

## Maritime history of the Port of Melbourne

### Before 1800

The area where Melbourne now stands was an area of low-lying swampy land where the waters from the Maribyrnong and Yarra Rivers flowed into Port Phillip Bay.

Mud flats and salt marshes teemed with wildlife and nutrient-rich waters were full of fish and shell fish. Aboriginal tribes such as the Wurundjeri and Bunurong made the journey to the coast during the summer to fish and hunt.

Early European explorers discovered that the indigenous people used canoes made of bark. There are still some old trees around Melbourne that show where sheets of bark were cut to make their boats.

### January 1802

The original convict colonies of Botany Bay (Sydney) and Van Diemen's Land (Tasmania) had grown. The settlers had taken the best available land and were making huge amounts of money by running sheep and sending the wool back to Britain.

New colonists were arriving in Australia all the time and needed land to settle on. The south coast of the mainland was largely unexplored and so a purpose-built ship with special sails and a sliding keel was sent from Britain to undertake the exploration.

Lieutenant John Murray sailed the *Lady Nelson* through the entrance to Port Phillip Bay and spent 25 days exploring. Although he liked the look of the woodlands for farming, he didn't find much fresh water.

## **March 1802**

Ships in the open ocean had no way of communicating with either ports or each other, so when Matthew Flinders arrived in his sloop, *Investigator*, just a few weeks later he thought he was the first to see Port Phillip.

He too liked the look of the area and sailed on to Sydney with glowing reports about the potential for farming.

## **January 1803**

Sightings of French ships sailing around the coast of southern Australia made the government in New South Wales very nervous and the sloop, *Cumberland*, was sent to Port Phillip to carry out a closer inspection of the area.

On board was the Surveyor General, Charles Grimes, he walked around the bay, mapping the area, and discovered the Yarra River and its steady, abundant supply of fresh water.

## **October 1803**

The decision was made to start a new colony in Port Phillip. This was especially important because the British Government needed a port in the area to control the skins and oil from the whalers and sealers who set up camps there.

Lieutenant David Collins set out from Britain with two ships (*HMS Calcutta* and *HMS Ocean*) carrying 300 convicts, as well as free settlers, soldiers and staff. The ships dropped anchor off Sorrento on the Mornington Peninsula, south east of Melbourne, and were unloaded.

This first attempt at establishing a colony was not successful. There was very little fresh water, the local Aborigines were very hostile and after some of the convicts ran away, everything was packed up. The remaining colonists moved on to Van Diemen's Land after less than two months.

## May 1835

More than 30 years later there were still no official European settlements in Victoria.

In Sydney and Tasmania the colonists who were making fortunes as sheep farmers wanted more and more land and requested permission to move into the Port Phillip area.

In May 1835, John Batman sailed from Launceston, Tasmania in his [schooner](#) *Rebecca*. As well as a group of settlers and their goods, he brought legal contracts, blankets, knives, axes and scissors to trade with the Aboriginal tribes for their land along the west coast of the bay.

## August 1835

A couple of months later, John Pascoe Fawkner sailed his ship, the *Enterprize*, towards Port Phillip.

The weather was bad and they missed the entrance to Port Phillip Bay and had to shelter in Western Port though eventually they sailed into Port Phillip and quickly found John Batman's camps. To avoid a clash they kept sailing north and found the mouth of the Maribyrnong River and sailed up the Yarra where they ran aground on a mud flat. Here they set up a camp, cut down a couple of trees to stabilise the river bank and built the first wharf and a couple of huts for storage.

Soon, some of Batman's people moved to the banks of the Yarra and the settlement of Melbourne had begun in earnest. In the next few weeks and months, hundreds of people and thousands of sheep arrived to settle in the land around Port Phillip Bay.

## 1840s

At the time of Melbourne's founding in 1835, the river Yarra was too shallow (about three metres in depth) to allow large ships to travel any great distance upstream. The first port in Melbourne was actually established in Sandridge (Port Melbourne after 1884), roughly where Station Pier is now.

Most of the increasing number of bigger ships had to anchor in Hobson's Bay (between Williamstown and Port Melbourne). People and cargoes were loaded into small boats and taken to the closest beach. Horses and cattle were driven down ramps and had to swim ashore. Sometimes the cargoes were just dumped on the sand and mud and were lost or damaged before the owners could collect them. However they arrived, passengers and goods all faced the difficult journey through swamp land to Melbourne, on carts or by foot.

## 1850s

With the gold rush in the 1850s bringing huge numbers of people to Victoria, transport links between Sandridge and Melbourne had to be improved.

Melbourne boomed and the merchants pushed to develop a better transport system, including bridges and a port where ships could navigate the river right to the heart of the growing community.

If the weather was wet, it was a struggle to get heavily laden bullock-drawn carts and carriages through the mud from Williamstown or Sandridge to the city. In the worst conditions, it could take several days to travel the relatively short distance.

Private companies also helped to solve this transportation problem by building a railway, tracks were laid between the pier on the bay at Sandridge and Melbourne and also out to Williamstown. Australia's first rail line terminated at Station Pier, in what is now Port Melbourne.

The fastest ships of the time were called [clippers](#). Using a large number of sails, the Clippers raced to Australia with passengers and the equipment needed for mining and returned with bales of wool and barrels of whale oil. The quicker they crossed the oceans, the more trips they made and the more they earned.

However, many of their sailors jumped ship in Victoria and trekked to the goldfields in the hopes of finding riches too, and the masters of ships found it difficult to get crews.

### **Health in the 1800s**

It has been estimated that in the 1850s about 600,000 people came to Victoria. However, an unknown number died on the voyage here, both from diseases and ship wrecks – a section of the coast to the west of Melbourne is actually known as the [Shipwreck Coast](#).

There was no proper way of disposing of sewage on board ships and cramped, poorly ventilated conditions below the waterline meant that disease spread quickly. [Typhoid](#) was common and often when ships arrived in Port Phillip they were quarantined near the south end of the bay. At one time there were so many sick arrivals that a convict hulk was converted to a hospital ship.

Conditions in Melbourne itself were not wonderful either, the city had grown rapidly but not the sanitation systems - raw sewage ran down the streets into the Yarra River. Along the banks of the Maribyrnong and the Yarra Rivers, slaughter houses, tanners and glue manufacturers tipped their waste straight in to the water.

It is hardly surprising that there were regular outbreaks of deadly diseases like [cholera](#) and typhoid. During this time the city was nicknamed 'Smellbourne'.

As the prosperity of the port increased, the leases on the polluting businesses were cancelled to allow the port to expand - this also helped to improve the quality of the water flowing through the city and out into the bay.

## **1852 - SS *Great Britain* comes to Melbourne**

During the middle part of the 19<sup>th</sup> century, ship-building technology was improving at an incredible rate. The *SS Great Britain*, built in 1843, was the first ship of its type - she had a steam engine, an iron hull and was driven by a screw propeller. Between 1852 and 1876 she sailed to and from Melbourne. She made 32 voyages and carried over 15,000 immigrants.

## **1877 - The founding of the Harbour Trust**

Although businessmen and merchants in Melbourne had complained to the government for years about the poor state of the port, no one was willing to spend the large sums of money required to make real improvements.

Eventually the government and the merchants agreed to cooperate and share costs; this led to the establishment of the Harbour Trust.

One of the first things the Harbour Trust did was to hire a leading engineer from Britain, Sir John Coode, to advise on port improvements.

He recommended the following large-scale engineering projects:

- The course of the Yarra River to be straightened, widened and deepened to form the Coode Canal.
- A dock to be cut into the banks of the river, to give more space for shipping to tie up. This became Victoria Dock.
- The waterfall on the Yarra River in the heart of the city to be removed to allow ships further up the river.

## Late 19<sup>th</sup> century shipping

Throughout the late 19<sup>th</sup> century, shipping architecture developed rapidly. Bigger, more reliable steam engines were built but many ships still carried masts and sails to supplement the engines and save on fuel.

## Unloading cargo

Rail access to the wharves made moving of cargo easier. But loading and unloading ships still depended on the muscle power of the [stevedores](#) and the process might take several weeks to complete.

Sheds were built to protect goods while leaving just enough room to allow a horse and cart to get close to the berths.

## Changes in Ships

Steam ships continued to evolve - better construction and metal-making techniques meant that hulls could become larger. There was also a move from coal-powered steam engines to diesel-powered ones.

Ships began to communicate across distances, using radio. Navigation changed too, with the invention of radar during the Second World War.

## **The early 20<sup>th</sup> century**

Victoria Dock was finished and became the heart of the port. Not only did cargo and migrant ships berth here, for a while it was the base of the American Navy Pacific Fleet.

More sheds were built but most ships still depended on their own on-board booms (levers) with block and tackle (pulleys and ropes) to load and unload cargo.

## **First half of the 20<sup>th</sup> century**

Most cargo was moved on and off ships by block and tackle attached to masts called yardarms. When a ship arrived in the port, gangs of stevedores and sailors would load boxes, barrels and bales from the hold into cargo nets which were hauled manually, or by motors attached to the ship's engines, and swung over to the wharf. There, another gang would unload the net and pass the goods onto trucks or into sheds for storage.

This took large numbers of men a long time, ships could be in port for weeks. It was hard, dangerous work and cargoes could easily be damaged or 'lost'.

As trade grew, ports installed larger, more powerful purpose-built steam-driven, and then diesel-powered cranes. These enabled the stevedores to lift large amounts of cargo more efficiently.

## Container ships

The biggest change in the Port of Melbourne in the 20<sup>th</sup> century has been the move to the containerisation of cargo. This process followed a world-wide trend and began in the early 1960s.

At first, containers were carried on regular or modified cargo ships. Soon though, dedicated container ships were built to carry larger numbers of containers, as design improved and world trade increased, the ships got bigger and bigger.

Containers were invented in America so imperial measurements (feet and inches) are used when describing them. Containers are the same right around the world so they can be stacked and all truck, ship and rail fittings have been designed around the standard container sizes.

Shipping containers usually come in two sizes: 20 feet long or 40 feet long. These containers are known as Twenty-foot Equivalent Units (TEU) and Forty-foot Equivalent Units (FEU) respectively. The capacity of cargo ships is measured in TEU. Ships that are just able to fit through the Panama Canal are known as [Panamax](#) vessels. They have a capacity of about 4200 TEU.



*MSC Don Giovanni – a large container ship (Panamax)*

## **Special cargo-lifting equipment – late 20<sup>th</sup> century**

Loading and unloading containers efficiently required the invention of special equipment.

Gantry cranes are huge cranes that reach right over a ship's hull. They use their massive diesel-driven electric motors as counterweights, in order to lift containers which can weigh nearly 35 tonnes. The crane operator sits high up in a cabin that slides backwards and forwards along rails. The cabin has a glass floor so the crane driver can look down to accurately pick up or put down the containers.

Straddle cranes move containers within the port and stack them in neat rows. The driver sits sideways in a cabin, 13.5 meters above the ground; while on-board there is a computer which assists the stevedore to locate the correct containers using satellite information from the [Global Positioning System](#) (GPS).

## **Bigger and bigger ships - into the 21<sup>st</sup> century**

In the late 1990s, the Victorian Government made major changes to the Port of Melbourne.

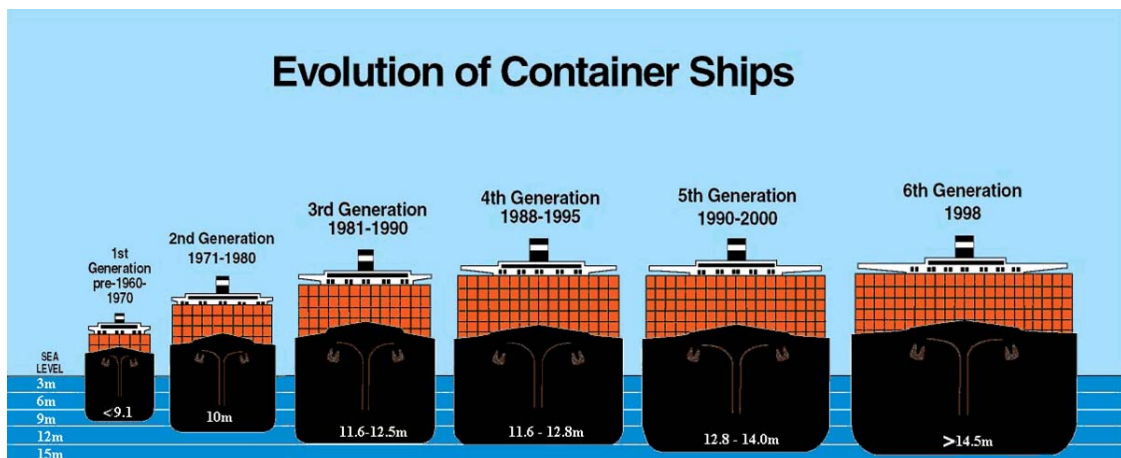
A major toll road was constructed in 1999 with part of it being carried across the Yarra River close to Victoria Dock on a bridge.

The span of this bridge (the Bolte Bridge) is only 30 metres above the water and so the bigger ships cannot pass underneath. This meant that a large section of the port was no longer accessible to modern cargo ships. North Wharf, part of South Wharf, and what used to be the heart of the port, Victoria Dock, became part of the Docklands precinct.

Shipping is now concentrated to the west, around Swanson Dock, and at Webb Dock. In 2005, the Victorian Government handed back control of Station Pier (in Port Melbourne) to the Port of Melbourne Corporation.



*The Bolte Bridge reduced access to some areas of the port for modern shipping*



*Container ships are getting larger, so the port has to adapt*

## Looking to the future

Although many rail links were built into and through the port, these have generally been used less than road routes. The Port of Melbourne's development plan includes extending rail links back into the docks and carrying a greater percentage of containers to and from the ships on trains rather than trucks.

Transporting containers by rail has distinct advantages over road transport:

- it is more environmentally-friendly – trains can carry more containers and so fewer journeys are needed
- it reduces traffic congestion
- it is often faster, as trains don't have to contend with traffic jams



*Moving containers by rail*

Like a lot of the world's largest ports, the Port of Melbourne is a river port and the size of ships visiting it depends on the depth of its shipping channels. Currently sections of the channels can accommodate ships 12.1 metres draft at high tide – the larger ships that call at the Port of Melbourne have a draft of around 13 metres when fully loaded.

Plans are in place to deepen parts of the channel at the entrance to Port Phillip Bay, in South Channel, at the mouth of the Yarra River and Swanson Dock. This will make those areas capable of accommodating ships of 14 metres draft in all tidal conditions. The dredging project is subject to governmental and environmental approvals and, if those approvals are granted, is due to be finished sometime in the near future. Once the project gets under way dredging operations are expected to take around two years to complete.

This will mean that the Panamax ships can use the port fully-laden instead of part full to avoid running aground.

Visit: [www.channelproject.com](http://www.channelproject.com) for more information about the channel deepening project.



*2006: The biggest ships that visit the port cannot come in or out fully loaded*