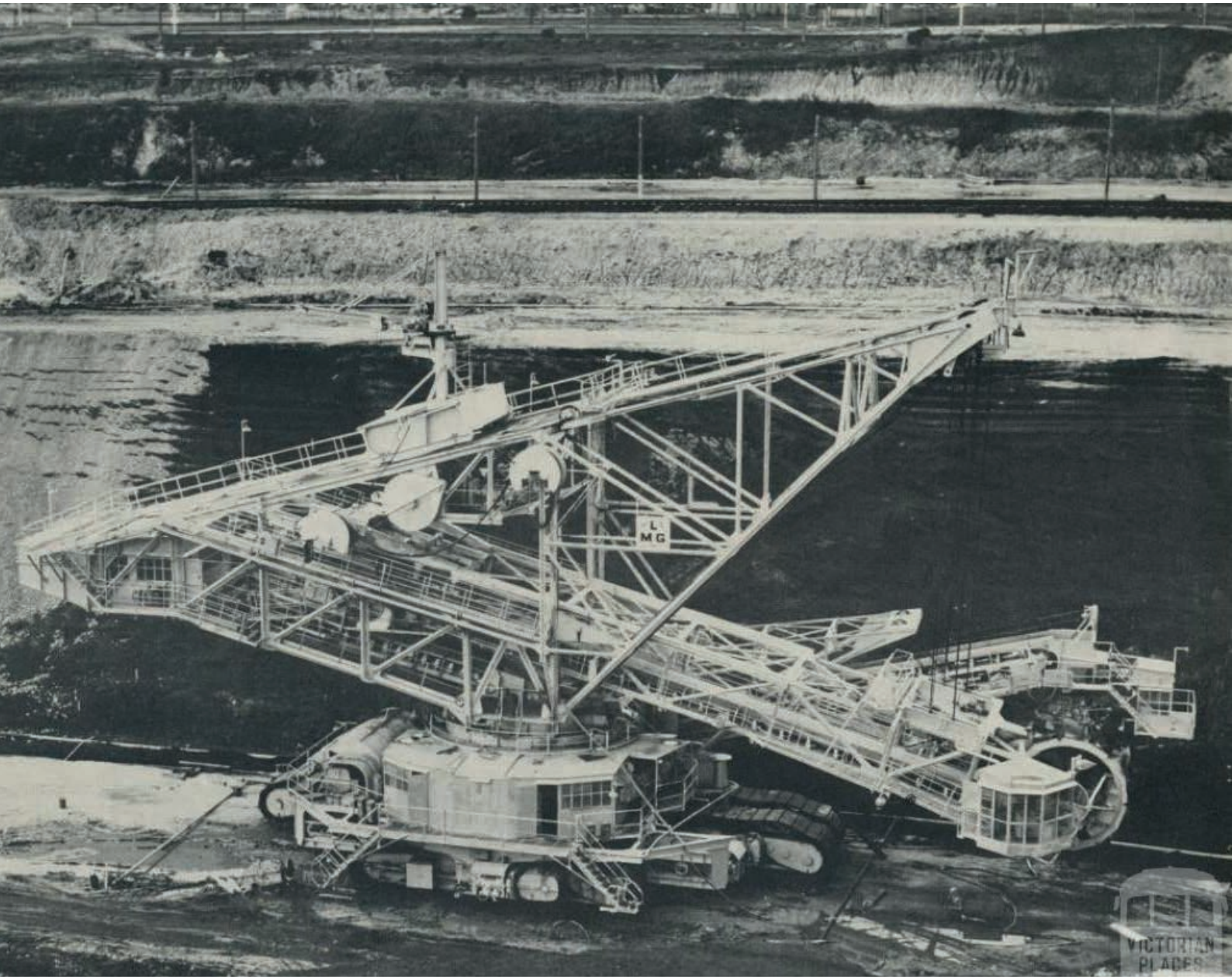
The Morwell Gas Plant had cost 10 million dollars to construct but production ceased in November 1969 when natural gas was discovered in Bass Strait.[116] The Duke might have been wrong about the Morwell Gas Plant, but power production continued to be an important industry for the Latrobe Valley.

Temporary cottages provided by the Australian Paper Mill, c. 1940s
Morwell Historical Society

OPERATING THE MORWELL POWER STATION AND BRIQUETTE FACTORIES

Life in the Latrobe Valley was centred around power generation, in spite of other emerging industries. The SEC had a hand in the everyday lives of everyone who lived in the region, giving Latrobe Valley residents an unprecedented rate of employment and home ownership. This paternalism grew in the early years of the Morwell Power Station and Briquette Factories.[117]

When production began at Morwell Power Station and Briquette Factories, the SEC's vision for the 'Morwell Project' was finally realised. The Morwell Power Station site produced base load power for Victoria's electricity grid by generating power from brown coal.[118] The bulk of the coal from the Morwell Open Cut mine was transferred from dredgers to the Power Station and Briquette Factories via a conveyor belt system to be stored in the Raw Coal Bunker at the complex.[119]



Bernie Briquette mugs, 2018
Caroline Hubschmann, SHP (Sue Hodges Productions Pty Ltd)

Bernie Briquette, n.d.
State Electricity Commission of Victoria

Briquettes being loaded for despatch, Morwell, 1959
State Electricity Commission of Victoria

Between December 1960 and June 1961, the Morwell Power Station used an average of 415,000 tonnes per month, all from the Morwell mine. In addition, the station received deliveries of around 800 cubic yards per month of overburden clay that was used to blend with coal from the Morwell Raw Coal Bunker.[120] Coal was delivered from the 'wet section', where it was separated for use in either the Power Station or Briquette Factories. Workers would call for the coal with a push button and it would be brought up by a conveyor belt to the shuttles that travelled across the coal bunkers. If a boiler were out of service, workers had to undertake the difficult task of timing coal deliveries so that there were gaps in the coal on the shuttle.[121] As employee Keith Roberts reflected, 'if there (were) boilers out on both sides it got a little hairy trying to move the coal'.[122]

After operations at the Morwell Power Station began, staff immediately noticed problems with the fouling of boiler surfaces due to the properties of coal from the Morwell Open Cut mine. This meant that each boiler needed to be cleaned after 300 to 400 hours of operation.[123] In an attempt to fix this situation, George Bonafrede oversaw an intensive examination of ash variations in the Morwell Power Station laboratory and his team compiled a 'fouling index' to determine the range of coal qualities and their depth and location. The Power Station owners also had to wrestle with the fact that the least suitable coal lay in the north-east sections of the mine, which had been marked for early excavation.[124]

There was much experimentation to develop successful cleaning techniques, with limited success in trials to blend Yallourn and Morwell coal. But boiler fouling remained a substantial problem during the first five years of operation.[125] Although the frequency of fouling gradually decreased, workers had to clean the boilers regularly throughout the station's years of operation.[126] These fouling problems were taken into account when the boilers for the Hazelwood Power Station were designed.[127]

(Left)
Back-wheel dredger in the Morwell Open Cut mine, 1959
State Electricity Commission of Victoria

Aside from the issues with boiler fouling, the German-made equipment was well engineered and rarely broke down. However, over time equipment became less reliable and required more frequent maintenance.[128]

THE BRIQUETTE FACTORIES

Briquettes were made from exhaust steam from the power stations three 30MW turbines, which dried raw coal that was then compacted.[129] The Morwell Briquette Factories produced briquettes for three main purposes: household use, such as fuel for fireplaces and hot water systems; industrial use, including gasification at the Morwell Gas and Fuel Works; and as start-up power for the Hazelwood and Loy Yang Power Stations.[130]

In August 1959, the Morwell Briquette Factories began using coal from the Morwell Open Cut mine. Again, the briquette quality was found to be 'fair, but [the briquettes appeared] to deteriorate very quickly when exposed to sun and rain'.[131] Nevertheless, commercial production began on 8 December 1959 and progressed in half-factory stages until September 1960. This process was short-lived and by 17 December 1959 customer complaints about briquette quality forced production to stop. On 19 December production resumed with better-quality coal from the Yallourn Open Cut mine. From this time onwards, the Morwell Briquette Factories used Yallourn coal until it became difficult to obtain in the 1990s.[132] Loy Yang coal was used from the 1990s through to the factories' closure in August 2014.

A slump in demand was another challenge faced by the Briquette Factories. From the late 1950s to the 1960s, the SEC experienced significant losses through its briquetting operations and was forced to sell briquettes below cost price. At this time, the SEC decided against building the two additional factories it had originally planned and sold one factory to India at a loss with the cost passed onto electricity consumers in the form of tariffs.[133] The SEC further proposed to use the equipment originally intended for the third and fourth briquette factories to generate power in the Power Station.[134] These failures were criticized by electricity authorities, but the SEC was confident in the future of its briquetting works.[135] It assumed, ultimately incorrectly, that its main rival—natural gas reserves in Bass Strait—would prove exhaustible.[136]

Morwell Gas Plant, n.d.
Morwell Historical Society

A TRUE POWER CENTRE

Although the completion of the Morwell Open Cut mine and power plant was seen as 'a major step towards complete reliance on Victorian brown coal resources', the biggest steps were yet to be taken.[137] With the opening of the Hazelwood Power Station and later the Loy Yang Mine and Power Stations, the SEC completed its carefully constructed power centre in the Latrobe Valley.

In 1959, a year after brown coal from the Morwell Open Cut was first used to fuel the Morwell Power Station, the SEC announced its plan to build a power station at Hazelwood. This would also be supplied by the Morwell Open Cut, making it part of an ambitious plans to use Morwell's coal reserves. Construction began on the Hazelwood Power Station in 1964 and was completed in 1970.[138] When both the Morwell and Hazelwood power stations were finally operational, the Latrobe Valley supplied almost 90% of Victoria's electricity.[139]

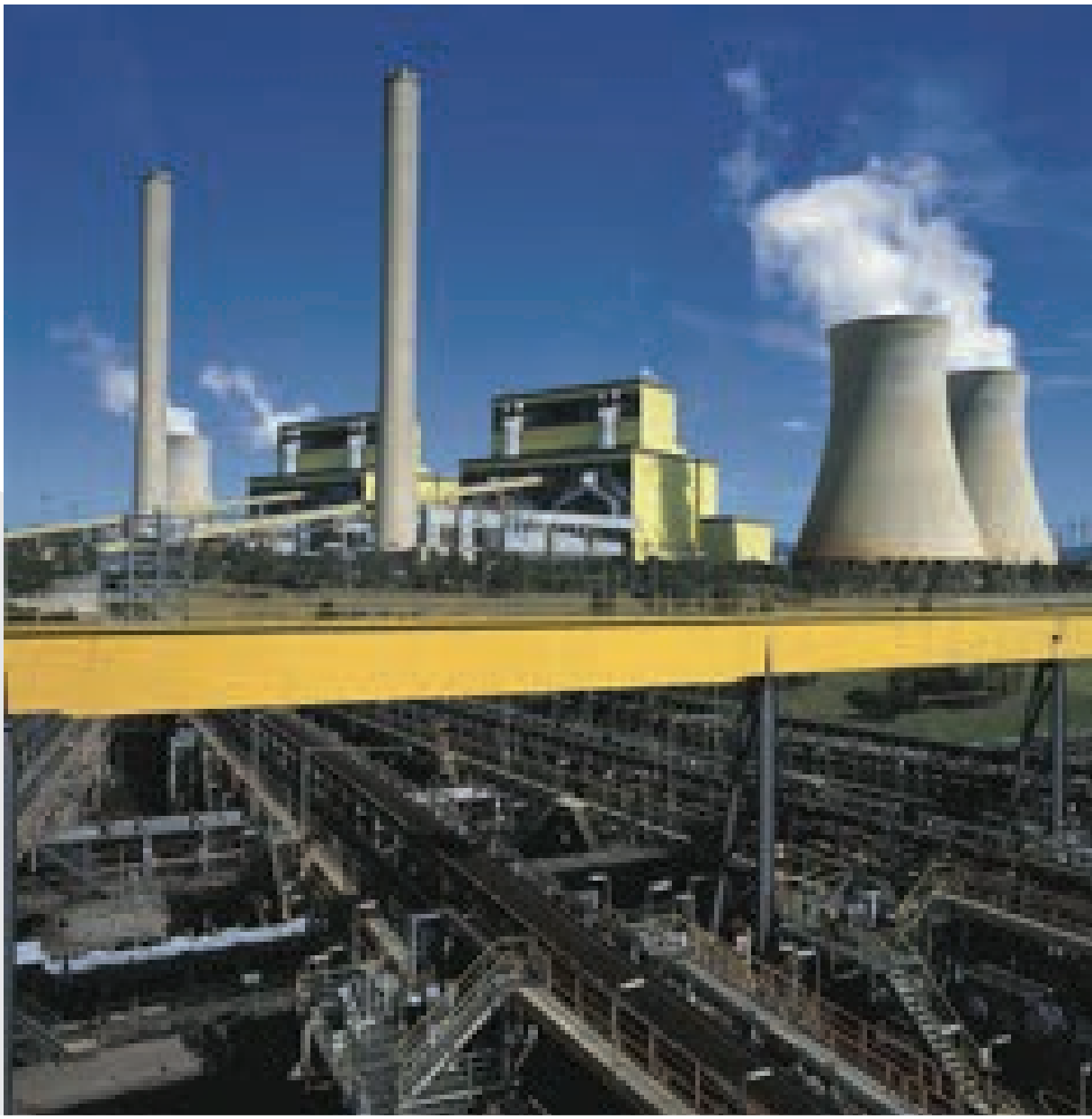
Section of Hazelwood Power Station, 1966
National Archives of Australia

Meanwhile, at Yallourn, the company's model town had grown from 138 residents in 1921 to over 5000 in 1961. But it was no longer the heart of power generation in the Latrobe Valley. The SEC's employees now lived throughout the entire region and the Victorian Housing Commission had built over 2000 new houses in Morwell. Other towns like Moe and Yallourn North, the township near the former Old Brown Coal Mine, also saw an increase in population. A new satellite town, later named Churchill, was planned to house Hazelwood Power Station's workers and their families in 1964.[140]

Over time it had also become apparent that the township of Yallourn was built on top of valuable coal deposits. The 1961-62 annual report of the SEC stated that: 'It might be necessary to win coal near and under the town of Yallourn after the year 1995'.[141] Unfortunately for the people of Yallourn, the SEC started to clear land for the Yallourn Open Cut to expand much sooner than that. The removal of houses—some of which were relocated to neighbouring towns—started in 1975 and a year later there were fewer than 2000 residents left in Yallourn. For some residents, the loss of the town and their homes was a great source of grief. To them, the SEC chose to 'rip something out like that you rip out people's roots.'[142]

As part of this scheme, the old power stations were demolished and a new power station, Yallourn W, was built. Yallourn W started generating power in the 1980s. Four years later, the last of Yallourn's residents left to make way for coal and the SEC's model town ceased to exist,[143] consumed by the expanding open cut mine.

Loy Yang Open Cut is the youngest mine in the Latrobe Valley. The Mines Department had known about coal in the Traralgon area since 1875, but mining only began when the overburden was excavated in 1982. The mine delivered coal from 1983 onwards.[144] The site has two power stations, Loy Yang A, completed in 1988, and Loy Yang B, completed in 1996. With the opening of Loy Yang, brown coal mining and power generation was now happening in three main areas in the Latrobe Valley: Yallourn, Morwell—including the Hazelwood Power Station—and Loy Yang.



(Left)
The empty town square of Yallourn, ready for demolition c. 1980s
Marie-Therese Elz

(Right)
Loy Yang Power Station n.d.
AGL Energy

Technology at each of the power stations became bigger and better to meet Victoria's ever-increasing need for power. The coal-fuelled boilers at Hazelwood had a 200-megawatt capacity and were enormous compared with the older ones at Yallourn and Morwell. In a jubilee history of the SEC, published in 1969, the boilers were described as follows:

> Compared with the 12,500 kilowatt units of which Yallourn had been so proud thirty-five years earlier, they were as a 100,000-ton [101,604 tonne] tanker to a tug-boa. These Hazelwood units will be dwarfed by the 350,000 kilowatt units now projected for Yallourn 'W'.[145]

The SEC made sure that the capacity of each new project—Morwell, Hazelwood, Yallourn W and Loy Yang—trumped that of previous ones. The Morwell Open Cut reached a peak annual coal output of 16 million tonnes in 1976-77, followed by a peak output of 22 million tonnes at the Yallourn Open in 1981-82 after Yallourn W opened. Loy Yang is by far the largest producer of coal, with an annual output of over 30 million tonnes since 1999.[146] The generating capacity of the power stations in the Latrobe Valley grew from 170 megawatts at Morwell to 1480 megawatts at Yallourn W, 1600 megawatts at Hazelwood and eventually to a capacity of over 3000 megawatts at Loy Yang A and B combined.[147] The Latrobe Valley had truly become the SEC's centre of power.

Morwell Power Station, generator test run, c. 1920s-60s
Museums Victoria

WORKING AT MORWELL POWER STATION AND BRIQUETTE FACTORIES

The Morwell Power Station and Briquette Factories needed a large workforce. In 1953, before operations began, the SEC anticipated that the Morwell Project would provide 2000 jobs, which would increase to 3000 when the second two briquette factories opened.[148] Although the third and fourth factories were never built, the Morwell site was still an important provider of employment for people in the Latrobe Valley.

Before the SEC was privatised in 1994, the power industry was a secure, even guaranteed, employer for local young people. In 1992 alone, the SEC had over 1,000 apprentices.[149] There was plenty of work for everyone: the plant even kept inactive boilers manned at overtime rates! Former employee Peter McCartney was paid double time to complete fire safety training programs and former employee George Harris remembers: 'When there were downturns in the rest of the state, it really didn't affect the SEC employees'.[150] Employees also received good wages, including superannuation.

Shift work was the most difficult part of the job, with some workers doing seven night shifts in a row. But, although it could be exhausting, shift work was usually not too demanding. For some employees, the work was 'slow, easy and comfortable', or even 'cushy'.[151]

Surveying levels for a conveyor at a new power station in Victoria, 1963
National Archives of Australia

There were many opportunities for both skilled and unskilled workers at the Morwell complex, which created a sense of security and self-respect. As George Harris reflects: 'Now these people may only have [had] a job of sweeping the floor or something like that, but they had work, they had a pay cheque and they had a pride in what they did.'[152] Professional development took place at lower-level positions at the plant: George Harris worked a number of positions in his time, including as a trimmer, fireman, and assistant turbine driver. Keith Roberts, an employee from 1977–79, remembers:

> At that time, the Morwell Briquette and Power Station was seen as the entry point for a lot of staff moving to other areas that had their interest. Basically, you would come in, start out as a cleaner on day shift, then you'd go on to shift work in the yard gang and the briquette factory and then you could work either through the briquette factory or you could then come over onto the boiler cleaner's unit . . . and then move through onto the shift operators, which then led you to (if you wanted to go that far) to boiler attendants and then further into the turbine house as turbine drivers.[153]

Workers were allowed to invent new ways of doing things. George Harris's work is an example of this. At first, operations at the plant began using a cold start procedure. Harris, who began working at the Power Station four months before it came online, created a new method:

> … I developed a procedure to start the station directly from the boilers using a flow through system where all the valves were open and as the boiler pressure came up so did the pressure in all of the auxiliary plant and the turbines would have eventually rolled off their barring gear and come up to speed. This system proved to [have] worked well.[154]

Furthermore, because the number of boilers installed was sufficient to supply four factories, there was now a surplus of steam supply. To make use of this surplus steam, a 60MW radial flow turbine was installed, bringing the capacity of the station to 170 MW (3 x 30MW high pressure back pressure turbines, 1 x 20MW low pressure turbine and 1 x 60MW high pressure condensing turbine).[155]

Problems with operations or machinery were usually discussed and tackled collaboratively by a shift team or department. Team leaders enjoyed being able to work closely with management and their teams to address issues. In the words of former employee Michael Gred:

> I could go down to the managers and sit down and talk to them. Talk about plan issues, manning issues and all that and they'd sit there and listen to you … and together we'd work … through to right the problems and all that.[156]

Many people have spoken of the family atmosphere they felt as employees of the plant. Workers often followed their fathers into a career at the power station, or worked alongside siblings, but the family atmosphere was also created by the supportive atmosphere at the Power Station. The community feeling also extended outside of the workplace. There was a Cricket Association as well as social clubs for all the different departments and dances and a Christmas picnic for employees and their families every year. As Peter MacCartney reminisced:

> … community-wise, well there was a sense of belonging … We had real good fun.[157]

TRAINING AND SAFETY

The Morwell Power Station and Briquette Factories generally had extensive safety measures to protect workers. Although there were emergency incidents, major accidents involving casualties were rare. Notwithstanding this, a tragedy occurred in 2001 when 48-year-old Peter John Riley was killed while working inside a hopper. The operator of the power station was fined $135,000 over the incident.[158]

Gredd and Harris were integral to developing training programs that helped workers identify and react to problems quickly:[159]

> … the training was very good, well it made the operators more confident, because they not only knew how to do a thing, they knew why they were doing it. Which basically meant that if things didn't go according to plan, you could step back and say 'ok, I know this should've happened, now let me think why it didn't happen.' Mind you, you only got that timeframe if it's a small emergency, if it's a large emergency … you've got to react instantaneously. [160]

Fire safety was a particularly big part of training at the Power Station. Keith Roberts recalls a demonstration of how dangerous the coal dust could be: 'They had a pan with coal dust that was ember, they threw it up in the air and it just exploded into a flame, probably 20, 25 feet square.'[161]

Brown coal briquette presses, Morwell, Victoria, 1962
National Archives of Australia

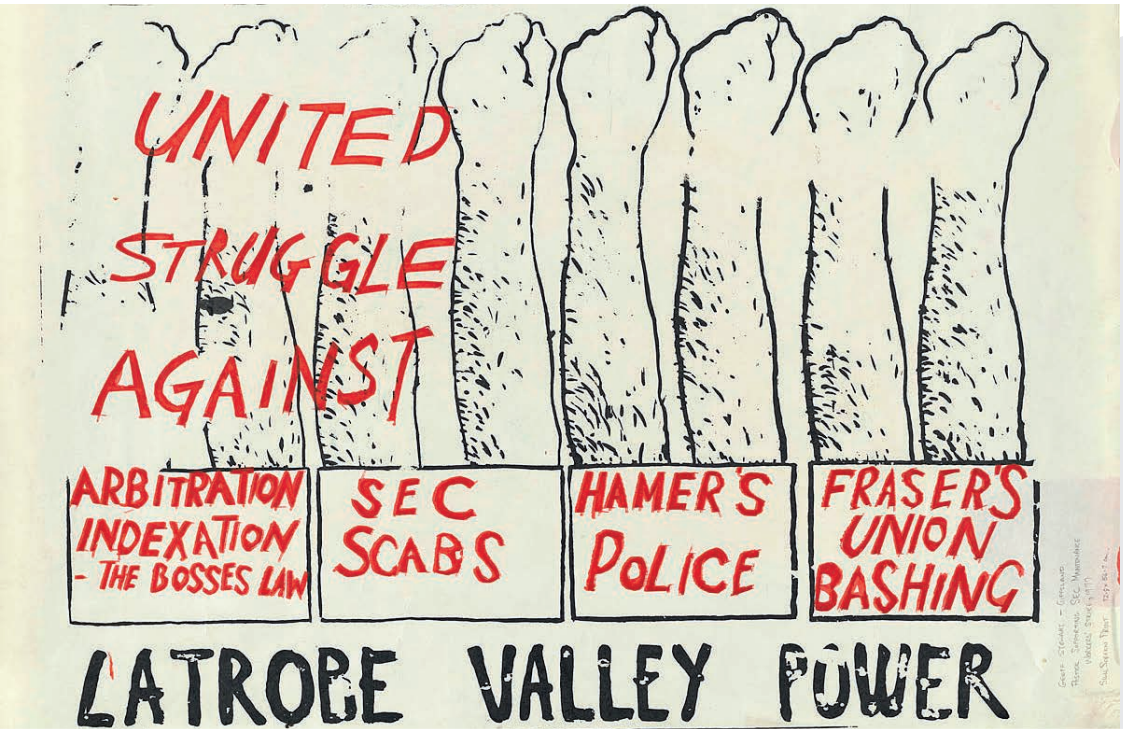
STRIKES

Strikes were a part of life at Morwell Power Station. In 1966, an action started by the workers at Yallourn, Hazelwood and Morwell Plants saw 2,500 SEC workers strike, 1400 of whom worked in the Latrobe Valley. According to *The Canberra Times*:

> A sudden 24-hour strike by more than 2,000 State Electricity Commission white-collar workers dimmed out Victoria from 9 o'clock tonight.
>
> Drastic emergency electricity cuts will remain in force until 5pm on Saturday affecting homes, factories, television and radio, outdoor signs, non-essential street lighting and all shop-window lighting.[162]

Strikers were angered by delays in negotiations for increased pay and better working conditions. This led to power restrictions across Victoria as the strike took effect.[163] Two years later, 2,000 SEC workers calling for a wage rise walked out of key power stations, including Morwell, causing the Morwell plant to be shut down for 24 hours.[164] In 1977, Morwell employees were among 2,500 power plant maintenance workers who stopped work, demanding a $40 wage increase.[165] In the 1980s, workers at the Morwell Open Cut Mine went on strike. Coal supplies dried up and the plant could not generate power, which resulted in widespread blackouts and industry shutdowns. Melbourne's public transport system also ground to a halt, with trams and trains stranded in depots.[166] As *The Canberra Times* again reported:

> Large areas of Victoria were without electricity much of yesterday as the worst power crisis for 30 years hit the State ... The power cuts, which came as levels of coal for generating power fell to a trickle, shut down industry and seriously affected commerce in Melbourne.
>
> Millions of commuters struggled to get to work in widespread traffic jams while Melbourne's trams, buses and trains remained in their depots, also paralysed by the stoppage.[167]



Poster supporting SEC maintenance workers' strike, Latrobe Valley, Victoria, 1977
National Gallery of Australia

PRIVATISATION

The 1992 Victorian state election was won by the Coalition. Led by Liberal Premier Jeff Kennett, the new State Government introduced a massive cost-cutting program that included selling state assets to boost the economy and to pay down debt created by the previous State Government. The corporatisation and privatisation of the SEC was part of this hotly-contested scheme. On 1 January 1994, 73 years after its establishment, the SEC was broken up and its task of power generation and management of coal mines taken over by Generation Victoria.[168] The following year, Generation Victoria was broken up further and the newly created-businesses sold.[169]

The Morwell Power Station and Briquette Works were sold as Energy Brix Australia in 1996, while the Morwell Open Cut and Hazelwood Power Station were managed by the Hazelwood Power Corporation from 1995 and their assets sold in mid-1996.[170] The mines and power stations at Yallourn and Loy Yang followed the same route and were all under private ownership by the end of 1996.

The privatisation of the mines and power stations in the Latrobe Valley has been a topic of political and public debate ever since. Many people argue that privatisation has led to both higher energy bills and a decrease in energy production.[171]

For the Latrobe Valley, disaggregation of the SEC also meant that most local people lost their employer. When the power plants were sold, some former workers were offered employment working for the new companies but others were left unemployed.[172] The falling apart of the SEC's paternalistic structure left many former workers and their families in dire situations, because they did not know where to turn or how to recover from losing their jobs.

It is clear that privatisation of the SEC created a rupture between the Latrobe Valley and the State Government, who so carefully constructed it in the first place.[173] Naturally, it also had a significant impact on operations at the Morwell Power Station and Briquette Factories. Among other things, employment opportunities became more limited. According to Keith Roberts: 'You could quite easily have a shift roster of 20 … by the time that Energy Brix closed the plant, they were running the whole plant on five people'.[174] Training programs and opportunities diminished and eventually disappeared. Michael Gredd, who started as a shift worker in 1995, remarked: 'When I started here, there was … hardly any training modules there was no testing, no nothing.'[175] Gredd was instrumental in instigating training programmes in the later stages of the plant.

THE 21ST CENTURY

On 26 December 2003, a fire significantly damaged the Morwell Power Station and Briquette Factories site, destroying the coal cross-over conveyor that fed the B, C & D briquette plants. Only A plant continued to operate, but even this plant took six months to repair in the wake of the fire. The concrete bunker roof in A & B factory was also badly damaged and needed temporary repairs to strengthen its supports.[176]

Robert Bachette was on duty in the Briquette Factory that day. Although flames threatened the entire plant, and tensions were high, Bachette's team was able to remain composed and carry out safety procedures until the fire brigade could get the blaze under control. Bachette recalls the strong sense of support and concern for fellow workers: 'We all made sure that we looked out for each other and we made sure we knew where everyone was.'[177] It was an extremely dangerous fire, as then CFA incident controller Phil Glover recalled:

> We were seconds away from losing seven volunteer firefighters that night … That was easily the closest I've come in my career to a legitimate catastrophe.[178]

CLOSURE

The Morwell Power Station and Briquette Factories was the first former SEC site to close after privatisation. The briquette works shut in August 2014 and the Power Station closed one month later. There were many difficulties in the period before closure. Aside from the 2003 fire, a major fire at the open cut mine (now called Hazelwood) disrupted coal supply in February 2014.[179] The Power Station was also getting old. Ultimately, however, two major circumstances led to its failure. The first occurred in July 2012, when the Australian government introduced the controversial carbon emissions tax. The tax penalised industries producing high carbon dioxide emissions, including the Power Station. In doing so, it also reduced the demand for briquettes by large industries. The second factor was depressed wholesale electricity prices. This situation had dogged the power station for several years because of growing international concern about global warming and the implementation of government subsidies for more environmentally-friendly energy solutions shrank demand for coal-powered electricity.[180]

The closure of the Morwell Power Station meant that more jobs were lost in the area, but the biggest blow was yet to come—the closure of the Hazelwood Mine and Power Station in March 2017. At this time, local unemployment rates were already among the highest in Victoria.[181]

Fire at the Morwell Power Station and Briquette Factories, 26 December 2003
Mick Williams, *Latrobe Valley Express*

Hazelwood power plant and the mine fire, 2014
3CR Community Radio

COMMUNITY CONCERNS

HEALTH ISSUES IN THE LATROBE VALLEY

The Morwell Power Station and Briquette Factories is associated with the painful reality of widespread health issues experienced by the Latrobe Valley community. In 1977, sociologists Powels and Birrell first documented that the people in this area had higher mortality rates than their other Victorian counterparts.[182] Because of this, there has been much speculation about the possible harmful health effects of burning brown coal for energy production on a large scale.[183] This includes the impact of air pollution on respiratory health and exposure to asbestos.

While the Morwell Power Station and Briquette Factories may evoke fond memories for some employees and community members, for many others they are a site of trauma and pain. The 'Latrobe Health Innovation Zone' is a state government initiative that recognises the continuing need to address these lasting problems.[184]

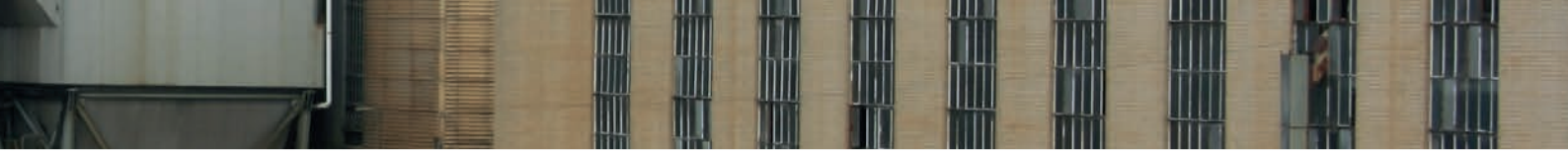
AIR POLLUTION

Air pollution in the Latrobe Valley has been a concern for many decades. In 1980, the SEC announced that it would provide $1m to develop an air monitoring program in the Latrobe Valley. It also proposed to fund a study by the Department of Health to investigate the connection between air quality and health in the area.[185]

Studies by Monash University in 1997 and 1998 investigated air pollution in the Latrobe Valley and its relationship to lung problems. The first study found that coal dust was not conclusively related to lung function decline.[186] However the second study, which interrogated data on pollution levels and instances of hospital admissions for respiratory disorders in 1988, found there was a significant link between airborne particles, nitrogen dioxide and respiratory morbidity.[187] Respiratory morbidity is a measure of all types of respiratory illnesses in the population including asthma, chronic or acute bronchitis, emphysema, chronic airway obstruction and chronic obstructive pulmonary disease.[188]

More longitudinal studies are needed to examine the impact of the power industry on the health of the people living in the Latrobe Valley, particularly after the 2014 Hazelwood Mine fire. At the time of writing, most local people associate the power stations with adverse health effects.[189]

Loy Yang Power Station, 2018
Caroline Hubschmann, SHP (Sue Hodges Productions Pty Ltd)



ASBESTOS-RELATED DISEASE

Inhaling asbestos fibres causes fatal illnesses including lung cancer, mesothelioma and asbestosis.[190] The Latrobe Valley has the highest rate of asbestos-related disease (ARD) in Victoria due to the widespread use of asbestos in the power industry.[191]

Asbestos-related diseases are estimated to have been wholly or partly responsible for around 25,000 deaths in Australia to 2001.[192] Most of these deaths are work-related. They are often tied to local or regional epidemics in past and present industrial areas.[193] In 2007/08, 13 interviews were conducted with people with mesothelioma and/or asbestos-related lung cancer and their carers and partners. This was part of a Latrobe Valley pilot study and the results showed that those afflicted were male, older and had worked in the construction and power industries. Carers and partners who suffered from asbestos-related disease were mostly female.[194]

The adverse health effects of asbestos were noted as early as 1899, and the first documented death related to asbestos was in Britain in 1906.[195] In the 1930s, the lethality of asbestos was recognised by governments in Britain and the United States. In Australia, this was only widely-known in the 1970s when asbestos was commonly used in industry and for housing. The SEC had been informed of the dangers of exposure to asbestos dust in its power stations as early as the 1940s and 1950s, but the information was widely disregarded.[196] As one SEC employee recalls:

> We used to climb over that [asbestos lagging], it was just like fluff and it used to blow up into the air and we used to throw it at each other and play in it and have a good old time. That was just normal.[197]

Victoria banned the use of asbestos in 2003, but the use of asbestos in the power stations of the Latrobe Valley has contributed to the development of asbestos-related disease in thousands of people.[198] The damage goes beyond the physical. The community is angry that the workers and their families were never told about the dangers of exposure to asbestos: instead, it was seen as a normal part of working in power stations. [199] Because asbestos was used as insulation to minimise heat loss, asbestos dust was almost always present in the atmosphere. As one former SEC employee at Yallourn power station notes, in the 1960s 'you could walk into "A" station and you couldn't see the other end of the boilers.'[200]

Ray Harris worked in stations A, B, C, D and E from 1956 to 1962 and at Hazelwood Power Station from 1962 to 1989. He spoke to law firm Slater & Gordon about how workers were exposed to asbestos but never warned of the dangers of asbestos exposure:

> Exposure to asbestos occurred during the construction phase of new power stations, when lagging was applied to boilers, turbines and ancillary equipment. Laggers were supplied with bags of dry asbestos, which were emptied into bins measuring approximately two metres square by one metre in depth. Water was added and the product mixed to form a paste. During this process laggers were covered in dust and did not wear masks prior or during the mixing process. Dust dispersal was quite significant.[201]

The Latrobe Valley community has experienced a range of emotions about asbestos and several studies have explored what the community thinks should be done about their members' exposure to it. Former workers have reported feeling both loyalty to long-time employers and anger at their perceived betrayal.[202] They also feel guilt at having transferred the asbestos fibres to their families through direct contact and via their clothing. There is also a widespread level of fatalism: people who have been exposed do not want to know whether they are sick from asbestos, because asbestos-related diseases are seen as fatal.[203]

On 15 October 2008, the then-Victorian Premier John Brumby issued the following apology to asbestos victims:

> Victims of asbestos exposure deserve the right to provisional damages and they deserve an apology. With that in mind I want to take this opportunity today to acknowledge an injury that has been ignored for too long. On behalf of the Victorian government and the community I want to say sorry and to express our regret for the pain and the suffering felt by some former power industry workers and their families where that was caused by asbestos exposure at the former SECV. Some workers and families have endured intolerable suffering, including the slow and painful effects of lung cancer, asbestosis and mesothelioma. The government sincerely apologises to these workers and their families for the injuries caused by the exposure at the SECV.
>
> Victoria banned the use of asbestos in 2003, but we understand that some former workers and their families, through going about their daily work, are still suffering the impact of asbestos exposure.
>
> It is unacceptable that any person, through the course of their work, is exposed to what we now know is a deadly substance. I hope this apology goes some way to bringing closure and resolution for families who are suffering from asbestos-related diseases.[204]

Gippsland Asbestos Related Diseases Support Inc. (GARDS), a non-government voluntary organisation supporting those affected by asbestos-related diseases throughout Gippsland, organises an annual wreath-laying ceremony in the Morwell Rose Garden that is attended by asbestos disease victims, their families and friends. The organisation continues to advocate for a dedicated, permanent memorial, and for the State Government to participate in this.[205] The wider Gippsland community, too, would like a permanent memorial to the victims of asbestos, their families and friends.[206]

(Top)
Morwell Centenary Rose Garden, 2018
Caroline Hubschmann, SHP
(Sue Hodges Productions Pty Ltd)

(Bottom)
GARDS memorial plaque dedicated to victims of asbestos and their families, 2018
Caroline Hubschmann, SHP
(Sue Hodges Productions Pty Ltd)

THE 2014 HAZELWOOD MINE FIRE

On 9 February 2014, embers from a nearby bushfire ignited a fire in the Hazelwood mine. It burned for 45 days, during which time smoke and ash was strewn throughout the area and over the town of Morwell. Country Fire Authority Chief Officer Euan Ferguson described the fire as 'one of the largest, longest running and most complex fires in the state's history'.[207]

Residents of Morwell and surrounding areas suffered adverse health effects from this incident. The 2014 Hazelwood Mine Fire Inquiry found that:

> … members of the Latrobe Valley community, and in particular residents of Morwell, reported suffering distressing adverse health effects from the mine fire, including sore and stinging eyes, headaches and blood noses.[208]

Most of these symptoms went away once the fire was put out but some symptoms persisted and new health conditions were reported. At times, the concentration of particles and carbon monoxide exceeded standards and the smoke contained many contaminants.[209] There is no doubt that this was caused by smoke and ash from the fire.[210] According to one resident:

> … You couldn't go anywhere. It was in your house, it was everywhere… you can't imagine living in smoke for 45 days.[211]

There is also the risk that the general population could develop health problems in the medium- to long-term. The Hazelwood Mine Fire Inquiry found that there was an increase in deaths in the Latrobe Valley between February and June 2014, in comparison with the same periods between 2009 and 2013, and that this was in all likelihood the result of the Hazelwood Coal Mine fire.[212]

Since the Hazelwood Mine fire there has been quiet resignation within a large portion of the community that the Latrobe Valley cannot rely on coal-based energy production for its economic future.[213] Hazelwood was decommissioned in 2017, and over 1,000 local jobs were lost, so new economic solutions need to be found for the former workers and their families.

Hazelwood power plant and the mine fire, 2014
3CR Community Radio

MOVING INTO THE FUTURE

Morwell is considered one of the most socially and economically disadvantaged local government areas in Australia.[214] The Hazelwood Mine Fire Inquiry Report found that the Latrobe Valley and Morwell in particular have a poorer health profile than elsewhere in Victoria. This means that residents have a reduced life expectancy as a result of conditions including cancer, diabetes, mental disorders, cardiovascular disease, asthma and injuries. This is worsened by socio-economic disadvantage.[215]

Before the Victorian power industry was privatised in the 1990s, the Latrobe Valley was accustomed to almost full employment and economic growth. In the mid-1970s, almost 9,000 people (nearly a third of the Latrobe Valley's labour force) were employed by the SEC. By 2002, this had dropped to 1,800.[216] As unemployment rose, other industries declined and the population dropped throughout the region.[217] Being known as the 'Valley of the Dole' has had lasting impacts on the community.[218]

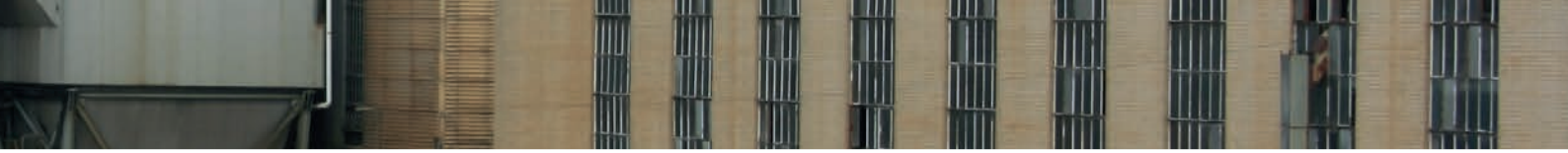
Morwell Power Station closed in September 2014 and Hazelwood Power Station followed in March 2017. A 2017 study conducted by the School of Environmental and Life Sciences at the University of Newcastle found that people who lived in the Latrobe Valley experienced strong feelings of loss, anger, abandonment and mistrust, which were heightened after the 2014 Hazelwood Mine fire.[219] But the study also found that the community was hopeful for a future and keen to participate in shaping it:[220]

> We are going to leave a bright future for our children and the next generation. And we must. We have a responsibility to make sure that we don't destroy our land and our environment for our children.[221]

The 'Future Morwell Urban Design Revitalisation Plan' provides recommendations for moving towards a prosperous future.[222] There is broad recognition that the region has to diversify its economic base and has to be willing to transition away from coal-fired electricity generation. This discussion began before the Hazelwood Mine fire but the event acted as a watershed: it prompted a more concerted and vigorous debate. It also encouraged residents to have the courage to demand a say in the decision-making process for the future of their towns.[223]

Despite widespread fears for the fate of Morwell after the Morwell and Hazelwood Power Stations closed, economic signs are positive. One year after Hazelwood stopped producing electricity, unemployment levels have declined, in contrast to widespread fears. The jobless rate sat at 11.4% in December 2016, and had dropped to 8.8% in December 2017.[224] There has been an increase in the number of businesses in the Latrobe City Council area and the number of businesses leaving Morwell has halved since Hazelwood closed.[225] Confidence in business has also increased. One study even reported that: 'Morwell's not dying, Morwell's not dead, the mine shutting down didn't destroy Morwell at all.'[226]

This is debatable. The State Government has promised $226 million for programs to help the Latrobe Valley transition away from the traditional outmoded industries that have defined the region. The fund is administered by the Department of Economic Development, Jobs, Transport and Resources and is working closely with the Latrobe Valley Authority, community, businesses, unions and local and Commonwealth governments.[227] In 2018, the mines and power stations at Yallourn and Loy Yang remain operational and the area still



produces most of Victoria's electricity, but what will the future bring? The high emission rates of greenhouse gases in the area have been heavily protested in recent times and the idea of adapting to renewable forms of energy and rehabilitation of the old mines is gaining momentum in the community.[228]

The Latrobe Valley has experienced more than its fair share of hardships, from the loss of Yallourn, to the privatisation of the SEC, to the adverse health effects of living and working in the region, to the Hazelwood Mine fire and finally the closure of multiple power stations, including the Morwell Power Station. The identity of Morwell has always been closely tied to its industries, so the transition to a future that does not rely on coal will include changing the narrative. This includes recognising that the power stations that were so influential in its development will no longer dominate the town, but that the region has powered Victoria for over 100 years. Reconciling these two very disparate facts will require courage, optimism and radical thinking. Perhaps the Latrobe Valley should take a good look at its past—where progress and optimism were driven by experimentation and modernisation—in planning for its future.

Latrobe Valley, 2018
Caroline Hubschmann, SHP (Sue Hodges Productions Pty Ltd)

ENDNOTES

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