

Stockyard Creek, engraving,
J MacFarlane.
*La Trobe Picture Collection,
State Library of Victoria.*

Gold discoveries in the early 1870s stimulated the development of Foster, initially known as Stockyard Creek. Before the railway reached Foster in 1892, water transport was the most reliable method of moving goods into and out of the region.



4. Moving goods and cargo

Australian Historic Theme: 3.8. Moving Goods and People

In the second half of the nineteenth century a great deal of money and government effort was spent developing port and harbour infrastructure. To a large extent, this development was linked to efforts to stimulate the economic development of the colony by assisting the growth of agriculture and settlement on the land. Port and harbour development was also linked to the development of local industry, a movement which became even more important in the twentieth century when two world wars and a depression emphasised the need for Australia to become self-sufficient. The most massive maritime infrastructure work in the nineteenth century was carried out at the Port of Melbourne, which the gold era had confirmed as the gateway to Victoria. A considerable amount of effort was put into further developing the 'outer ports' along Victoria's west coast, as well as to developing a reliable network of infrastructure on the Gippsland lakes and waterways. But there were also many more modest infrastructure works, such as jetties, piers and sheds, installed at smaller coastal settlements around Victoria to help local and regional producers move their goods to market.

From the late 1850s until the mid-twentieth century, Victorian Government policy aimed to settle small-scale farmers on the land. In the nineteenth century this policy was carried out through a series of government legislation, commonly known as the Selection Acts. In the first decades of the twentieth century, the 'closer settlement' and soldier settlement schemes continued this process. One of several factors that determined the success or failure of selectors and closer settlers was the ease and cost of transporting their produce to market. Providing access to such transportation was a major incentive for government-installed maritime infrastructure. By the early twentieth century, the government was also actively trying to encourage decentralisation, establishing facilities whenever it could, away from Melbourne. The push for decentralisation was one reason for the establishment of the Geelong Harbor Trust in 1905.

Providing transport networks for settlers on the land

Access to transport for their produce is essential to primary producers. But the rapid population development of Victoria in the nineteenth century, particularly during the 1850s meant that infrastructure such as good all-weather roads, bridges and railway lines were often inadequate. Even as major roads were constructed, they were often financed by tolls, adding financial burden to farmers attempting to convey their produce to market. It is little wonder that during the 1850s, for instance, when a rapidly growing population provided a market for grain, fruit and vegetables, most of these products were grown near the major centres of population, such as near the major goldfields or close to Melbourne and Geelong. Farmers with access to water transport had an edge over those without it. In 1859, for instance, a Melton farmer complained that it cost him more to transport his grain 25 miles to Melbourne than it would cost to convey it by ship from Liverpool.¹⁰⁹ But in the same year farmers on the Bellarine Peninsula were able to convey their goods to the jetty at Portarlington (constructed in 1859) for quick access to Melbourne.¹¹⁰

Early facilities for despatching goods by water were primitive. Many, such as jetties and wharves, were built by private companies, as at Wye River and Apollo Bay, where timber companies built the earliest jetties. But as selection and closer settlement opened up more of the colony after the gold rushes, the Public Works Department contracted for the construction of jetties at a number of coastal and river locations. Along with the jetties there were often tramways on which produce could be conveyed by cart or railway truck onto the jetty, goods sheds where goods could be stored and sheltered as they awaited transportation, and cranes to lift heavy goods onto and off vessels.

Amongst the jetties and facilities built by the government for handling cargo at the 'smaller' harbours in the years between the 1860s and 1890s were: a jetty and crane at Hastings, in 1864, a jetty and crane at Dromana in 1862 and 1864, a jetty at Drysdale in 1871, a jetty at Rye in 1866, a jetty, goods shed and crane at Apollo Bay between 1882 and 1884, a jetty and tramway at Andersons Inlet in 1884, with a crane added in 1889, a jetty at Grantville in 1884, with a goods shed added in 1889, and wharves and sheds at East Gippsland river locations in 1886 and 1887.¹¹¹



Remains of wharves on Stockyard Creek, near Foster in South Gippsland, 2006 (H8120-0022).
Heritage Victoria.

Transport links not only assisted the settlement of farmers on the land, they encouraged the growth of export industries for Victoria. As selectors moved across Victoria in the second half of the nineteenth century, they developed industries in grain, wool, meat and fruit. The growth of such industries sometimes necessitated the installation of specific infrastructure, such as bulk grain handling facilities in the twentieth century. But the successful export of these products also relied on developing technology, which, in turn, influenced port infrastructure. Meat preserving and canning, for example, allowed Victorian-grown cattle to be slaughtered and exported overseas in the mid to late nineteenth century. Experimentation with refrigeration in the late nineteenth century, enabled meat to be frozen, usually at a point near a port, and then shipped overseas.

Developments in shipping also assisted the growth of Victoria's rural industries. Iron-hulled sailing ships, and then steamships, gradually replaced wooden sailing vessels in the second half of the nineteenth century. They were better equipped to carry bulky cargoes, such as wheat, from Victoria to European markets.¹¹² The increasing use of steam, rather than sail, meant that perishable goods, such as dairy produce, could be more rapidly transported to other Australian localities. The changing size and construction of ships in turn influenced the infrastructure at Victoria's ports. Jetties had to be lengthened, channels and canals had to be constantly deepened and widened and more berths provided to keep up with developments in shipping and increasing volumes of export material.

In the late nineteenth century, major engineering works were carried out at a number of Victorian ports in order to improve their accessibility and safety for larger vessels. Some Victorian ports, despite successive infrastructure developments, could not keep up and became redundant for international or even interstate trading vessels. Major ports, such as Melbourne and Geelong, have undergone successive improvements in order to keep up with developments in shipping size and methods of handling cargo.

Inefficient harbour works and the evolving size and nature of vessels (particularly those used for international transport) were partly to blame for the declining roles that 'outer ports' played in moving cargo in the latter nineteenth and early twentieth centuries. But another factor was the increasing availability of other forms of transport. The Victorian country rail network, developed between the 1870s and 1920s, gradually connected inland agricultural areas, as far away

as the Riverina in New South Wales to the major ports of Melbourne or Geelong, directing commodities away from regional ports. Areas less well serviced by railways, such as Gippsland, continued to depend on water transport far longer than those in the west and central Victoria. For some farming communities in South Gippsland, for instance, it was not until good all-weather roads were constructed in the twentieth century, that transportation problems were solved.

Railways provided relief for many primary producers, by conveying their produce relatively efficiently to central markets or ports. In some districts, such as East Gippsland, the railway connected with a local inland water transport system, steadily replacing the need to ship produce along the coast to major ports. But there were some parts of the state which were not easy to access by rail. Selectors moved into the hilly, timbered South Gippsland region between the 1870s and 1890s. With only distant rail connections and roads that were impassable in winter, they relied on goods being shipped to Lang Lang (then called Tobin Yallock) then hauled by dray over pack tracks.¹¹³ Dairying became the main local industry and butter was despatched to Melbourne via Lang Lang, Griffiths Point (San Remo) or Anderson's Inlet, though settlers in the north or east of the region were able to eventually connect with the Gippsland railway.¹¹⁴ The last region of South Gippsland to be settled by hopeful farmers was the remote eastern Strezlecki area, between Corner Inlet and the towns of Morwell and Traralgon, in the first decade of the twentieth century. The sheer difficulty of clearing blocks and attempting to reach market towns on impassable roads, meant that many settlers eventually abandoned their land.¹¹⁵ In the 1920s, the Victorian Government determined to resettle this abandoned territory with soldier settlers or British immigrants. The 1920s Royal Commission on Outer Ports recommended that the success of such resettlement would depend, among other things, on the settlers' ability to transport products, such as root crops, to interstate markets. Thus, along with a network of roads, the Commissioners recommended that the port be developed at Port Welshpool, by first reconditioning and improving the existing pier (first built 1850s) which was connected by trolley to the Welshpool Railway Station. A new railway pier was also proposed, though prudently the Royal Commissioners suggested that this should not be constructed until there had been some signs of successful resettlement of the hill country.¹¹⁶ A new jetty at Welshpool was not added until 1937. The same Royal Commissioners recommended the



Wheat Traffic Railway Pier,
Williamstown, nd.
Public Record Office Victoria,
VPRS 12800P1, H2163.

Railway Pier, constructed in
the 1850s, was later renamed
Gellibrand Pier.

improvement of Warrnambool and Portland Harbours, as well as the re-establishment of Lakes Entrance, to assist farmers in other areas, such as the Mallee, which were then being 'closely settled'. But major works were not achieved at Portland until after World War II, making that port safer and more convenient for the loading and unloading of products from the west of the state.

Exporting primary produce

Wool

When the *Thistle* left Portland Bay for Van Diemen's Land on 12 March 1836 it carried Victoria's first export cargo of wool.¹¹⁷ Wool soon became Victoria's major overseas export, despatched from Williamstown and Port Melbourne piers and from Geelong. Railway piers built at Williamstown, Port Melbourne and Geelong in the 1850s formed the nucleus of a transport system that, as it expanded in the following decades, allowed wool to be transported from country Victoria directly to the major ports. When the Bendigo to Echuca Railway line was completed in 1864, for instance, Murray River steamers were able to convey bales of wool down the river to the wharf at Echuca, from where trains could carry them to Williamstown or Port Melbourne. Similarly, when the Geelong to Colac railway line was completed in 1877, wool could be transported directly to the wharf at Geelong. Despite the fact that Portland was connected by rail to Hamilton, the centre of the rich wool-producing Western District, in the 1870s, Victorian Railways' freight charges favoured the transportation of primary produce directly to Melbourne or Geelong.¹¹⁸ It was from these ports that wool was primarily exported in the nineteenth and early twentieth centuries.

Ballast

Prior to the development of an export industry in bulk cargoes, many cargo ships that entered the Port of Melbourne had to carry ballast on their outward journey. One of the most conveniently-located forms of ballast was basalt or bluestone, which was the basis of the plain to the west of the Maribyrnong River. Basalt was quarried on many sites in Melbourne's western region, but early quarries were located at Point Gellibrand and near what is now Spotswood on the Stony Creek. From the

quarries at Stony Creek, basalt was conveyed on wooden tracks to jetties and then transported by lighter or 'ballast craft' to vessels in Hobsons Bay. Once the export of bulk cargoes such as wheat, grew in the 1880s, ballast was not needed so much and the ballast trade declined.¹¹⁹

Wheat

The 'unlocking of the land' in the second half of the nineteenth century created new export industries for Victoria. By the end of the nineteenth century more than two million acres of Victorian land was sown to wheat, much of which was exported to Britain.¹²⁰ As a heavy and bulky cargo, wheat had to be preferably loaded at deep water anchorages. Trains carried bagged grain to the Geelong and Williamstown railway piers in the nineteenth century. But there were problems with these sites. At Geelong, the railway pier was found to be 'extremely inconvenient', while at Point Gellibrand, which offered deeper water, there was 'congestion and consequent delay and loss to producers'.¹²¹ Nevertheless, Williamstown got most of the trade. The inadequacy of the grain handling facilities at both Williamstown and Geelong, together with a desire on the part of the Victorian Government to encourage decentralisation, were major incentives for the formation of the Geelong Harbor Trust in 1905. It was hoped that the Trust would develop facilities for handling bulk wheat on the north shore of Corio Bay. The North Shore offered far deeper water for anchorages than what was found at the 'old port' in Geelong. It seemed ridiculous that grain was being transported from western Victoria, past Geelong, and on to Williamstown. Once established, the Geelong Harbor Trust began to plan for a wheat loading wharf and facilities on the North Shore. To encourage the export of grain from this port, the Victorian Railways Commissioners after 1910 began offering concession rates to transport grain from country areas to any port that was closer to the producer than Williamstown.¹²²

Although new methods of handling grain in bulk had been used in New South Wales from about the beginning of the twentieth century, it was not until the mid-1920s that a Victorian Government-appointed board recommended that grain elevators be constructed at 132 Victorian country railway stations, with terminal elevators at Breakwater Pier in Williamstown and on the North Shore at Geelong. The board also recommended a terminal at Portland, subject to the construction of a breakwater to make vessels berthing at this port more stable.¹²³

The Yarraville Sugar Refinery on the Maribyrnong River, 1876. Engraving. *La Trobe Picture Collection, State Library of Victoria.*



But it was not until 1934 that the Victorian Government established the Grain Elevators Board to oversee the erection of these elevators. The Geelong terminal was intended to service the main wheat growing districts of the state, in the western area, while Williamstown would serve the north. Work on the Geelong elevator began first, in 1936. Along with sheds and storage house, a special pier was constructed. At the same time as the elevator at Geelong was completed, in 1938, work began on laying the foundations and basement of the Williamstown Grain terminal.¹²⁴ This was never completed, however, and Williamstown's role as an export site for wheat declined, as Geelong's grew.

Bagged wheat was despatched from Portland during the 1920s and early 1930s,¹²⁵ but Portland's long-awaited port

improvements did not occur until the 1950s. After this bulk grain handling facilities were developed and Portland and Geelong continue to share the grain export trade for Victoria.

Meat

Victoria's first meat exports were live cattle, shipped from Port Albert to Van Diemen's Land in the 1840s to supply convicts with fresh meat. By 1856, when numerous 'inhabitants of Gippsland' petitioned the government to provide land for public wharves and stockyards at Port Albert, an average of six or seven vessels were engaged in shipping cattle from here.¹²⁶ The end of transportation to Van Diemen's Land coincided with the rising demand for meat in gold rush Victoria, and Port Albert's cattle trade was then directed



Loading coal from the Powlett River coalfields at Inverloch, 1910. *Public Record Office Victoria, VPRS 12800 P1, H3329.*

more to Melbourne than Van Diemen's Land.¹²⁷ Developing techniques in meat preserving encouraged the growth of an export trade in meat from the 1860s. Meat preserving and canning companies were located on the lower Yarra River and the Maribyrnong River at Maribyrnong, Footscray, Yarraville and Newport and on the north shore of Corio Bay.

The successful development of refrigeration by about 1880 offered a means of exporting frozen meat. The Australian Frozen Meat Export Co. established a slaughtering and freezing plant at Newport in 1882. This later became the Newport Freezing Works and Sims Cooper.¹²⁸ At Geelong in 1896, the Western District and Wimmera Freezing Company began operating at the mouth of Cowie's Creek, on a site later occupied by International Harvesters. Portland also had a freezing works, the Portland and Western District of Victoria Freezing Co. Ltd, from 1896. Thomas Borthwick and Sons purchased this site in 1904.

Victoria's export of frozen meat increased by five times in the period between 1900 and World War I.¹²⁹ One of the first actions taken by the Geelong Harbor Trust after its establishment in 1905 was the construction of the 'Corio Freezing Works'. In 1909 at Corio Quay. A wharf and railway siding were installed along with the freezing works, though the wharf was also used for loading grain.¹³⁰ From 1913 the freezing works were leased by private companies, later becoming Port Geelong Cold Storage Pty.Ltd.¹³¹

Fruit

Refrigeration had application in the Victorian fruit growing industry too, because it enabled orchardists to store their fruit in 'cool stores' and market it over a longer period. Between 1905 and 1914 the Victorian Government attempted to assist fruitgrowers by constructing coolstores in fruit-growing regions, along with one at the Port of Melbourne, near Victoria Dock, in 1912.¹³² Canned fruit, transported by rail from fruit-growing regions, was also despatched overseas from the Port of Melbourne.

Imports and the growth of industry

In the early decades, Victoria was dependent on importing most manufactured goods. It was the expenses and effort involved in 'lightering' imports from ships in the bay to

Melbourne that prompted members of Melbourne's Chamber of Commerce to argue for the establishment of a Melbourne Harbor Trust and the construction of docks close to the city centre.¹³³ As Victoria began to develop its own industries, raw materials were often transported by water from interstate or overseas. Often infrastructure that was connected to early industry was privately developed. In the twentieth century the development or redevelopment of some major Victorian ports was specifically linked to the relocation of major industries and the growth of new ones. In the twentieth century, disruption to international sea transport during both World Wars was an impetus to the development of local industries. In the wake of World War II, Australian Government policy actively sought to encourage national economic stability and independence and the further development of secondary industry was part of this plan. Publicly provided infrastructure was sometimes turned over to industrial uses. Moreover, the improvement or development of port infrastructure, particularly after World War II, was often tied to encouraging the development of industry and therefore Victoria's and Australia's independence.

Transporting raw materials and finished products by water

In early Melbourne some industries, such as slaughtering, fellmongering, tanneries, etc situated themselves on the banks of both the Yarra and the Maribyrnong Rivers. This positioning had more to do with using the river water for washing or scouring purposes and as a drain for waste products, than as a transport route. Such noxious industries were pushed away from the Yarra in the 1870s, many of them relocating on the Maribyrnong at Footscray and Flemington.¹³⁴

But many of the early industries at Port Melbourne, Footscray, Yarraville or Williamstown and later at Geelong, Portland or Westernport, were located near the water so that raw materials could be easily shipped to them. Victoria's first sugar refinery, for instance, was established at Sandridge, near the Railway Pier in 1855. In the 1870s, another sugar refinery was built on the Maribyrnong at Yarraville. Sugar cane from northern New South Wales and Queensland was shipped to these sites for processing. When the Sandridge sugar mill was destroyed by fire in 1889, the company took over the Yarraville premises. Near the Colonial Sugar Refinery at Yarraville, a number of other industrial concerns clustered on the river. Each used their own river wharves until the Melbourne Harbor



Remains of the Maribyrnong Sand Company's loading chute, Maribyrnong River, Essendon (H7822-0512).
Heritage Victoria.

Sand was mined at this site on the Maribyrnong River for many years from the early twentieth century. It was loaded from the chute into barges for transportation.

Trust took control and established a continuous line of wharf at Yarraville between the late 1870s and 1900.¹³⁵ The Harbor Trust (later the Port of Melbourne Authority and now the Port of Melbourne Corporation) continued to provide maintenance and renewal of these wharves in the twentieth century.¹³⁶

World War I gave an impetus to the development of Victorian secondary industries and this development continued through the 1920s. The motor car industry was one that began to develop on a local scale in this decade, when chassis and engines were imported from the USA, but bodywork was assembled locally. Vehicles assembled in Victoria were 'exported' to other Australian states. The Ford Motor Company established its assembly plant at Geelong in 1925. A few years later, General Motors Holden established a plant at Fishermen's Bend, in Melbourne.

With the Australian mineral boom from the early 1960s came another wave of water-located industries using raw materials transported from other parts of Australia. At Westernport BHP established a steel rolling mill with associated jetty in the 1960s–1970s. In the 1980s an aluminium smelter was constructed at Portland.

Coal

A predominant cargo brought into Victorian ports in the nineteenth and for much of the twentieth century was coal. Black coal, heated in sealed containers or 'retorts', generated gas for lighting, heating and industrial purposes. Coal was also used to generate steam to power trains, steamships and factories. Until Victoria developed its own coal resources, it was dependent on importing coal from Newcastle in New South Wales. While coal was unloaded at general cargo wharves, there were also some facilities dedicated to unloading coal for gasworks, the railways and industry. The City of Melbourne Gas and Coke Company, formed in 1850, for instance, built its gasworks on the north of the Yarra River on the West Melbourne Swamp between 1854 and 1855. The first stage of construction involved the excavation of a dock from the river so that coal could be delivered directly to the gasworks.¹³⁷ In the 1870s, this dock was filled in and a wharf on the Yarra built to supply coal to the works.¹³⁸ In the next decade an overhead tramway linked the wharf with the gas company's retort houses. Cranes lifted buckets of coal from the holds of steamers, and deposited it into tram trucks which then delivered it to the retort houses. The South Melbourne

Gasworks, operated from the 1870s. In the 1880s a special berth for coal steamers was set aside at the nearby Sandridge Town Pier. It was planned that a special tramway from the pier would carry the coal to the gasworks.¹³⁹ By 1929 the Town Pier serviced the gasworks exclusively. The railways' dependence on coal was acknowledged in the early 1890s by the creation of a coal canal from the newly-constructed Coode Canal, north along the course of the Moonee Ponds Creek to the North Melbourne Railyards.¹⁴⁰

Victoria's search to develop its own coal resources also impacted on maritime infrastructure. Coal seams had been noted in South Gippsland in the 1840s and 1850s and in 1852 the Victorian Government offered a reward for 'workable black coal' found in Victoria.¹⁴¹ In the late 1850s coal was mined at Cape Patterson, but the operation here ceased in 1864. In the 1870s the coal seam at Kilcunda, which had been discovered in 1840, was being worked. The Public Works Department contracted for a jetty and truck at nearby Griffiths Point (San Remo) in 1871.¹⁴² A wooden tramway ran from the mine at Kilcunda, to the jetty.¹⁴³ In the late 1880s coal mining switched to Korumburra, Outtrim and Jumbunna, which were linked by rail to Melbourne. In 1909 the State Coalmine at Wonthaggi was opened. Although a branch railway was soon established to transport the coal to Melbourne, initially it was hauled to Inverloch and despatched to Melbourne by sea.¹⁴⁴

The need to transport coal by sea waned over the course of the twentieth century. In the 1920s brown coal, mined from open cuts in the La Trobe Valley, was used to generate electricity for industry and domestic uses. Between 1919 and 1962 Melbourne's trains were transformed from steam-operated to electricity-driven. Coal to generate electricity for this network was transported by rail to the Newport Power station. Finally the discovery of natural gas in Bass Strait in the 1960s spelt the end of the old coal-burning gas works. From the 1970s natural gas was now available for domestic and industrial uses.

Kerosene, oil and petrol

At the beginning of the twentieth century, kerosene and oils became increasingly important as domestic and industrial fuels. As motor transport became more widespread in the middle of the twentieth century, oil and petrol became essential. Initially products such as oil and kerosene were imported to Australia and, until there were facilities for refining oil, petrol also was imported in cans and distributed from

distribution centres located near the coast. From 1901 the Shell Company began importing these products at Williamstown and Geelong. At Williamstown the company used an old wool store (now demolished) as a distribution depot. At Geelong, it stored the oil near the Geelong railway yards.¹⁴⁵ By 1914 the company had moved to a bulk handling facility on the river at Newport, where the Melbourne Harbor Trust built a wharf and railway sidings.¹⁴⁶ At Newport tankers berthed at the wharf and bulk products were pumped to nearby storage tanks. Meanwhile, in 1928 the company established storage on Geelong Harbor Trust Land at North Shore, where the Oriental Timber Mills had been established in the early twentieth century.¹⁴⁷

In 1922 the Commonwealth Government, in partnership with the Anglo-Persian Oil Company, established Australia's first oil refinery on the Kororoit Creek at Altona. A pipeline linked the refinery to a wharf at Newport (this was replaced in 1971 by the Holden Oil Dock).¹⁴⁸ The company also established oil storage facilities on the newly-opened up Fishermens Bend in 1923. But, within a few years, this site had become an oil storage and distribution depot for naval vessels.¹⁴⁹

Commonwealth Oil Refineries were sold to BP Australia in 1952. By this time new refineries were begun at both Altona and Geelong. At Altona, Standard Vacuum Oil built a new and enlarged refinery but also set about reclaiming four and a half acres of land between the Breakwater and Gellibrand Piers at Williamstown and erecting huge storage tanks there. The company also substantially rebuilt Breakwater Pier for delivery of crude oil, which would be piped to the Altona refinery. At Geelong Shell established a refinery on the North Shore. Refinery Pier alongside, was built between 1954 and 1961.¹⁵⁰

By the 1960s oil was Australia's largest single import and, as oil tankers became ever larger, the need to provide deeper shipping lanes and anchorages turned attention to the development of port facilities at the hitherto-ignored Westernport. An added impetus to the development of facilities at Westernport was the discovery of the Bass Strait oil-fields off the Victorian coast in 1965. BP Australia built a refinery and oil terminal jetty at Crib Point in 1966. This refinery ceased production in 1985.

Timber

From the early years of settlement, timber for building purposes was imported into the colony from overseas and interstate, while timber-felling districts, such as the Otways in Victoria's south-west, also produced supplies for the Melbourne market. Timber for houses continued to be imported throughout the late nineteenth century and early twentieth century. Baltic pine was popular and it was not until the First World War era that Victorian hardwoods were widely used for home building. It took until the next decade for the local pine industry to produce enough timber for use as weatherboards.¹⁵¹ While timber was landed at Sandridge Beach and the piers, it was also lightered up the Yarra River to Melbourne. Requesting a site to erect timber sheds on the south side of the Yarra, near the falls, Mr John Steele observed in 1853 that 'the timber trade of the City of Melbourne is much inconvenienced by the present mode and manner of landing wood at the Queen's Wharf from the Hobson's Bay lighters....then dragged through the mud – to cross the public road – to be laid down on a partial swamp, and open at all times to pilfering.'¹⁵²

By 1885 the Melbourne Harbor Trust Commissioners had decided that land in or near the city was far too valuable to be used as timber yards. Furthermore, large stacks of timber posed a fire risk. The Trust asked the Victorian Government to reserve a site on the east side of the Yarra River opposite Yarraville and Spotswood. Here, in 1889, the Trust began building six jetties and a wharf specifically for the landing of timber.¹⁵³ One of the first actions of the Geelong Harbor Trust was to grant a lease to the Oriental Timber Company for a log pond at Corio Quay.¹⁵⁴

Fort (at) Queenscliff overlooking sea baths and jetty, circa 1880–1890. *La Trobe Picture Collection, State Library of Victoria.*



5. Defending our shores

Australian Historic Themes: 7.1. Governing Australia as a Province of the British Empire 7.7. Defending Australia

Coastal defences

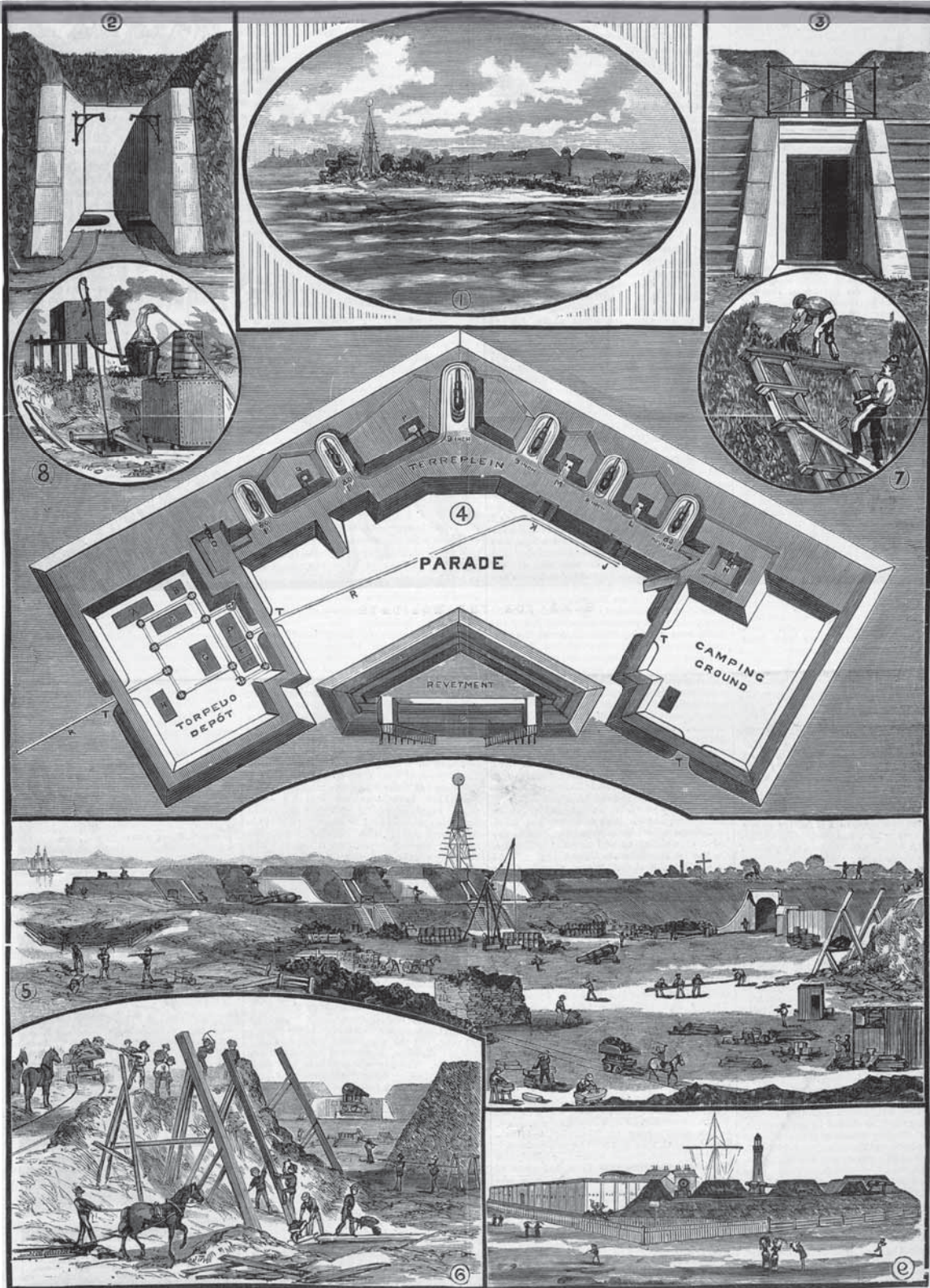
Several sites on Victoria's coast are linked with the defence of the colony of Victoria in the nineteenth century and of the Commonwealth of Australia in the twentieth century. In the nineteenth century defence installations were located on the coast because it seemed impossible that any hostile force would invade overland. The very earliest defence sites were those of the 1803 and 1826 settlements at Sullivans Cove and Settlement Point. These settlements were prompted by fears that Britain's imperialist rival, France, would annex this 'uninhabited' territory as a French colony. But once British settlement in the district had been sanctioned, defence installations were seen as necessary to protect the shipping trade. One of Governor Bourke's first orders was that a battery should be located at Point Gellibrand, a position that would enable it to guard the shipping in Hobsons Bay.¹⁵⁵

This battery was not constructed until 1855, when a 'semi-circular redoubt' was built directly in front of the lighthouse at Point Gellibrand. At the same time a similar battery was erected at Emerald Hill (South Melbourne) on the beach at the end of what is now Kerferd Road.¹⁵⁶ By this time, the need for defending the colony appeared in a different light. In the first place, Britain, along with Turkey and France, was at war with Russia in the Crimea and the British Secretary of State had advised the Australian colonies to put their harbours in a state of defence. In the second place, the gold rushes had made Melbourne a very valuable British port. There were fears that a foreign warship or mercantile vessel could easily enter Hobsons Bay, destroy or impound all the shipping and

lay siege to Melbourne, thus disrupting the important trade between the colony and Great Britain.¹⁵⁷

Worried that the coastal defences were inadequate, a Select Committee of the Victorian Government sought expert opinion in 1858 as to how to strengthen them. It was suggested that forts or batteries should be established at three points at the Port Phillip Heads: Point Nepean, Point Lonsdale and Shortlands Bluff (Queenscliff). But the cost of permanently staffing batteries so distant from Melbourne, along with the fact that the firing range of contemporary guns might not be sufficient to reach a vessel passing through the channels through the heads, prompted the Select Committee to postpone this plan. Instead it concentrated on strengthening defences at Hobsons Bay as suggested by Captain Peter Scratchley, an officer of the British Royal Engineers. In 1860 the existing batteries at Point Gellibrand and Emerald Hill were upgraded with bluestone,¹⁵⁸ and extra batteries were erected near these points. At Point Gellibrand, these were placed where the existing Fort Gellibrand still stands, in front of the Williamstown cricket ground and on the end of the newly-built Breakwater Pier.¹⁵⁹ On the 'beach' side, extra batteries were located near the Sandridge Lagoon and at west St Kilda. The Emerald Hill battery (Kerferd Road) and the Fort Gellibrand Battery had 'barracks' or quarters added to them in the 1860s, where some members of the Royal Artillery (British forces) were stationed. Scratchley's plan had included another at Point Ormond, but it is not known if this was ever constructed. The proposed defences at the Heads were not completely abandoned. At Shortlands Bluff a sea-wall was erected at the site of the proposed fort in 1860 and a battery was added in 1863-64. The next year Point Lonsdale was designated a battery reserve.¹⁶⁰

Imperial forces were withdrawn from the colony in 1870, leaving the Victorian Government with full responsibility for the colony's defence. By the mid 1870s far more powerful guns were being developed in Great Britain, making the development of defence infrastructure at Port Phillip Heads more feasible. Furthermore, the Russo-Turkish War of 1877 again raised fears of enemy invasion of the colony. The British Director of Works and Fortifications, Lt-Gen William Jervois, toured the Australian colonies advising on defence works. Together with Scratchley, he recommended the expansion of Victoria's defences at the Heads, rather than in Hobsons Bay. Jervois' scheme included a series of forts at Point



VIEW OF SWAN ISLAND BATTERY FROM THE SEA. 2. EMPLACEMENT FOR HOISTING SHELLS FROM MAGAZINE. 3. ENTRANCE TO A MAGAZINE. 4. PLAN OF SWAN ISLAND BATTERY. 5. PRESENT STATE OF SWAN ISLAND BATTERY. 6. AT WORK ON THE REVETMENT. 7. SODDING AN EMBANKMENT. 8. CONDENSING APPARATUS FOR DRINKING WATER. 9. VIEW OF QUEENSCLIFF BATTERY.

Nepean, Shortlands Bluff (Queenscliff) and Swan Island, along with a second line of defence offered by two forts located on the shoals inside the Port Phillip Heads. He also recommended that batteries be constructed at the western ports of Warrnambool, Port Fairy and Portland, replacing the unprotected mounted guns at each of these places. It was unlikely that any of these smaller ports would be attacked by a 'squadron', but batteries would protect them against a hostile 'man of war, cruiser or privateer'.¹⁶¹

Work began on fortifications at Shortlands Bluff, Swan Island and the South Channel Fort in 1879 and on a battery at Point Nepean in 1882. But progress was slow, largely because of the cost involved in executing the plan. The development of the Armstrong breech loading gun altered the design of some of the forts. Rather than being fixed in position, this gun retracted back into its base after firing. This meant that the gun could be disguised behind walls or parapets when not firing, and also that the personnel reloading the gun were protected behind walls and could have overhead protection as well. The development of this gun meant that planned fortifications could be modified and the development of torpedoes, which were fixed by cable and fired at a ship from the shore, meant that one of the two shoal forts could be dispensed with. Only South Channel Fort, commenced in 1879 and finished in 1889, was constructed, although an 'annulus' or stone base had been begun for the other fort on Popes Eye.

Though the defence infrastructure was concentrated at Port Phillip Heads, in the mid-1880s the Victorian Government became fearful that an invading force might land troops at Westernport Bay and march them overland across the Mornington Peninsula to Melbourne. A survey of the Westernport Coast revealed that the easiest place for the enemy to land was between Hastings and Stony Point. Though a fort was planned for Hastings, this never eventuated. A battery, with four guns, was placed at Hastings in 1891, but removed in 1904.¹⁶²

The forts at Queenscliff, Point Nepean and Swan Island were completed by the mid 1880s. After 1885, a second battery was built at Fort Franklin (near Portsea). By 1890 Victoria was assessed as having 'the best defended commercial city of the Empire'.¹⁶³

Defence in the twentieth century

The forts were staffed permanently by members of the Victorian Artillery before Federation. Fort Queenscliff remained the headquarters. After Federation, the Port Phillip forts passed to the control of the Commonwealth Armed Forces. Though the feared Russian invasion of Port Phillip Bay never eventuated, the forts at the Heads continued to be manned. Two world wars in the twentieth century focussed attention on Port Phillip Heads again. At the beginning of World War I, in 1914, the Commonwealth Government, ignorant of the fact that land had been reserved for defence purposes at Point Lonsdale in the 1870s, gained permissive occupancy of land near the Point Lonsdale lighthouse. Here the Defence Department installed an electric light station, electric light emplacements and an engine room, presumably to sweep searchlights across the entrance to Port Phillip Bay, as similar lights were operated from Fort Nepean.¹⁶⁴ A military camp was also located nearby. In the build up to World War II in the 1930s, the Commonwealth still regarded this site as 'essential'.¹⁶⁵

The first British shot fired in World War I came from Fort Nepean. A German steamer, leaving Melbourne on the eve of the war, was given clearance at Portsea, before a message was received at Fort Nepean that war had been declared. The fire commander at Fort Nepean was ordered to stop the ship. Signals were hoisted and a shot fired before the captain was convinced to stop. The ship and crew were placed under arrest at Portsea.¹⁶⁶ Again, in World War II, the first British shot was fired from Fort Nepean when a small Bass Strait freighter, entering the heads on 4 September 1939, neglected to identify itself. A warning shot was fired.¹⁶⁷

World War II brought the danger of enemy invasion closer than ever before in Australian history. In 1940 German ships mined waters off Victoria, New South Wales and Tasmania. In 1942 a Japanese midget submarine succeeded in entering Sydney Harbour and sinking a ship. The Port Phillip Heads forts were strengthened, with additional barracks at Point Nepean to house extra servicemen who were stationed there. An additional gun-emplacement was built at Cheviot¹⁶⁸ and five gun emplacements were placed along the sand dunes facing Bass Strait across the Rip at Point Lonsdale, where they remain to this day.¹⁶⁹ In 1942 an 'electric eye', known as Chinamans Hat or 'Station M', was constructed offshore at Port Phillip Heads. The light building, which was octagonal in

Lagoon Port Melbourne
circa 1900–1909.
La Trobe Picture Collection,
State Library of Victoria.

Fishermen used the lagoon as a sheltered harbour until the 1920s when it was filled in and a breakwater jetty extended into Hobsons Bay from the east wall of the lagoon. HMAS *Lonsdale* later occupied the reclaimed land.



shape and resembled a Chinaman's hat, was used to shelter equipment and offer protection for naval officers who were occasionally on-site. A photo-electric light beam was mounted on the structure with reflectors on the Heads at Point Lonsdale and Portsea to detect incoming ships by a break in the beam.¹⁷⁰ A break in the transmission of the beam was meant to suggest the entry of an enemy vessel.¹⁷¹

Naval defences

Victoria's first warship, the *Victorian*, was in service in the 1850s, though it was not often stationed within Hobsons Bay, having other duties, such as surveying the Victorian coast. When the *Victorian* was declared unfit for service in the 1860s, the Victorian Government requested assistance from the British Government to establish a Naval Force. HMS *Nelson*, a wooden triple-decked warship converted to a 74-gun steamship was acquired as a training ship. The *Nelson*, which had links back to the Napoleonic era in Europe, remained in

service until 1898. An anchor from the *Nelson* is now located at Commonwealth Reserve, Williamstown, and many guns from the *Nelson* are located in reserves around Melbourne. At the same time as the *Nelson*, the government acquired the newly-built turret ship, the *Cerberus*, which arrived in the colony in 1871. An ironclad monitor, the *Cerberus* was fitted with guns and was the forerunner of modern battleships. The *Cerberus* served the Victorian Navy and then the Commonwealth, being used to store explosives and as a port guard ship during World War I. In 1924 it was sold to a salvage company and partly dismantled, before being purchased by the Sandringham Council for use as a breakwater at Half Moon Bay, where it remains today.

The *Nelson* and the *Cerberus* were based at Williamstown during their active service and it was here that Peter Scratchley recommended that torpedo training for the militia take place. A torpedo depot was erected in the naval dockyards in 1870¹⁷² and facilities for firing torpedoes appear to have been installed both there and on the Yarra at Footscray in the 1870s.¹⁷³ In 1885 the training school at Williamstown

became the Williamstown Naval Depot, which remained Victoria's Naval base until 1920. Also in 1885 a naval orderly room was constructed at Port Melbourne,¹⁷⁴ reputedly on the beach near the Sandridge Baths.¹⁷⁵ It is shown as a torpedo depot, complete with jetty, on a map of Port Melbourne dated 1894,¹⁷⁶ but may have been replaced by the more substantial naval drill hall in Bay Street, built after Federation in 1912.

After Federation, all the state's defence infrastructure was transferred to Commonwealth ownership. Despite this, there was little attempt to build up the Australian Navy until 1909 when Britain began to be alarmed at Germany's increasing naval power.¹⁷⁷ Work began on building an Australian Navy. At North Geelong, in 1913, a Naval Officers' College was opened in Osborne House.

In 1910 the federal Government received advice from Admiral Henderson on the best sites for Australian naval bases. In Victoria, Henderson recommended Hanns Inlet on Westernport Bay and the federal Government purchased 4,000 acres for the proposed base and torpedo school. In 1913 work began on the depot, originally named Flinders Naval Base, but later renamed HMAS *Cerberus*. The base was not ready for use until 1920, and therefore played no part in Australia's World War I effort. Included in the depot was a wharf, built on dry land, with the waterways around it dredged after construction. This wharf was replaced in 1988. Expanded during World War II to cope with extra personnel attending an Officers' Training School, HMAS *Cerberus* remains a complex site.

The naval connection with Williamstown and Port Melbourne continued during World War I, when 'practically all officers and men recruited for the Australian Navy' passed through the Williamstown training depot. The adjacent government dockyard was also closely associated with it.¹⁷⁸ At Port Melbourne, a Naval Store was established to provide repair stores and fittings for the transport fleet.¹⁷⁹

The Port Melbourne piers were points of embarkation for servicemen and women during both world wars. After the bombing of Pearl Harbour drew the USA into the 1939-1945 conflict, the Port of Melbourne became the point where most American servicemen and supplies entered Australia, as well as the chief supply port for the Allied Forces in the south-west Pacific.¹⁸⁰ During this war the Commonwealth established the land station HMAS *Lonsdale*, at Port Melbourne and acquired the MHT Dockyard (which had formerly been the Government

Dockyard) to become a naval dockyard, building naval and merchant ships and one frigate there.¹⁸¹ Soon after Sydney Harbour had been breached by the Japanese submarine, the Department of the Navy proposed laying a minefield between Breakwater Pier at Williamstown and the Port Melbourne piers. But the plan was not carried out, for fear that vessels anchored near the minefield might drag their anchors across it. It was felt that the improved defences at Port Phillip Heads would also alleviate the necessity for installing the minefield.¹⁸² But a minesweeping range and 'degaussing range' were installed in Hobsons Bay. The degaussing range over which ships entering and leaving the port had to pass, used magnetism to identify vessels as they entered the port, then de-magnetised them as they left. There were plans to remove the associated structures and installations in the 1950s, though by this time, the Melbourne Harbor Trust was using one of the associated dolphins to support a navigational light.¹⁸³