

3.9 Developing manufacturing and industrial processes

Summary

The large population of miners and a skilled workforce in the Ballarat district, including trained engineers, provided the workforce and necessary expertise for the large-scale development of industrial processes and manufacturing in Ballarat from the 1850s. An extensive range of industrial enterprises were established at Ballarat, from the manufacture of all types of goods to the heavier work of locomotive manufacture. Industry and manufacturing remained a vital element of Ballarat's economy and workforce into the 1960s and 1970s and have played an important part of Ballarat's history and identity.

Consideration of this theme in relation to the HUL approach

This theme represents an important and relatively extensive activity type in the City of Ballarat, particularly in the central city, which has relevance to many aspects of the historical landscape. This theme relates to the HUL layers 'Economic processes', 'Infrastructure' and 'Land use patterns and spatial organisation'.

In the nineteenth century, manufacturing operations were usually established in particular locations—for example, on the edges of towns and settlements away from residential centres, or in close proximity to a water supply or a railway station. By contrast, some factories were close to workers' housing and also often close to a local hotel. Industrial development is associated with immediate demand from the local area and the availability of local expertise. Since the postwar period, manufacturing has also been encouraged through State government intervention.

Industrial operations often occupied large and complex sites, which may include a fuel source, various outbuildings, boiler, chimney, and transport needs such as stabling or a railway siding. In early and more remote industrial operations, workers were sometimes provided with accommodation. Industrial complexes often formed part of a larger industrial landscape that concerned for example the supply of resources. Industrial places have also undergone considerable changes over time in response to changing technologies. There is often the potential for historical archaeology at these places.

As large workplaces, there were social and political dimensions to manufacturing operations. The operation of factories involved a class dynamic of workers and bosses. The closure of some factories had a significant impact on the working population and often involved economic decline in the wider area. Likewise, the growth of industry has played a part in shaping residential development.

Consideration of this theme relative to First Nations history

Technical ingenuity	<p>First Nations people designed and built fisheries in the large swamps and lagoons and probably also in the Yarrowee River.</p> <p>First Nations people made a large range of tools and implements for different purposes that used specific materials and methods of manufacture, including the boomerang for hunting and tools for fire-making.</p>
Factories	<p>First Nations people may have been employed by factories in the Ballarat area.</p>
Factories	<p>The operation of large industrial complexes fuelled on steam power, which relied in part on a continuous timber supply, contributed to the deforestation of the country around Ballarat.</p>

3.9.1 Developing manufacturing

The impact of the Industrial Revolution was keenly felt at Ballarat, where industry developed rapidly and extensively in the late nineteenth century. The scale and diversity of industrial development in Ballarat after the gold rush was extraordinary, so much so that one journalist likened Ballarat to ‘a second Manchester, as great an industrial centre as it had been a gold producer’.³⁶² With the move away from alluvial mining from the 1860s, there was a ready labour force of ex-miners to develop Ballarat’s industrial capacity. Ballarat quickly became a centre of industrial development and manufacturing owing to the large population and the related demand for all manner of manufactured products. By the 1860s, Ballarat supported a number of industrial enterprises. A number of contributing factors encouraged the extensive development of industry at Ballarat—namely, strong demand from local industry, access to efficient transport, adequate capital, a large workforce, and skilled workers with mechanical knowledge and know-how.

A vast range of goods was produced, including building materials, clothing, footwear, furniture, bicycles, soap and candles, and saddles and other leather goods. Factories

³⁶² *Rutherglen Sun and Chiltern Valley Advertiser*, 1 March 1938, p. 1.

were also established at Buninyong in the nineteenth century, including tanneries, soap, tallow and candle factories, and the Buninyong Brewery (discussed in Section 3.9.4).³⁶³

The early twentieth century saw further growth in manufacturing in Victoria. With the advent of World War I, skills in fabrication and machining were developed, and in the 1920s the value of manufacturing surpassed primary production for the first time.³⁶⁴

3.9.2 Forges and foundries

Forges and foundries smelted iron and other metals at high temperatures and moulded it for various purposes. Early commercial activity included the smithies and forges that serviced those travelling to the Victorian goldfields. Forges and foundries could be large operations with hundreds of men, or small single operators. An example of the latter is shown below (FIGURE 2.185).

Smithies and forges were an essential service in the gold-mining settlement because of the heavy reliance on horses, which needed to be shod, and the need to manufacture, maintain and repair mine machinery. There was a significant appetite for and knowledge of mechanical processes in Ballarat and other local towns which had been formed by and remained largely reliant on mining development.



Figure 3.150 A modest foundry with attached house in Ballarat, was the premises of 'White, Iron and Brass Foundry', c.1872. (Source: State Library of New South Wales)

³⁶³ Whitworth, 1870.

³⁶⁴ Dingle, 1984, p. 204.

3.9.3 Manufacturing vehicles

Carriage-works and coach builders operated in Ballarat in the late nineteenth and early twentieth century. These produced a wide range of vehicles. Blacksmith and coachbuilder John James at Ballarat East was manufacturing bicycles at his forge in the early 1870s.³⁶⁵

The Phoenix Foundry, the largest of eight foundries in Ballarat, won its first contract to manufacture steam locomotives for the Victoria Railways in the 1860s/70s.³⁶⁶ Situated on Armstrong Street near the Ballarat Railway Station, the extensive foundry complex occupied around an acre of ground (FIGURE 3.186).³⁶⁷ Employing hundreds of men, the Phoenix Foundry remained integral to the Ballarat economy for over 100 years. The Victorian Railways built new railway workshops in Ballarat North in the early twentieth century in an effort to boost industry and hence to offset to offset the decline of mining.

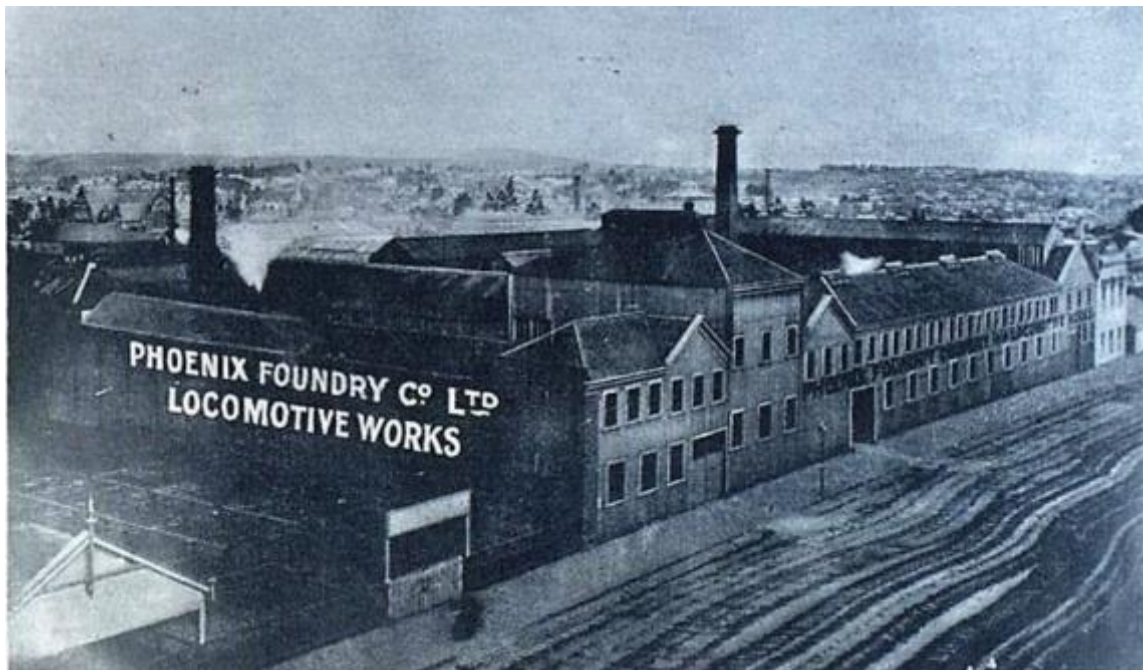


Figure 3.151 The Phoenix Foundry Co. Ltd, Locomotive Works, Ballarat. (Source: Ballarat City Libraries via VC)

³⁶⁵ Museums Victoria Collections, Item ST 18656, <https://collections.museumsvictoria.com.au/items/405280>

³⁶⁶ Pickersgill, 1885, p. 158.

³⁶⁷ *Illustrated Australian News*, 12 August 1873, p. 129.



Figure 3.152 L.E. Cutter’s coach-building factory at Ballarat, 1900. (Source: State Library of South Australia)

Franklin Caravans was started in the late 1940s by Geoff Robertson, who started building caravans at the back of his father’s Town Hall Hotel in Armstrong Street, Ballarat. He sold the caravans on consignment to a Melbourne retailer. Later, he moved the operation to Dawson Street, Ballarat (FIGURE 3.188). By the 1970s, Franklins had become the largest caravan manufacturer in Victoria.³⁶⁸

The Country Fire Authority operated a factory in Ballarat from 1951 where they manufactured fire engines and emergency vehicles.³⁶⁹

FRANKLIN CARAVANS

7-9 Dawson St. South, Ballarat. Phone B 5517



This 27ft. Franklin Mobile Home is typical of the advanced styling of all the Franklin Range, which includes the lightweight 10ft, 6in., 12ft. and 14ft. caravans in aluminium or bondwood. Write for details of the famous 16ft. Special with Rescote walls and aluminium roof, on a tandem chassis with shower, etc. Leading builders of Mobile Homes to 3011.

● YOU INVEST YOUR MONEY WHEN YOU BUY A FRANKLIN

Figure 3.153 Advertisement for Franklin Caravans, Dawson Street, Ballarat, from *Australian Motor Manual*, June 1961. (Source: Vintage Caravans Forum)

³⁶⁸ Vintage Caravan Forum, <https://vintagecaravans.proboards.com/post/135035>; *Age*, 21 August 1979, p. 28.

³⁶⁹ *Age*, 13 August 1996, p. 5.

3.9.4 Agricultural machinery

The rich farming country around Ballarat and the constant interest in improving farming techniques saw significant demand for agricultural machinery and implements. There were a number of agricultural implement and tool makers in Ballarat. The entrepreneurial industrialist Hugh Victor McKay established himself as an agricultural implement maker with a factory in Dawson Street, Ballarat North, in the c1880s, where he manufactured and distributed the Sunshine Harvester in the 1890s (FIGURES 3.190, 3.191).³⁷⁰

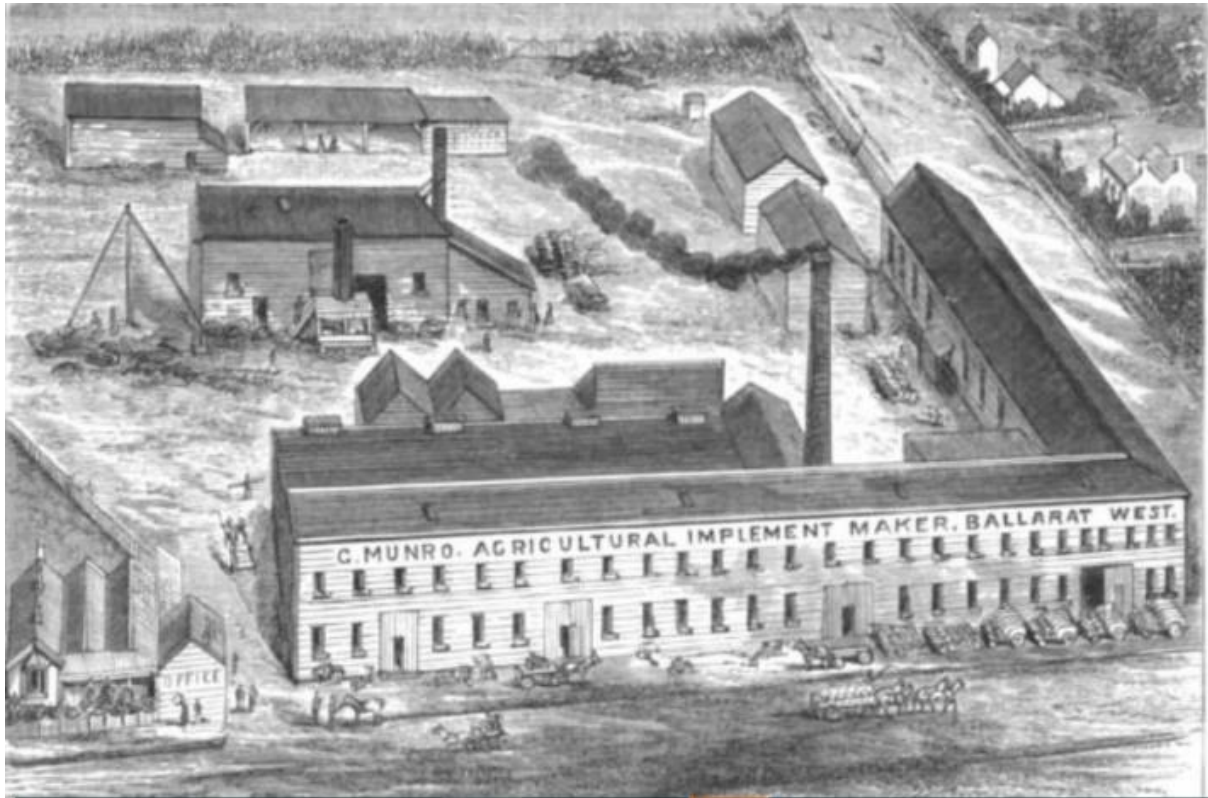


Figure 3.154 George Munro, Agricultural Implement Maker, West Ballarat. (Source: Sutherland, *Victoria and Its Metropolis*, 1888, vol. II, p. 190)

³⁷⁰ Ballarat Progress Association, *Guide to Ballarat the Beautiful*, Ballarat, [1907], p. viii; Museums Victoria Collections, Item TL 15186; Bate 1978, p. 217.



Figure 3.155 H.V. McKay’s Sunshine Harvester works, Ballarat, from a trade booklet, c1903-04. (Source: Museums Victoria Collections, Item TL 15186)



Figure 3.156 The Sunshine Harvester manufactured in Ballarat by H.V. McKay, image taken from a trade booklet, c.1903-04. (Source: Museums Victoria Collections, Item TL 15186)

3.9.5 Processing minerals

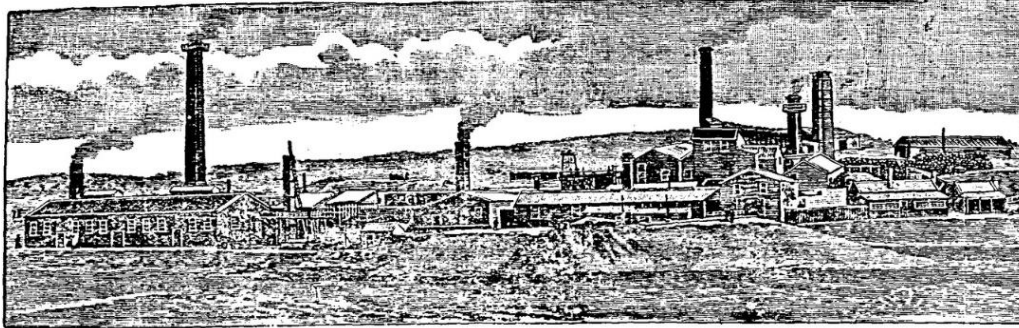
Quartz-crushing

There was a large supply of quartz at Ballarat present in auriferous quartz reefs and this was often extracted in gold-mining methods.

The Edwards Pyrite and Ore Reduction Co. was established at Frenchmans Hill, near Sebastopol, in 1893 (FIGURE 3.192).³⁷¹

³⁷¹ *Guide to Ballarat the Beautiful*, [1907].

The Edwards Pyrites & Ore Reduction Co.



Is situated near Sebastopol, at Ballarat, and was erected in 1890. It is well situated for this industry, being on the slope of the Frenchman's Hill, so that the ore gravitates from the drays to the bins, from here to the furnaces, thence to the cooling floor, and from there to the vats, whilst there is a good fall for the tailings dump. The furnace house is equipped with furnaces of the Edwards Tilting type, the gases from which pass into very long and wide zig-zag brick flues where the arsenic and other mineral fumes are condensed, leaving but the merest trace of these fumes to escape. The condensed matter is refined for arsenic (this being an unprofitable necessity), as there is no other way of getting rid of this nuisance, and the quantity is too small to be profitable. The Edwards Patent Chlorination Process is installed for extracting the gold from the roasted ore. The ore supplies are obtained from the Ballarat district and adjacent mining centres. A traveller is always on the alert to sample ores with a view to purchase.

Figure 3.157 The Edwards Pyrites & Ore Reduction Co., situated on the Frenchman's Hill.

3.9.6 Food processing

Meat

A slaughterhouse was a regulated municipal facility under the *Health Act* in colonial Victoria and local councils were responsible for the management and regulation of slaughterhouses and abattoirs because of the significant public health implications of these operations. Early slaughterhouses were established at Buninyong and Learmonth. The Ballarat Abattoirs were established to the west of Ballarat, within close proximity to the cattle yards.³⁷²

The Ballarat Meat Preserving Works operated briefly in the 1870s but failed to prosper.³⁷³ Bacon-curing had become a major industry in Ballarat by the 1880s, supplied by the large number of pig farmers in the volcanic soil around Warrenheip and Bungaree. Farmer's bacon-curing establishment at East Ballarat began around the 1870s and moved to a substantial new brick building on Eureka Street in 1886 that could process

³⁷² Map of Ballarat, 1938.

³⁷³ Farrer, 2005, p. 44.

400 pigs per day (FIGURE 3.193).³⁷⁴ Bacon-curing remained an important industry and large employer in Ballarat in the mid-twentieth century.³⁷⁵



Figure 3.158 George Farmer's Bacon-Curing Factory in Eureka Street was one of the largest factories in Ballarat, c.1886-1900s. (Source: Ballarat Mechanics Institute)

Flour mills

Wheat, oats and barley were staple supplies in the early mining settlements. The goldrush created enormous demand for wheaten flour and oats were essential for horses. By the early 1850s, a number of flour mills were in operation across the municipality, which processed the grain supplied by local farmers.³⁷⁶ These were largely steam operated, which required on a nearby water supply. On the east bank of Lake Wendouree, there were two flour mills in operation in 1861.³⁷⁷ Flour mills also operated at Miners' Rest, Warrenheip and Buninyong.³⁷⁸

In the north of the municipality where a large area of land was under crop, there were flour mills at Ascot, Addington, Learmonth, Mount Bolton and Waubra operating in the 1860s.³⁷⁹ The largest flour mill in the area was the Ascot steam flour mill (since

³⁷⁴ *Australasian*, 15 May 1886, p. 11.

³⁷⁵ McIntyre and McIntyre, 1942; White, 1968.

³⁷⁶ See Lewis and Peggy Jones, *The Mills of Victoria 1840–1990: An historical record*, The Flour Millers Council of Victoria, Melbourne, 1990, pp. 231–233.

³⁷⁷ Brache, 1861.

³⁷⁸ See images by Sievers, held at the NLA.

³⁷⁹ Jones 1990; Whitworth, *Bailliere's Victorian Gazetteer*, 1865, p. 220; Information from Learmonth community consultation, 19 April 2023.

demolished), built by the enterprising James Fry c.1858. Built of bluestone, this rose to five storeys and was surmounted by a clock tower. A photograph of the complex appears to show bluestone workers' accommodation provided at the site (FIGURE 3.194). There was a fall in wheat production in 1864, owing to rust, and this led to a decline in the output of local flour mills.

By the early twentieth century, steam-operated flour mills had declined as a local industry. The sole flour mill operating in Ballarat in the 1920s was the Garden City Flour Mills, built by German-born Otto Müller.³⁸⁰



Figure 3.159 The remarkable five-storey Ascot flour mill, photographed by A.V. Smith, c.1866; long demolished. (Source: State Library Victoria, Accession No. H1765)

Distilleries and breweries

The large working population supported a large number of hotels and this in turn meant that there was a high demand for beer and spirits. The development of breweries and distilleries increased dramatically with the large influx of people to the Ballarat goldfields in the 1850s. The production of bottled beverages, both alcoholic and non-alcoholic, was critical in the period before a reliable water supply was available in Ballarat. The

³⁸⁰ *German Pioneer Families in Australia*, 1935, pp. 76–77.

operations of breweries and distilleries nevertheless relied heavily on a water supply and were frequently located with this in mind. These complexes also included a chimney, which was necessary for the distilling process.

Early breweries were often large imposing complexes that dominated their surroundings. Thomas Shepherd established the Buninyong Brewery in the 1850s, which was later converted to a cordial factory (FIGURE 3.195).³⁸¹ Robert Dunn, after whom Dunnstown was named, established a distillery at Warrenheip in the early 1860s (FIGURE 3.196). Dunn was noted as the first in the wider Ballarat area to use a cast-iron mash tub for the purpose, which was used at the Victoria Sugar Works at Sandridge.³⁸² He was also the first to take advantage of the provisions of the recently passed *Distillation Act*. Other notable manufacturers were Ballarat Bitter Eureka Aerated Waters and Brewing Company in Lydiard Street (FIGURE 3.199).



Figure 3.160 Buninyong Brewery, n.d. (Source: Ballarat Mechanics Institute, ref. HR 037)

³⁸¹ Coleman Sutherland, 'Buninyong Conservation Study', 1983, p. 11.

³⁸² VGG, 1865; *Ballarat Star*, 29 August 1862, p 3.

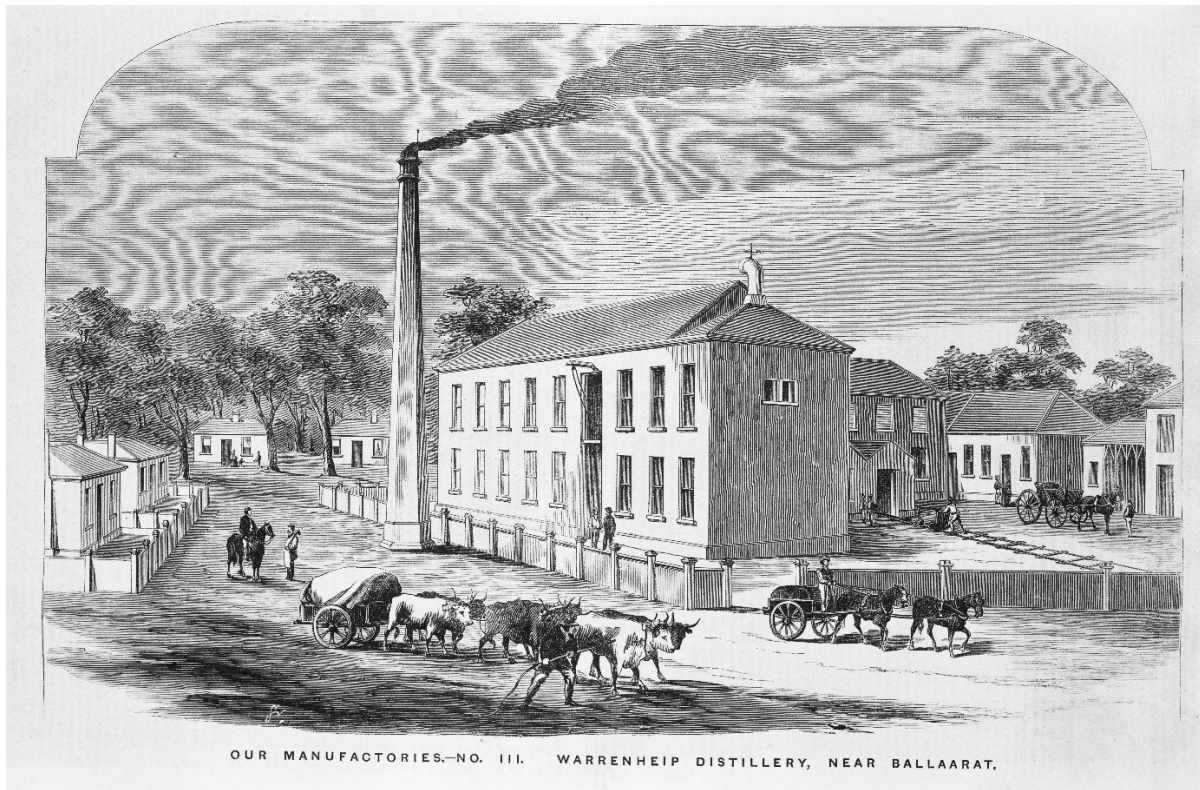


Figure 3.161 Samuel Calvert, wood engraving of the impressive Warrenheip Distillery, published in the *Illustrated Melbourne Post*, 1863. (Source: State Library Victoria, Accession No. IMP20/10/63/5)

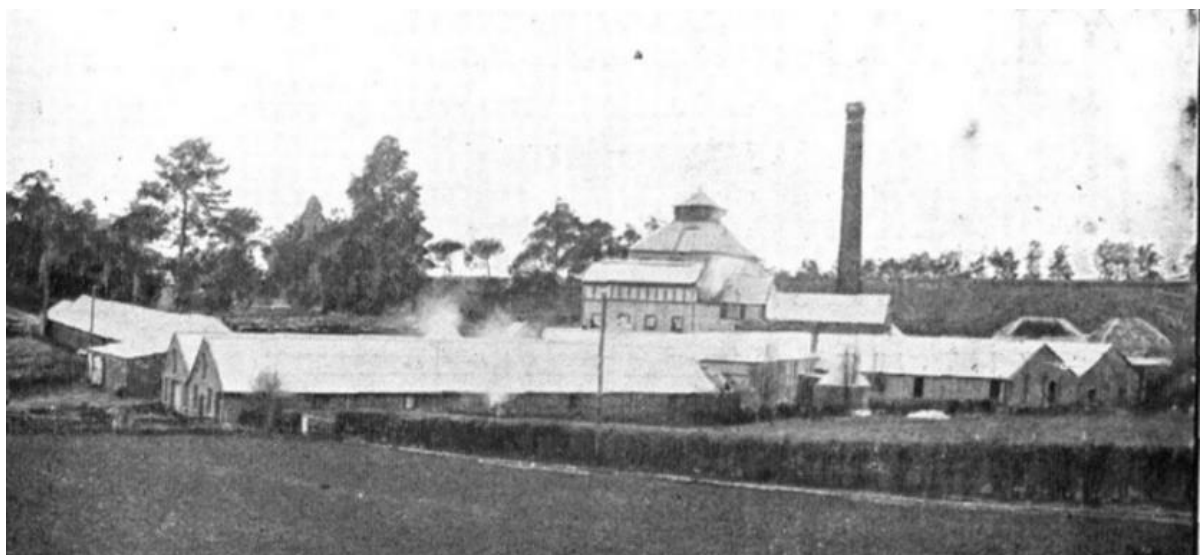


Figure 3.162 Phoenix Brewery, Warrenheip, c.1910s. (Source: State Library Victoria)

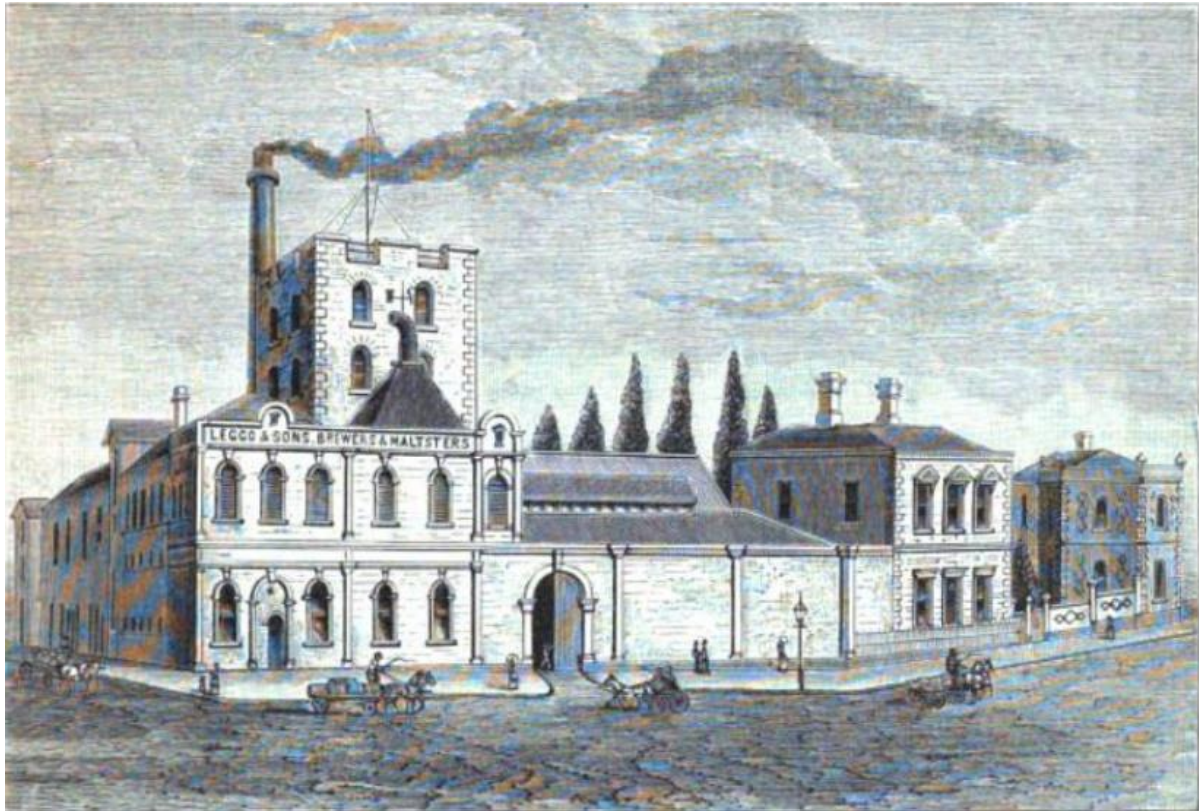


Figure 3.163 Henry Leggo's Barley Sheaf Brewery, Creswick Road, Ballarat. (Source: Sutherland 1888, vol. II, p. 181)



Figure 3.164 Eureka Brewing Company, Lydiard Street, Ballarat. (Source: *Guide to Ballarat the Beautiful*, [1907])

Soda water, soft drink and cordial factories

Cordial, soft drink and cider factories were common in Ballarat and surrounding towns from the 1850s. Evan Rowland's establishment in Doveton Street, Ballarat, which manufactured soda water, soft drink and cordials, was considered in the 1880s as 'one of the most complete of its kind in Australia'.³⁸³ Rowland was the most successful of the early soft drink manufacturers in Victoria; his operation was purchased by Schweppes after the Second World War.³⁸⁴

'The Fry's Flourmill and the Rowlands and Lewis soda factory were established on the shores of the lake in the 1850s'.³⁸⁵

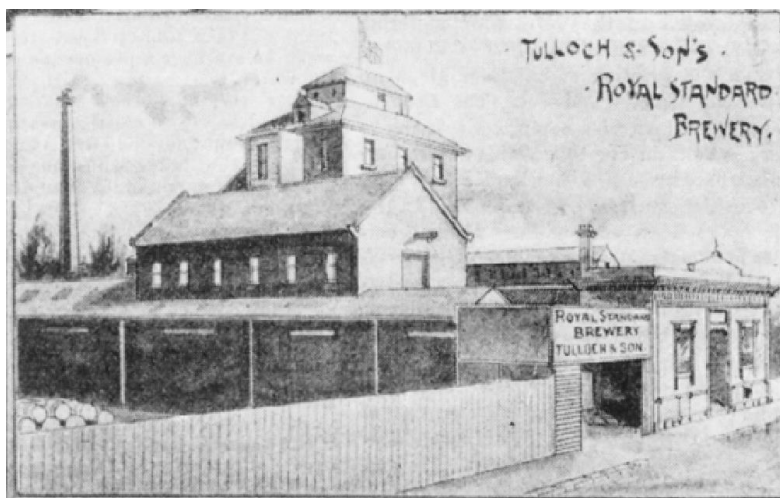


Figure 3.165 Tulloch & Sons Royal Standard Brewery, Ballarat, from 'Views of Ballarat West', published in the *Illustrated Australian News*, 1 August 1893. (Source: State Library Victoria, Accession No. IAN01/08/93/13)

Other food manufacturers

Biscuit factories

The factory of C.P. Long and Co. was established in Ballarat in 1858. This later developed to become the Sunshine Biscuit Factory.³⁸⁶

³⁸³ Pickersgill, 1885, p. 159.

³⁸⁴ Keith Farrer, *To Feed a Nation: A history of Australian food science and technology*, CSIRO Publishing, Collingwood, 2005, p. 94.

³⁸⁵ Jacobs and Rowe, 'Ballarat Heritage Precincts', 2006.

³⁸⁶ *Walkabout*, 1 April 1944, p. 26.

Confectionery works

J. Long and Sons Confectionery works, East Ballarat, was established by the early 1890s.³⁸⁷

Mars Confectionary established a plant at Wendouree (Ring Road) in 1979.³⁸⁸

Frozen vegetables

The McCain family food processing company was established in Canada in 1957. The family relocated to Victoria and initially set up a business in Daylesford before building a factory on the Ring Road in Ballarat North in 1974.³⁸⁹

3.9.7 Tanneries

The Ballarat Tannery was established in 1856.³⁹⁰ By 1879, there were two tanneries in Ballarat West and two operating in Ballarat East.³⁹¹ Tanneries were essential in the production of leathergoods, including belts, hides, saddles and bridles, which were vital items in the era before the motor car. Wattle bark was a key element in the tanning process and meeting this demand necessitated the extensive destruction of wattle trees.

Many postwar European migrants brought with them experience in tanning pricing. Hungarian migrant Alex Suvoltos established a new tannery at Mount Pleasant in 1956.³⁹² Tanneries and leathergoods manufacturers continued to operate in Ballarat into the late twentieth century.

³⁸⁷ See image at State Library Victoria, Accession No. IAN01/08/93/17.

³⁸⁸ *Age*, 21 August 1979, p. 28.

³⁸⁹ McCain Foods website.

³⁹⁰ Bate, 1978.

³⁹¹ J.H. Archer, *Statistical Register of the Colony of Victoria*, Part 1, 1879, p. 43.

³⁹² 'Discover Historic Mount Pleasant Trail', 2019, p. 9.



Figure 3.166 Paddle Brothers tanning leather products, Ballarat, c.1950s. (Source: National Archives of Australia)

3.9.8 Textiles, clothing and footwear

Victoria’s pastoral districts were experiencing a wool boom in the 1870s. Being situated in a pastoral area meant that fleece was in abundance in Ballarat. The processing of shorn fleece into blankets, tweed and other products at woollen mills developed as a successful industry in Ballarat from the 1870s.

Important early woollen mills included the Ballarat Woollen Mills in Ballarat North, established in 1871, the Sunnyside Woollen Mill in Mount Pleasant, designed by Henry Caselli and commenced in 1872; and the five-storey bluestone Doveton Woollen Mills, established in the late 1870s. The latter was purchased by Sidney Myer of the Myer Emporium in 1918 and subsequently became the Myer Woollen Mills.

Textile and clothing factories were also established in Ballarat. The manufacturing company Lucas Pty Ltd commenced operations in Ballarat in the late nineteenth century. During the Prince of Wales’ visit to Ballarat in 1920 Lucas staff presented him with a custom-made pair of pyjamas.³⁹³ The Ballarat suburb of Lucas was named after the Lucas factory.

Manufacturing works were an important part of women’s work in the late nineteenth and early twentieth century. The Sunnyside Woollen Mills, for example, employed a large team of female machinists (FIGURE 3.201). The Lucas factory employed a predominantly

³⁹³ *Weekly Times*, 12 June 1920, p. 48.

female workforce and also employed a female senior manager, Matilda (Tilly) Thompson.³⁹⁴

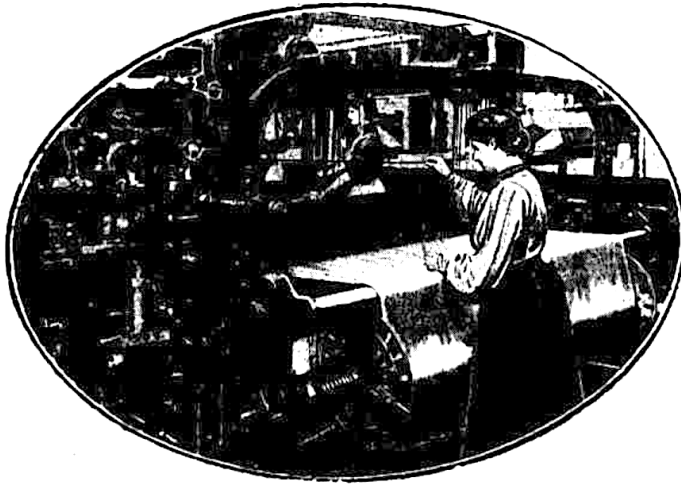


Figure 3.167 Woman machinist at the Ballarat Woollen Company's Mills, Sunnyside. (Source: *Argus*, 25 April 1908)

The clothing manufacturing company Rivers was established in Sebastopol in 1979 as a joint concern of the Paddle Brothers and Diana Ferrari. Rivers began as a wholesale company that sold to Myer and David Jones and opened its first stand-alone store in 1983.³⁹⁵

Textile factories and woollen mills have contributed to the degradation of the Yarrowee River with many mills in the Ballarat area discarding their waste into the river.³⁹⁶

³⁹⁴ Peter Mansfield, 'Thompson, Matilda Louise (1871–1959)', *Australian Dictionary of Biography*, vol. 12, Melbourne University Press, Carlton, 1990.

³⁹⁵ Rivers, <https://www.rivers.com.au/rivers-about-us>

³⁹⁶ Garner, 2021.



Figure 3.168 Former Sunnyside Woollen Mill, Mount Pleasant, 2011. (Source: Ballarat Heritage Services Picture Collection, photographer L.J. Gervasoni)



Figure 3.169 Fred Kruger photograph, Woollen Mill, Ballarat, c.1880s. (Source: National Gallery of Victoria, Accession No. PH291-1979)



Figure 3.170 Oliver and Stevens boot factory, Armstrong Street (South), Ballarat, c1890–1910. (Source: Ballarat City Libraries via VC, ref. CB_Photo_3167)

3.9.9 Building materials

Timber mills and sawmills

With the rapid development of townships and mining enterprises, there was a significant demand for timber for building. Timber mills were established in and around Ballarat by the mid-1850s, close to forested areas such as Mount Warrenheip.³⁹⁷

The early mills were generally steam operated and relied on a large amount of timber as fuel.

The production of building materials in Ballarat continued in the latter twentieth century. A plywood factory was operating in Ballarat in 1985.³⁹⁸

Bricks and tiles

Brickworks that provided for the needs of local building activity were established in a number of localities where suitable clay was available, including Mount Pleasant.³⁹⁹ As well as residential and commercial building, bricks were used extensively for industrial complexes, including chimneys for steam-powered operations.

³⁹⁷ Warrenheip map 1858 (SLV).

³⁹⁸ LCC, *Melbourne Area Report*, 1985.

³⁹⁹ 'Discover Historic Mount Pleasant Trail', 2019, p. 21.

Brickworks included Yarrowee Bricks; Brickworks at Eureka Stockade,⁴⁰⁰ and Selkirks Brickworks, North Ballarat. Brickworks also operated on or near the site of the former Black Hill Quartz Mining Company crushing battery.⁴⁰¹

The Ballarat East Brickworks at Black Hill (also known as Hoffmans) was an extensive operation that was in business until around the 1930s. The Eureka Tile Company operated at Eureka from the 1870s. Around 1914, a railway branch line was constructed from the Eureka Siding to the Eureka Tile Works.⁴⁰²

3.9.10 Inventions and innovation

The excitement of gold and the wealth it generated created a mood of possibility and opportunism of Ballarat. This, combined with local skills and talent, led to the realisation of improved industrial processes and new innovations. Small-scale experimental attempts at generating hydro-electric power, for example, were made at Ercildoune homestead in the c.1870s by Samuel Wilson, who became one of the pioneers of this process.⁴⁰³

Various patents for machinery were taken out by industrial innovators at Ballarat through the latter part of the nineteenth century, including for steam boilers.⁴⁰⁴

Henry Sutton of the Music Academy in Sturt Street was also a notable local inventor in the second half of the nineteenth century. In 1878, he provided a telephone connection for the Ballarat East Fire Station.

3.9.11 Decentralisation and postwar industrial development

Manufacturing in Ballarat was buoyed during the Second World War, when some Ballarat manufacturing companies took on government wartime contracts. Factories on the outskirts of the city were designated as wartime operations. In Sebastopol there were ambitious plans for former guncotton factory site.⁴⁰⁵ At Alfredton, meat-processing operations commenced in 1943 at the Victorian Inland Meat Authority and the Egg and Egg Pulp Marketing Board was also established the same year.⁴⁰⁶

⁴⁰⁰ Imperial map Ballarat, 1933.

⁴⁰¹ Jacobs and Rowe, 2006, p. 126.

⁴⁰² GML 2024, 'Eureka Stockade Gardens Conservation Management Plan', draft, May 2024.

⁴⁰³ Doyle, 'Ercildoune' in Aitken and Looker, 2002, p. 203.

⁴⁰⁴ VGG, various.

⁴⁰⁵ 'Ballarat: Australian city with a past ...', *Pix*, Vol. 27 No. 18, 17 May 1952.

⁴⁰⁶ Victorian Places, 'Alfredton'.

Ballarat continued to perform as one of Australia’s leading industrial cities in the postwar period. In 1947, there were 290 factories in Ballarat, which employed 3600 men and 1837 women.⁴⁰⁷ The workforce was strengthened through the arrival of many postwar European migrants, who worked in a range of manufacturing jobs. The Phoenix Foundry continued to provide an important source of employment in Ballarat, employing a workforce of 450 people in 1956 and 1250 men in 1968.⁴⁰⁸

A number of new factories were established in Ballarat in the 1950s, 1960s and 1970s. This ongoing industrial development both relied on and strengthened the strong tradition of industry and technical education at Ballarat. The Timkin factory, producer of steel ball bearings, was established in the 1960s in Wendouree.⁴⁰⁹ Manufacturing remained steady through the 1960s and 1970s. In 1968, Ballarat was proposed for ‘accelerated development’ under the Victorian Government’s decentralisation Program. In 1972, this was further boosted through government policy and support directed at Ballarat’s economic development.⁴¹⁰

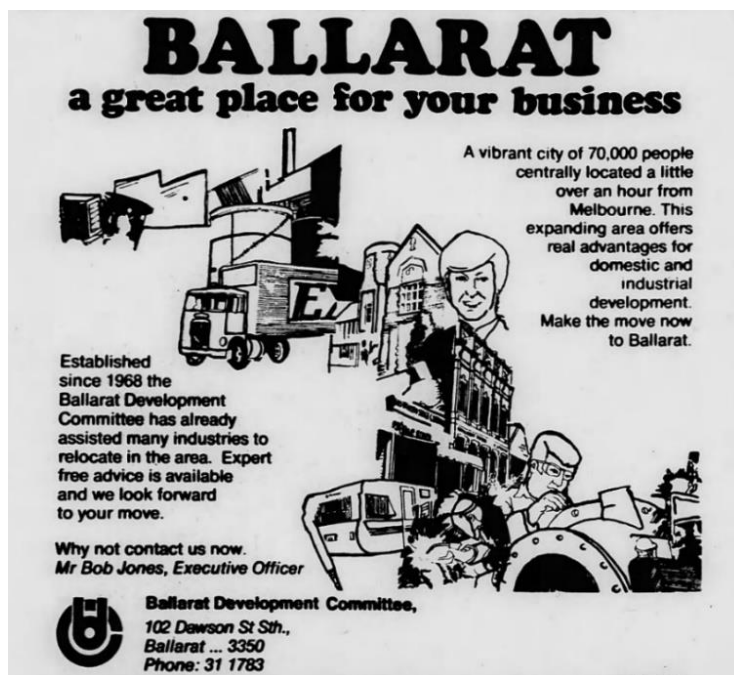


Figure 3.171 Ad for the Ballarat Development Committee, 1979. (Source: *Age*, 21 August 1979)

⁴⁰⁷ *Building and Engineering*, 24 November 1947, p. 43.

⁴⁰⁸ White 1968, p. 147.

⁴⁰⁹ *The Shire of Ballarat: First in the State*, 1988. SLV holds photos of the factory, which were taken by Mark Strizic.

⁴¹⁰ *Age*, 28 August 1979, p. 28.