Engineers Australia Engineering Heritage Victoria

Nomination

Engineering Heritage Australia Heritage Recognition Program for the

Coode Canal

(incorporating Victoria Dock)

Melbourne, Victoria



Coode Canal 1930

Front Cover Photograph Caption

This photograph of Coode Canal was taken in 1930 and shows an aerial view of the canal during dredging.

Image: Public Record Office Victoria

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1 INTRODUCTION

The Coode Canal and Victoria Dock have been a vital part of the history and development of the Port of Melbourne and date back to the 1880s. They have both stood the test of time and can still be greatly appreciated by modern engineering standards.

By recognising these landmarks in Melbourne, Engineering Heritage Australia is acknowledging the contribution and great work of Sir John Coode and Joseph Brady and appreciate the mark these engineers have made on Melbourne's history and landscape.

The Coode Canal was first opened in 11th of August 1886 ¹ by Governor Henry Loch ² and in 1887 the first contracts for the Victoria Dock commenced ³. Even so today they are both continuously serviced and maintained, although Victoria Dock has ceased to be used for commercial shipping.

¹ Lewis Miles.Melbourne - The City's History and Development.1995.page 78.

² Bennett John. General Manager Bid Management at Port of Melbourne Corporation.12 February 2013.

³ Milner P.The Engineering of the Port of Melbourne. Paper presented at the *South National Conference* on Engineering Heritage, Hobart, 5-7 October 1992. page 32.

2 HERITAGE NOMINATION LETTER

The Administrator Engineering Heritage Australia

Engineers Australia

Engineering House

11 National Circuit

BARTON ACT 2600

Name of work: Coode Canal (incorporating Victoria Harbour), Melbourne, Victoria

The above-mentioned work is nominated to be awarded an Engineering Heritage National Landmark or Engineering

Heritage Marker.

This work is nominated with Virtual Interpretation as we have not been able to locate suitable interpretation locations

due to Port Security measures.

Location, including address and map grid reference if a fixed work: Melbourne, Victoria.

Coode Canal 37.8192S, 144.9182E

Victoria Dock 37.8182S, 144.9402E

Owner (name & address): Coode Canal owned by State Government, Department of Sustainability and Environment and

managed by the Port of Melbourne Corporation up to the Bolte Bridge.

The Victoria Dock waterway is also owned by the State Government, Department of Sustainability and Environment, as for

the physical dock, primary ownership belongs to Places Victoria Urban Renewal Authority (formerly VicUrban).

Access to site: The Coode Canal can be accessed via boat/ferry but not from the land side due to Port Security measures.

Victoria Dock can also be accessed via boat or on foot. Victoria Dock can also be viewed from the west podium of the

Etihad Stadium.

Nominating Body: Engineering Heritage Victoria

David LeLievre

Engineering Heritage Victoria

Date: April 2016

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3 HERITAGE ASSESSMENT

3.1 ITEM NAME

Item 1: Coode Canal
Item 2: Victoria Dock

3.2 OTHER/FORMER NAMES

Item 1: Paisleys' Old Humbug Reach

Item 2: N/A

3.3 LOCATION

Item 1 & 2: Melbourne, Victoria

3.4 ADDRESS:

Item 1 & 2: Melbourne, Victoria

3.5 SUBURB/NEAREST TOWN

Item 1 & 2: City of Melbourne

3.6 STATE

Item 1 & 2: Victoria, Australia

3.7 LOCAL GOVT. AREA

Item 1: City of Port Phillip
Item 2: City of Melbourne

3.8 OWNER

Item 1: Port of Melbourne Corporation.

Item 2: Places Victoria Urban Renewal Authority (formerly known as VicUrban).

3.9 CURRENT USE:

Item 1: Coode Canal is currently used as part of the downstream water course of the Yarra River which provides access for cargo to be shipped to Swanson Dock and Appleton Dock.

Item 2: Victoria Dock is currently an integrated precinct comprising of residential, office and commercial spaces. It is still being developed by Places Victoria.

3.10 FORMER USE

Item 1: Flood mitigation. Improved access for larger ships to Melbourne's main river dock as well as shortening travel time up the river.

Item 2: Berthing of ships, mainly vessels carrying cargo to be loaded and unloaded in Melbourne.

3.11 DESIGNER

Item 1: Sir John Coode

Item 2: Sir John Coode & Joseph Brady

3.12 MAKER/BUILDER

Item 1 & 2: Melbourne Harbour Trust and civil engineering contractors.

3.13 YEAR IMPROVEMENTS BEGAN

Item 1: 1880 Item 2: 1887

3.14 YEAR COMPLETED

Item 1: 1886 Item 2: 1892

3.15 PHYSICAL DESCRIPTION

Item 1: Coode Canal was originally 2000 metres long, 130 metres wide and 6 metres deep. It lies between the entrance to Victoria Dock (now spanned by the Bolte Bridge) and the confluence of the Yarra and Maribyrnong Rivers.

Item 2: Victoria Dock was originally 37.6 hectares, 8.5 - 9.5 m deep and the mouth of the Dock is 61 m wide. It is located 2 km to the west of the Melbourne Central Business District and is positioned on the north side of the Yarra River.

3.16 PHYSICAL CONDITION

Item 1: The Coode Canal can be described as being in good condition; it is currently being actively maintained by the Port of Melbourne Corporation.

Item 2: The wharfs around the former Victoria Dock have been stabilised and partly rebuilt by Places Victoria as part of the Docklands redevelopment ⁴.

⁴ Places Victoria website. Docklands. 2013.

3.17 MODIFICATIONS AND DATES

Key additions and modifications were:

- Capacity expanded with the addition of a centralised pier to Victoria Dock in 1914
- Canal widened by 100 feet and depth increased to 30 feet (completed 1919)
- Straightening and widening of the entrance to Victoria Dock to make entry of ships to the dock easier (completed 1923)
- Appleton Dock added on the north side of the Coode Canal (1956)
- Swanson Dock added on the north side of the Coode Canal (1968)

3.18 HISTORICAL NOTES

The Melbourne Harbour Trust was established in 1877 ⁵ and comprised of fifteen men with their obligation being to improve shipping access for imports and exports of goods close to the city and the railway network. The names of these men were: James Lorimer, James Orkney and W W Couche (elected by Governor-in-Council); Thomas Moubray and John M'Ilwraith (elected by the Corporation of the City of Melbourne); John Phillipson (elected by the Corporation of the Municipal District of Emerald Hill); William Moreley (elected by the Municipal District of Sandridge); Richard Dowman (elected by the Municipal District of Williamstown); William Mitchell (elected by the Municipal District of Footscray); Henry C. Piggot, James Paterson and Hugh E. Reid (elected by ship-owners); Charles E. Bright, Thomas Loader and Frederick Sargood (elected by merchants and traders). James Lorimer was elected as the first Chairman and the Commissioners decided to meet fortnightly on Wednesdays ⁶.

There were several issues in the area that needed attention such as frequent flooding in the Yarra River and ships being unable to deliver cargo due to the Fishermen's Bend being difficult to navigate.

English engineer Sir John Coode was appointed by the Melbourne Harbour Trust to advise on improvements to the river based port. Coode had previously been involved in civil engineering projects such as railways, waterways and water supplies and supervised on the construction of the Portland Harbour in Britain. Coode had been given the job of writing a report stating his recommendations on how to improve the area. Among his recommendations he had proposed the idea for the canal which would become the Coode Canal ⁷.

In 1879 ⁸ Coode's report included a recommendation to connect the lower part of the Yarra River more directly to Hobson's Bay by constructing a canal to remove the long Fisherman's Bend to the north upstream of the confluence with the Maribyrnong River. As well as greatly facilitating river navigation, the canal would also improve the river course itself and thus mitigate some of the often

⁵ Port of Melbourne. History of the Port. Viewed 18th January 2013.

⁶ The Long and Perilous Journey: A History of Port Melbourne. no date. page 70.

⁷ Sir John Coode's Scheme. The Argus. Thursday 24th April 1879. Viewed 2nd March 2013. http://trove.nla.gov.au/ndp/del/article/5957479

⁸ The Engineering of the Port of Melbourne. page 31.

severe upstream flooding events ⁹. The proposal was duly approved. The proposed canal was 2000 metres in length, 130 metres in width and 6 metres in depth ¹⁰. Works on the canal began in 1880 under the supervision of Joseph Brady, an Irish civil engineer who was, at the time, already employed by the Harbour Trust, and was then appointed as resident engineer for the project. Brady was also a very experienced civil engineer having had worked on projects such as railway construction, waterworks and field surveying.

Construction on the Coode Canal commenced in 1880 and was dug using steam driven machinery. Coode Canal was officially open in July of 1887 ¹¹, seven years after its commencement and the Fishermen's Bend was removed. The canal's efficacy was immediately proven as it shortened the trip to the river wharves by two kilometres and easily allowed access to vessels that had previously been unable to navigate it due to the narrow bends and shallow areas. While the Coode Canal was being dug, in addition to the course of the Yarra River being substantially altered, Coode Island was formed.

Coode Island however ceased to exist as a true 'island' after the mid-20th century as over the years the original course was gradually filled-in and the former West Melbourne swampland was reclaimed. Nevertheless, the name still remains ¹².

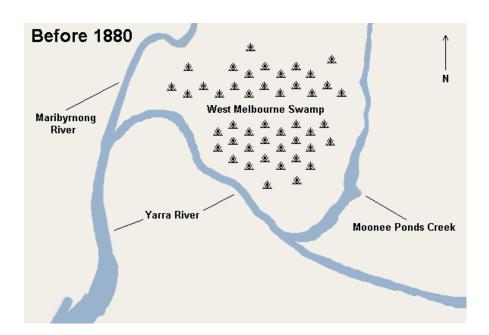


Image: Wikimedia Commons

¹⁰ The Engineering of the Port of Melbourne. page 29.

⁹ The Argus. 24th April 1879.

¹¹ The Engineering of the Port of Melbourne. page 31.

¹² Wikipedia. Coode Canal. downloaded 18th February 2013.

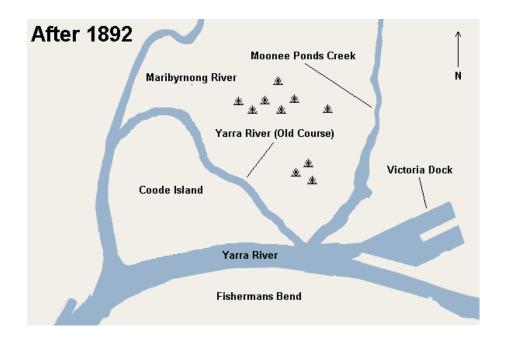


Image: Wikimedia Commons

Image at Appendix 1.1 titled 'General Plan of Harbour Improvements by The Melbourne Harbour Trust as suggested by Sir John Coode', depict Coode's original ideas for the area which was to continue the sweeping curve of his bypass canal downstream beyond the new convergence of the Yarra and Maribyrnong Rivers and out into Hobson's Bay. The Yarra River was also to be straightened and dredged ¹³. Also in Coode's report was an idea to have three new docks, the first was to be completed with its own finger wharves and the following two would be built after. The first dock was proposed to have a water area of 25 acres, a length of 6,540 feet (1,993 metres) and dredged to a depth of 27 feet (8.23 metres) ¹⁴. The total cost for this proposal was roughly a hefty 1.4 million pounds (2.8 million dollars) ¹⁵. In May of 1879 Coode's plan was accepted with some adjustments made by Brady, who opted for a cheaper and quicker alternative for all three docks combined to make one single dock and to use local hardwood timber instead of concrete and masonry as suggested by Coode. Coode disagreed with the decision to opt for timber as he contended that timber would not be durable enough to last, but due to the large financial savings, timber was used. Brady also suggested dredging only to a depth of 22 feet (6.7 metres) to increase savings. Brady's straightforward plans were approved by the Victorian Government.

The first contracts for the Victoria Dock were awarded to Hughes and Miller, James Forbes and Company, James Cowan and Arthur T Robb for excavation and construction ¹⁶. The excavation work allowed for the expansion of the area of the dock from 70 acres to 96 acres. Water was let into the dock in 1891 at this stage the site had been excavated to a depth of 17 feet. In 1897 construction

¹³ The Argus. 24th April 1879.

¹⁴ The Engineering of the Port of Melbourne. page 31.

¹⁵ The Argus. 24th April 1879.

¹⁶ The Engineering of the Port of Melbourne. page 32.

began on the wharves on the north east side of the dock along with a road. These wharves were completed by 1904 and were connected to the rail network.

Victoria Dock was officially opened in 1892 and had a closed water area of 96 acres (37.6 hectares). At the time of its opening it was the second largest dock in the world, second only to the Cavendish Dock ¹⁷ in the United Kingdom. By 1908 the Victoria Dock was receiving roughly 90% of Victoria's imports. By 1911 Victoria dock was receiving over half a million tonnes of cargo per year ¹⁸.

Due to the increasing growth rate in cargo in 1910, it was decided by the Harbour Trust commissioners to increase the width of the river by 100 feet to create a swinging basin measuring 1500 by 100 feet (457 by 30.5 metres) by at the intersection of the canal and river, to increase the depth of the river to 30 feet (9.14 metres), to erect a central pier and increase the width of the wharves by 100 feet (30.5 metres). The cost for this project would be around one million pounds ¹⁹. This was completed by 1919 and is just one of the several improvements that have been made to the Victoria Dock.

In 1925 the commissioners instigated work to straighten and widen the entrance of the dock. The primary purpose of this alteration was so that ships would enter at an angle of 30 degrees as opposed to the prior 45 degrees ²⁰. This resulted in three river entrance berths.

Development on the docks was greatly reduced during the Great Depression and World War 2, but after this period it picked up once again. The Appleton Dock on the north side of the Coode Canal, originally scheduled to be built in the 1930s was completed in 1956; the delay being due to the war. In 1960 the Webb Dock beside the mouth of the Yarra River was also completed. Then in 1968 the Swanson Dock opening from the north side of the Coode Canal followed ²¹.

In the 1950s and 1960s a new system of freight transport was introduced. Termed 'containerisation' it involved standard sized steel containers being used to transport goods. These containers were loaded, unloaded by purpose built large travelling cranes and were easily transported over lengthy distances. It improved trade by reducing costs and increasing the amount of trade. Victoria Dock was not containerised and therefore its use rapidly decreased. The new location for container ships to load and unload cargo was the newly constructed Appleton and Swanson Docks.

The Coode Canal is still used today as it allows access to Swanson Dock which is where the vast majority of Melbourne's containerised cargo is handled. The Victoria Dock is no longer used for

¹⁷ Cavendish Dock is one of the four docks which make up the Port of Barrow in Barrow-in-Furness, England. Covering some 59.15 hectares (6,360,000 sq ft) it is roughly the size of Barrow's other three docks combined. It is named after William Cavendish, 7th Duke of Devonshire whom invested heavily in the industrial growth of Barrow. Cavendish Dock is owned by Associated British Ports, however it is now entirely enclosed serving as a reservoir. It is also a popular fishing destination due to the diverse and unique wildlife found as a result of the control of water in and out the dock.

¹⁸ The Engineering of the Port of Melbourne. page 32.

¹⁹ The Engineering of the Port of Melbourne. page 32.

²⁰ The Engineering of the Port of Melbourne. page 32.

²¹ Extracted from the Port of Melbourne website. 1 February 2013.

commercial shipping purposes due to it being unable to accommodate containerisation and the larger size of modern day cargo vessels.

In recent years the Victoria Dock has been adapted for commercial and residential redevelopment, many residents and tourists using the water sections for boating and recreational activities. This major redevelopment on the western side of the Melbourne CBD is still in progress, with planning and management under the State Government agency, Places Victoria (formerly VicUrban).

3.19 HERITAGE LISTINGS

National Trust of Australia (Victoria)

Victoria Dock is classified by the National Trust of Australia (Victoria) as a building of National significance (File Number: B6247). There is no statutory obligation as a result of this classification.

Victorian Heritage Register

Victoria Dock is classified by the Victorian Heritage Register as being of historical and technical significance (VRH number: H1720). This registration is protected by the Victorian Heritage Act 1995.

Victorian Heritage Inventory

Coode Canal is classified by the Victorian Heritage Inventory as being of architectural significance (Heritage Inventory Number: D7822-0605). This registration is protected by the Victorian Planning and Environment Act 1987.

4 ASSESSMENT OF SIGNIFICANCE

4.1 HISTORICAL SIGNIFICANCE

See section 3.17 for details of the history.

The Coode Canal and Victoria Dock are an important part of Melbourne's rich history and contributed to the economic and social development of both the city and the state of Victoria by facilitating freight movements in and out of Melbourne by ship. Both sites date back to the final decades of the nineteenth century.

Appointed in 1878 by newly the formed Melbourne Harbour Trust, Sir John Coode was to write a report that stated his recommendations of improvements for the port. The main reason that this development was needed was that many ships carrying cargo were unable to navigate their way through the Fishermen's Bend due the sharp and narrow passage. The convoluted course of the river also caused frequent flooding of the river upstream.

Among a list of improvements was to construct a canal that would connect the lower part of the Yarra River to Hobson's Bay and remove the challenging bend, and to construct three docks from concrete and masonry ²². With the help of Irish engineer Joseph Brady, who was the Trust's own engineer, Coode's ideas were improved in design, efficiency and cost. The result was the Coode Canal and a single large dock, with its wharves constructed from timber known as the Victoria Dock.

The historical significance of these items is that without their construction Melbourne and Victoria would not have been able to access adequate port facilities to support ongoing development of the colony/state. The canal allowed for easy navigation whilst the dock provided a spacious and highly organised berthing for vessels to load and unload cargo.

4.2 HISTORIC INDIVIDUALS OR ASSOCIATION

See Appendix 3 for biographical information:

- 1. Sir John Coode
- 2. Joseph Brady

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 $^{^{\}rm 22}$ The Argus. 24th April $\,$ 1879.

4.3 CREATIVE OR TECHNICAL ACHIEVEMENT

Victoria Dock is one of the more versatile docks in Melbourne as its shape and size allows it to be very adaptable. The design of the Coode canal was primarily prepared by Sir John Coode but it can be said that Joseph Brady took Coode's designs and improved them, by making Coode's original ideas more cost efficient and durable.

Coode had originally proposed to build three small docks in his report, whereas Brady convinced the commissioners to build only one larger dock. According to Coode the wharves were to be constructed from concrete. Brady opposed as this suggested method was costly, he instead opted for local hardwood timber that today have still stood the test of time. Coode originally disagreed with Brady's changes but the Commissioners went with Brady's ideas as the financial savings were quite substantial.

A report from the Committee for Works, Dredging and Stores advised that concrete could only be laid on a dry surface and thus the proposed area for the Dock would have to be completely drained and kept dry for some years. This proposition would have been incredibly expensive and almost impossible given the composition of the former swampland in which the dock was to be built. Sir John Coode repeated that concrete was the best option in a May 1886 report. The Trust decided that Sir John Coode's objections to timber seemed inconsistent when in his amended scheme; he depended so much on timber piles and sheet piling for giving stability to his concrete masonry.

The Trust also contended that the durability under and out of water, of Jarrah, Red Gum, the dark brown species of Iron Bark and the Turpentine far surpass that of any timber used for harbour works in Europe, and that the piles (if cut at the right time of year and seasoned) would last for half a century without renewal. It was therefore decided by the Trust that due to the great cost of the scheme and proposed time period for draining and drying out the dock, that Sir John Coode's scheme of construction not be adopted.

4.4 RESEARCH POTENTIAL

A considerable amount of research has been conducted on not only the Coode Canal and Victoria Dock but on the Port of Melbourne in general.

Books and a countless number of websites on the internet allow for easy and accessible information regarding the Port of Melbourne. One of the more credible website is the official Port of Melbourne Corporation website.

One of the most noteworthy books is the one commissioned by the Melbourne Port Corporation itself: "The Long and Perilous Journey: A History of the Port of Melbourne", by historian Judith Buckrich. Along with the resources obtainable for the Coode Canal and Victoria Dock there are plenty of websites that offer biographical information on the lives and work of Sir John Coode and Joseph Brady.

4.5 SOCIAL

The period between World War I and World War II was a very significant period in the development of Victoria Dock (and Melbourne docks in general) due to the rapidly increasing tonnage figures of imports as well as further renovation and development of Victoria Dock.

The end of World War II was not only just a time of peace and prosperity for Australia, but it also heralded a period of progress and economic developments the likes of which had never been experienced previously. The War had brought Australia (and the Port of Melbourne in particular) into the world in an entirely new way. Australia was no longer burdened by the tyranny of distance, but instead had forged itself as a key logistic hub in the Asia-Pacific region.

During World War II, communications were much faster and Melbourne had become a part of a network of cities which were key participants in fighting the Axis powers. In addition to this, many Americans had begun to spend their leave in Melbourne and their easy acceptance was a clear sign of Australia's belonging to what became known as the "Western World".

The end of World War II saw an influx of migrants arriving into Melbourne and many were employed by the Port of Melbourne, which at the time was experiencing a period of labour shortages and union strikes. Many of these migrants were from Italy, Greece, Germany, Denmark and Croatia which directly influenced the multicultural make-up of Melbourne's population which thrives to this day.

In 1946, The Harbour Trust's Annual Report stated ²³:

"It is nowadays almost a platitude to observe that the 'life' and administration of a great modern port reflect the prosperity and progress of the nation and community it serves"

The quote above shows how a thriving port can have a positive influence on the community, which further establishes the assertion that The Port of Melbourne (Victoria Dock in particular) had a large role in the social changes that occurred after World War II that helped form Melbourne into its current prosperous state.

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²³ Melbourne Harbour Trust. Annual Report. 1946. Page 7.

4.6 RARITY

Australia is a predominantly arid/semi-arid country ²⁴ and therefore does not have many navigation canals due to a lack of water to create canals. There are approximately eight navigation canals currently in Australia in comparison to England and France which have over one hundred canals each ²⁵ ²⁶, as well as other European and Asian countries with many canals such as Italy, Russia, The Netherlands and China. The Coode Canal is also still in use today which further establishes it's rarity as one of the few major canals that currently exist in Australia.

At the time of its opening in 1892, Victoria Dock was the second largest single dock in the world and by 1950 it was handling over two million tons of cargo annually; in the mid-1980s this figure had increased to 20 million revenue tons annually. As it stands, Victoria Dock is currently the "oldest, largest single dock remaining in the world" ²⁷.

4.7 REPRESENTATIVENESS

Victoria Dock is scientifically (technically) significant as the first artificial basin constructed in Victoria, breaking with the British tradition of small dock design and, through its scale, allowing the largest vessels then in service to be handled close to Melbourne. The simple linear wharfage at Victoria Dock was revolutionary, pre-empting similar British designs by at least two decades. Victoria Dock is also unique to Australia as it was constructed from Australian timber whose durability under and out of water was deemed to be "superior to that of any timber used for harbour works in Europe...if cut at the right time of year and seasoned would last for half a century without renewal" ²⁸ by the Harbour Trust during the planning phase of the Dock.

4.8 INTEGRITY/INTACTNESS

Both Coode Canal and Victoria Dock are still intact today. Coode canal functions as part of the downstream water course of the Yarra River which provides access to Swanson Dock and Appleton Dock. Victoria Dock is no longer used to berth cargo vessels; it is now being developed as a commercial and residential precinct.

²⁴ Australian Government Bureau of Meteorology. Australian Climate Zones – Major Classification Groups. No date.

²⁵ Wikipedia. List of Canals of the United Kingdom.

²⁶ Wikipedia. List of Canals in France.

²⁷ Heritage Victoria. Victorian Heritage Register Citation H1720. May 2011. Page 2.

²⁸ The Long and Perilous Journey: A History of the Port of Melbourne. 2002.

5 STATEMENT OF SIGNIFICANCE

Coode Canal is the reach of the lower Yarra River in Melbourne which was excavated in 1886 as part of harbour improvements which were designed by Sir John Coode. The Canal was originally 2000 metres long, 130 metres wide and 6 metres deep. It extends from near the mouth of the Victoria Dock (now spanned by the Bolte Bridge) to the confluence with the Maribyrnong River.

A principle feature of Coode's design was the cutting off of Fisherman's Bend, to improve access for ships to Melbourne's main river wharfs as well as shortening travel time up the river. Coode had decided that this method would be superior to the alternative of a direct canal between the city and Port Melbourne; he claimed that the risk of silting at Williamstown would be great and that there would be difficulty in dealing with the flood waters of the Yarra ²⁹.

The construction of Coode Canal also lead to Victoria Dock being built. This, itself, is significant due to how important a role Victoria Dock played in the prosperity of the Port of Melbourne as well as Melbourne as a whole. Currently, Coode Canal allows access to Swanson Dock which is Melbourne's largest shipping container terminal. This makes Coode Canal a vital part of Melbourne's economy both currently and historically.

There are very few navigation canals in Australia, for several reasons. The first reason is that during the European settlement that occurred in the late 18th century there was a fairly low population of people living in Victoria at the time, it wasn't until the Gold Rush period of the 1850s that saw a population boom in Victoria as well as an increased need for long distance transport. The steam train had been invented by this time, and most major centres of population were being connected by rail or by existing waterways, thus rendering the need to build canals obsolete. In addition to this, Australia as a whole generally sufferers from variable water supplies which limits the opportunity for canal construction, this makes the Coode Canal one of the few existing navigation canals in Australia as well as one of the few navigation canals in Australia that are still functioning ³⁰. This makes the Coode Canal significant both rare and historically significant.

Victoria Dock is a 37.6 hectare basin of water which was constructed during the period between 1887 and 1892 in order to accommodate the needs of large ships entering Coode Canal. Initially designed by British engineer Sir John Coode, his original plans were later modified by Joseph Brady. The Dock was constructed by excavation works in what was known as the West Melbourne Wetlands. Victoria Dock is between 8.5 and 9.5 metres deep and is bordered by linear wharfage on four sides. The wharves were once able to provide 21 berths. A central pier was added in 1914 in order to increase capacity to meet growing demand. The wharfs were originally constructed using timber pilings, but some sections have been added using concrete construction ³¹.

When Victoria Dock was first opened in 1892, it was the second largest single dock in the world and by 1950 it was processing upwards of two million tonnes of cargo annually, and by the mid-1980s it

²⁹ The Argus. The Fisherman's Bend Cutting. Tuesday 10 August 1886. page 7.

³⁰ AusCanal. Australian Inland Waterways.

³¹ Lovel Chen. Heritage Impact Statement. Places Victoria. December 2012. page 3.

was processing over twenty million tonnes annually ³². Victoria Dock contains several large cargo sheds which date back as early as 1913, making it of historical and technical importance as the oldest, largest, single dock remaining in the world.

Victoria Dock is also technically significant as the first artificial basin constructed in Victoria, which differed from traditional British small dock design due to its large scale. This allowed the largest vessels of the era to be accommodated in Melbourne. Another technically significant feature of Victoria Dock was its simple linear wharfage, this innovation pre-empted similar British designs by over twenty years.

Victoria Dock also has many significant historical ties, the first of which is its association with renowned British engineer Sir John Coode, whose original design consisted of three small docks with wharfs supported by concrete and masonry piling. Victoria Dock also has important historical associations with Joseph Brady, who during the time of construction was the resident engineer of the Melbourne Harbour Trust. Brady successfully suggested modifications to Coode's original plans by proposing that Victoria Dock be built as one large single dock as opposed to three smaller docks and using Australian hardwood timber for wharf construction rather than concrete and masonry. Victoria Dock stands today as an important historical testament to the work of engineers Sir John Coode and Joseph Brady whose skills and vision are still a benchmark for engineers working today.

6 AREA OF SIGNIFICANCE

State and National.

³² Heritage Victoria. Victorian Heritage Register Citation H1720. May 2011. Page 2.

7 INTERPRETATION PLAN

7.1 GENERAL APPROACH

This nomination was written by a group of Victoria University engineering students and at the time they did their work EHV conceived the project as a 'normal' nomination with an interpretation panel and marker.

Following completion of the nomination and after the students had completed their work and disengaged from the project Miles Pierce and Owen Peake of the EHV Committee sought to find suitable locations for interpretation of the site. This led to a detailed investigation of the two sites covered by the nomination:

- Coode Canal
- Victoria Dock

The findings were as follows:

Coode Canal

The Coode Canal (Yarra River diverted into a new straighter and shorter course) runs through the heart of the Port of Melbourne. The canal starts at its upstream end just below the Bolte Bridge, above which there are essentially no port facilities. Going downstream to the confluence of the Maribyrnong River (which comes into the Yarra from the northern side of the city) there are the following facilities:

Right Bank (Coode Island): - Victoria Dock

- Appleton Dock

Swanston Dock (Container Terminal)

Yarraville Wharves (bulk cargo)

o Left Bank (Fisherman's Bend) - South Wharves

- Port of Melbourne tower and

Management Centre

- D'Albora Marinas

All these dock areas (except the marina) are subject to modern highly restrictive dock security with no entry whatsoever by the unauthorised public.

There are no locations where the public can see the river in anything like a broad sweep except at the very ends of the secure area (looking upstream or downstream from the non-secure areas.

The Bolte Bridge (CityLink) gives a good overview of the Coode Canal from the upstream end but stopping on this Toll Road is strictly prohibited and would be subject to severe fines.

There is a public restaurant (Pier 35 Restaurant) on the Fisherman's Bend side at the D'Albora Marina site at the extreme western end of the Coode Canal. This provides quite a good view of the Container Terminal across the river but only a very oblique view of the Coode Canal.

No other areas outside the security area of the port have been found which provide even a marginal view of the Coode Canal.

Victoria Dock

Victoria Dock which is upstream of the Bolte Bridge no longer has any port facilities and has been re-developed as a high density residential and commercial precinct.

Access to the water edge is limited primarily to the northern and eastern margins of the harbour. These locations give an adequate view of Victoria Dock but not the Coode Canal, further downstream.

Whilst interpretation at Victoria Dock could potentially represent that aspect of the nomination the Coode Canal is considered to be of greater importance (in the view of EHV) and interpretation without the Coode Canal would be unsatisfactory.

<u>Future Interpretation</u>

One location that could potentially be suitable for a marker and interpretation panel for both the canal and the dock is at the far western end of the south side of the former Victoria Dock and effectively at the entrance to the dock from the river. At this point much of the dock should be observable and the view westward under the Bolte Bridge takes in the start of the Coode Canal extending downstream into the Port precinct. Although this locale can be accessed at present it is in an as yet to be redeveloped part of Docklands and as such is not widely visited and is off the tourist pathway. From a future development plan on Places Victoria website - the State Government agency managing the overall dockland redevelopment - the subject locality is denoted as 'public open space'. This should in principle be advantageous for a possible E H R marker and interpretation panel, but it would not be appropriate to move on it until arrangements for the intended public open space are being finalised and any physical placement, if agreed to by Places Victoria, et al, would be near or after the completion of the development work. This is likely to be at least several years away and by then plans for the area might also be changed.

Conclusion

The combination of all the above factors strongly suggest that at this time this nomination would be best treated as a 'virtual interpretation' submission.

Most of the characteristics of conventional EHA practice (interpretation panel plus marker on site) could be incorporated into a web-based presentation.

The situation could change in the future as the Victorian Government is in the process of selling the Port of Melbourne to a private operator.

In the short term it is recommended to the Heritage Recognition Committee that this nomination be approved for 'virtual interpretation'.

The following plan will detail the proposals for the design and content of the proposed webbased interpretation:

7.2 THE VIRTUAL INTERPRETATION PANEL

- 1) A title: "Coode Canal and Victoria Dock"
- 2) Logos of Engineers Australia, Port of Melbourne Corporation
- 3) A small scale representation of the EHA marker plate.
- 4) The date and other details of the marking ceremony.
- 5) Highly legible text.
- 6) A map will be needed in this document.
- 7) Brief captions for each photograph including attribution.
- 8) Total text should not exceed 500 words excluding headings.
- 9) Sized to be compatible with electronic devices.

7.3 POSSIBLE INTERPRETATION THEMES FOR VIRTUAL INTERPRETATION PANEL

The following subjects have been assessed as possible themes for the interpretation panel:

- a) The History of the Coode Canal and Victoria Dock
- b) The role of Sir John Coode and Joseph Brady
- c) The role of the Port of Melbourne in present-day Melbourne

7.4 PRELIMINARY TEXT BLOCKS FOR VIRTUAL INTERPRETATION PANEL

Coode Canal

In 1878, eminent UK engineer John (later Sir John) Coode was appointed by the nascent Melbourne Harbour Trust to investigate improvements for the Port of Melbourne and navigation up the Yarra River. Coode recommended straightening of the lower reaches of the Yarra River to cut off a shallow northern bend by excavating a canal. He was assisted in the design and execution of the works by the Trust's own engineer, Joseph Brady.

Named after Sir John Coode the canal was originally 2000 metres in length, 130 metres in width and involved excavation of a total of 1,766,000 cubic metres of material.

103 words

Victoria Dock

The Victoria Dock which was also one of Sir John Coode's recommendations for the port. It was opened 1892 after its construction began in 1888 and had a water area of 37.6 hectares. Its primary purpose was to handle ships carrying general cargo.

Victoria Dock was accepting roughly 90% of Victoria's imports by 1908. By the 1950s and 1960s after the introduction of containerisation, the amount of cargo coming to Victoria Dock declined until it was seldom used for commercial purposes.

Victoria Dock is especially significant today as it is the oldest, largest single dock in the world.

100 words

John (later Sir John Coode) Coode

John Coode was born in 1816 in England. After studying civil engineering under James Rendell he worked in areas such as railways, harbours and water schemes. He supervised the construction of the Portland harbour between 1847 and 1872 which was the largest artificial harbour in Britain.

In 1878 he was appointed by the Melbourne Harbour Trust to write a report stating his recommendations to improve the river port facilities. He proposed the construction of the Coode Canal and Victoria Dock.

Sir John Coode is still recognised today as one of the most experienced civil engineers in the field of harbours during his time.

109 words

Joseph Brady

Joseph Brady, a civil engineer was born in Ireland to a civil engineering father. He began to study under his father and before long was working in fields such as surveying, drafting and harbours. He worked alongside Charles Vignoles on railway surveys all over the United Kingdom. In 1863 whilst working on a railway from Melbourne to Bendigo he won a prize of 500 pounds for his design of a water supply for Mount Alexander and Sandhurst goldfields.

In 1878 as one of the Melbourne Harbour Trust's engineers Joseph Brady worked alongside Sir John Coode to improve the river port facilities in Melbourne. The main reason for the construction of the Coode Canal was to allow vessels to navigate up the river to the docks along the river. The work also reduced the flood risk upstream.

Brady's detailed changes to Coode's concept design for Victoria Dock improved the functioning of the dock and significantly reduced the cost by using locally available hardwood timber to construct wharves. This proved to be an excellent decision as the bulk of the remaining wharves remain in service today, 124 years after construction.

191 words

Total: 503 words

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9 APPENDIX

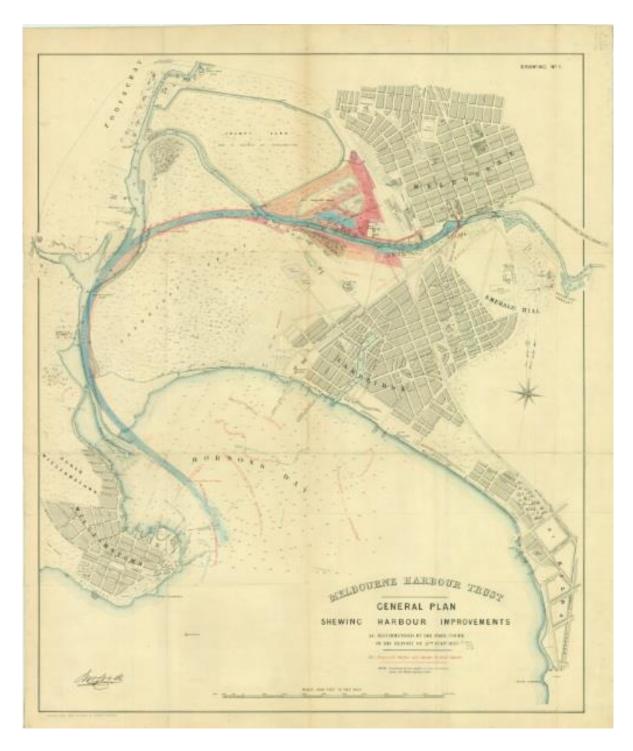
APPENDIX 1 IMAGES

APPENDIX 1.1 HISTORICAL IMAGES



Hobson's Bay and the Yarra River prior to the improvement works in the 1880s and 1890s.

Image: State Library of Victoria, La Trobe Map Collection.



General Plan of Harbour Improvements by The Melbourne Harbour Trust as suggested by Sir John Coode.

Image: State Library of Victoria.



Steam driven machinery being used to create the Coode Canal during the 1880s.

Image: Port of Melbourne Corporation.



Workers during the construction of Victoria Dock.

Image: Port of Melbourne Corporation.



Image of excavation works at Fisherman's Bend during the digging of the Coode Canal (1889).

Image: Public Records Office Victoria.



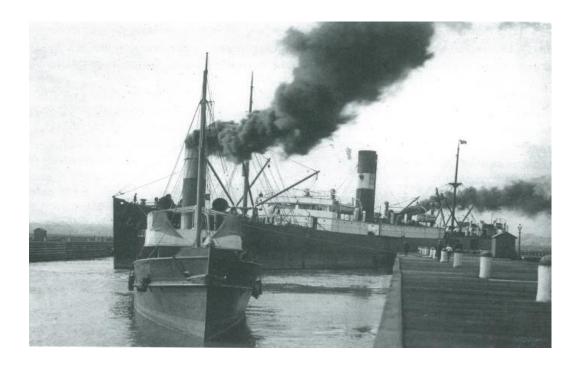
Victoria Dock in 1927 and depicts a combination of train, ship, cargo and horse transport.

Image: Port of Melbourne Corporation.



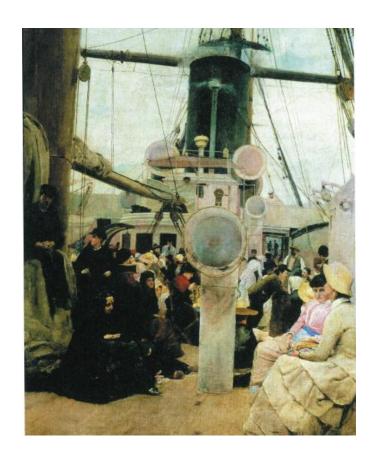
Victoria Dock in July of 1925 with twenty three destroyers and three larger ships, part of a fleet from the United States of America.

Image: Walking Melbourne Website.



Victoria Dock entrance showing the SS Parenthia being towed into dock (1911).

Image: State Library of Victoria, La Trobe Picture Collection.



"Coming South" by Tom Roberts (1886). This oil painting depicts settlers.

Image: National Gallery of Victoria.



A group of newly arrived migrants from Malta at Port Melbourne (1954).

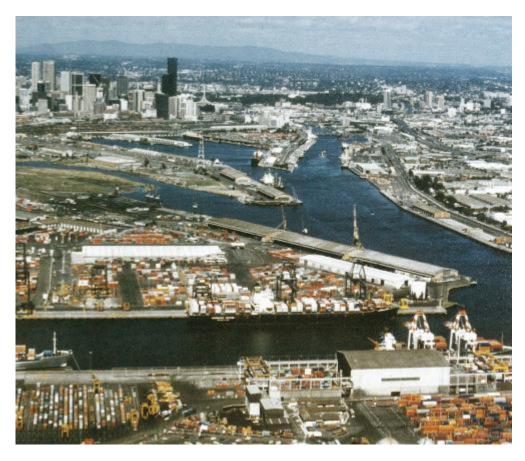
Image: State Library of Victoria, La Trobe Picture Collection.

APPENDIX 1.2 RECENT IMAGES



Recent image of Victoria Dock.

Image: Walking Melbourne Website.



Aerial view of the Port of Melbourne in the 1980s with Swanston Dock in the foreground.

Image: Public Records of Victoria.

APPENDIX 2 HERITAGE VICTORIA REGISTER ENTRY

Location

HARBOUR ESPLANADE and VICTORIA HARBOUR PROMENADE and NORTH WHARF ROAD and DOCKLANDS DRIVE and NEWQUAY PROMENADE DOCKLANDS, MELBOURNE CITY

Victorian Heritage Register (VHR) Number

H1720

Heritage Overlay Number

HO915

Level of Significance

Registered

	All of the buildings and structures marked B1 to B7 on Diagram 605066 held by the Executive Director comprising:-
	* the linear perimeter wharves and central pier with wharf bollards; wharf
Extent of Registration	fittings and railway tracks (B1)
	* shed 8 (B2)
	* shed 9 (B3)
	* shed 14 (B4)
	* shed 15 (B5)
	* shed 19 together with the adjacent bluestone pitcher paving (B6)
	* shed 20-21 together with the adjacent bluestone pitcher paving (B7)
	2. All of the land marked L1 on Diagram 605066 held by the Executive Director being all of the land beneath the waters of Victoria Dock and its wharves.

Statement of Significance

What is significant?

Victoria Dock is a 37.6 hectare (96 acre) water basin constructed between 1887 and 1892 to accommodate large ships of the time. Designed by the British engineer, Sir John Coode and modified by Melbourne Harbour Trust Engineer Joseph Brady, the dock was constructed by excavation works to the West Melbourne wetlands. The dock is between 8.5 and 9.5m deep and is bordered on four sides by linear wharfage. Entrance to the wharf is gained at the western end and the mouth to the dock is 61 metres wide. The wharves once provided 21 berths (now substantially reduced) and it has a central pier constructed in 1919 and extending from the middle of the north-eastern section. The wharves were originally constructed using timber pilings, although some sections now also employ concrete. While all the cranes have now been removed from the site, the crane rails remain on the wharf apron at berths 19-21. At the time of its opening in 1892, Victoria Dock was the second largest single dock in the world and by 1950 it was handling over two millions tons of cargo annually; in the mid-1980s this figure had increased to 20 million revenue tons annually. The dock features several large cargo sheds, the earliest of which date from 1913.

Victoria Dock is of historical, scientific (technical) and architectural significance to the State of Victoria.

Victoria Dock is of outstanding historical and scientific (technical) importance as the oldest, large, single dock remaining in the world. Victoria Dock is scientifically (technically) significant as the first artificial basin constructed in Victoria, breaking with the British tradition of small dock design and, through its scale, allowing the largest vessels then in service to be handled close to Melbourne. The simple linear wharfage at Victoria Dock was revolutionary, pre-empting similar British designs by at least two decades.

Victoria Dock is historically significant for its associations with renowned British engineer Sir John Coode whose original concept involved construction of three small docks with wharfs supported by concrete and masonry pilings. The dock is also historically important for its associations with Joseph Brady, resident engineer with the Melbourne Harbour Trust, who successfully recommended alterations to Coode's original design converting it into one single large dock which used Australian timbers for pilings rather than concrete and masonry. The dock is historically important as a testament to the skills of Coode and the vision of Brady.

Victoria Dock is of architectural and historical significance for its intact cargo sheds at Berth 8 (1913), the oldest and most intact shed in the Port of Melbourne and the prototype for the construction of later cargo sheds at Victoria Dock, and at Berth 15 (1913) which survives as a substantially intact open and closed shed. Both sheds at Berths 8 and 15 are historically and scientifically (technically) important for their ability to demonstrate cargo handling practices once common to the whole of the Melbourne wharves. The sheds at berths 9 and 14 are architecturally, historically and scientifically (technically) significant as the first sheds at Victoria Dock to be re-designed to accommodate mechanical handling equipment (1942). Despite the loss of the cargo cranes, Berths 19-21 with their railway tracks, sheds and Telford bluestone pitching are historically and scientifically (technically) significant for their ability to demonstrate typical ship to shore cargo handling practices of the 20th century.

Victoria Dock is historically significant for its associations with the Melbourne Harbour Trust which had a vital role in Victoria's trade and transport history. The construction of the dock symbolised the success of the Harbour Trust over other bodies in the State with vested interests in ports. The dock is historically significant as the main port facility through which general cargo was shipped and handled for Victoria from 1924 to 1970.

Year Construction Started	1887
Heritage Act Categories	Heritage place
Municipality	MELBOURNE CITY; MELBOURNE CITY; MELBOURNE CITY; MELBOURNE CITY

APPENDIX 3 HISTORIC INDIVIDUALS OR ASSOCIATIONS

APPENDIX 3.1 SIR JOHN COODE) 33

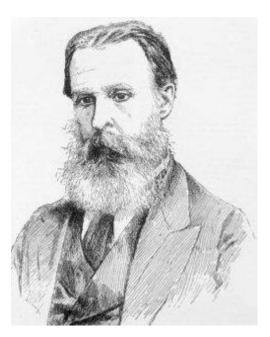


Image: Australian Dictionary of Biography

Sir John Coode was born 11th November 1816 in Bodmin, Cornwall, England his father Charles Coode was a solicitor .John Coode studied civil engineering under James Meadows Rendel in Plymouth.

In his private life he married Jane Price in 1842 and had a son John who also became a civil engineer.

Sir John Coode became greatly experienced in the field of harbours, railways and water schemes. In his career he worked for the Great Western, the Royal North of Spain Railways and The Bristol and Exeter Railway. Between the years of 1847 and 1872 he supervised the construction of the Portland Harbour, which is well known for becoming the biggest artificial harbour in Britain ³⁴ Due to his expertise in harbours he often supervised and advised on the design and construction of many harbours such as in Ceylon, South Africa and Britain. He was knighted on completion of his work at Portland and from May of 1889 to May 1891 he was elected as president of the prestigious Institution of Civil Engineers.

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³³ Refer to website Australian Dictionary of Biography. Coode, *Sir John (1816-1892)*. Viewed 9 January 2013. http://adb.anu.edu.au/biography/coode-sir-john-3250

³⁴ Milner P.1992.

Coode first came to Australia in 1878 and was appointed the task of improving the port by The Melbourne Harbour Trust. The major issues that they were experiencing were that there was a high frequency of flooding in the area because the river was too narrow and would overfill due to heavy rainfall and also that larger ships were unable to navigate through the river due to the narrow river channel and sharp bends. Sir John Coode was asked to advise on the resolution of these issues.

Coode then recommended the construction of what became known as the Coode Canal which resulted in the formation of Coode Island. His work on the canal allowed ships to easily navigate through to the docks of Melbourne and greatly decreased the flooding in the area. The Coode Canal was completed and officially opened in 1887.

Other works with which Coode was associated include a port at Warrnambool, a channel in Gippsland, navigation of the Murray River mouth, harbours in Fremantle, railways in Britain as well as several water works and water schemes.

Coode died in Brighton, England on March 2nd 1892 aged 76.

Joseph Brady was born 18th August 1828 near Enniskillen, County Fermanagh, Ireland and was a civil engineer. In his personal life he married Adelaide Sarah on the 14th of February, 1854 and they had seven children.

He studied under his father and became experienced in surveying and draftsmanship. Shortly after this he was employed as an engineer to assist Charles B. Vignoles, a former president of the Institution of Civil Engineers.

Alongside Charles B. Vignoles he worked on railways and construction in several areas such as Kent, Lincolnshire and the Sedbergh and Lancaster Railway. He worked on several water supply schemes in areas such as Bendigo, Brisbane and Fitzroy. In 1863 whilst working on a railway from Melbourne to Bendigo he won a prize of 500 pounds for his design of a water supply scheme for Mount Alexander and Sandhurst (Bendigo) goldfields.

In 1877 he was appointed by The Melbourne Harbour Trust to work alongside Sir John Coode on the Port of Melbourne. He is recognised specifically for his work on the Coode Canal and Victoria Dock in particular.

It can be said that Brady's ideas, such as for the Victoria Dock opting for one large dock as opposed to Coode's suggested three, made a significant impact on the Port of Melbourne. Brady also opted for cheaper and more durable construction materials for the Victoria Dock (such as Australian timber) as opposed to Sir John Coode's recommendations.

On 7th December 1875, he was chosen as an associate member of the Institution of Civil Engineers the same institution that Sir John Coode had been president of.

Joseph Brady died on the 8th of July, 1908 at his residence Allowah, located in Staniland Grove, Elsternwick.

³⁵ Refer to website Australian Dictionary of Biography. *Brady, Joseph (1828-1908)*. Viewed 10th January 2013. http://adb.anu.edu.au/biography/brady-joseph-3042



This image shows a map of the old course of the Yarra River before it was filled in and the formation of Coode Island which was formed during the dredging of the Coode Canal.

Image: Walking Melbourne Website.

APPENDIX 5 TIME LINE AND KEY DATES FOR THE PORT OF MELBOURNE 36

- 1803 British explorers discover Port Phillip
- 1835 Europeans settle at the site of Melbourne
- 1877 Appointment of Sir John Coode
- 1879 Sir John Coode writes the Coode Report
- 1880 Work begins on the Coode Canal
- 1887 Coode Canal opens
- 1888 Construction on Victoria Dock begins
- 1914 Major expansion of Victoria Dock
- 1923 Major expansion of Victoria Dock
- 1950 Opening of Appleton Dock
- 1960 Opening of Webb Dock
- 1968 Opening of Swanston Dock (container terminal)
- 1972-1975 Reworking of parts of Victoria Dock
- 1980 Reworking of parts of Victoria Dock
- 2013 and onwards as trade is expected to double over the next 25 years the port of Melbourne will expand to accommodate to this increase.

³⁶ Port of Melbourne. History of the Port. Viewed 18th January 2013. http://www.portofmelbourne.com/

APPENDIX 6 TIME LINE FOR SIR JOHN COODE 37

- 1816 Born in Cornwall, England
- 1842 Married to Jane Price
- 1844 Opened a consulting practice in Westminster
- 1849 Elected as member of the Institution of Civil Engineers
- 1856 Appointed engineer-in-chief of extensive national harbour works in Portland Harbour, England
- 1878 Appointed as Engineer for Port of Melbourne
- **1885** Revisits Australia to examine harbours and rivers in Fremantle
- 1886 Became a knight commander (KCMG), for his services at Portland 38
- 1887 Writes two reports for the Queensland government which were both approved.
- 1889 Elected as president of the Institution of Civil Engineers
- 1892 Died aged 76 in Brighton, England

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³⁷ The Australian Dictionary of Biography website.

³⁸ Wikipedia. John Coode (Engineer). downloaded 2nd February 2013.

APPENDIX 7 CANALS IN AUSTRALIA

Berry's Canal (New South Wales)

Berry's Canal is located 150 km down the southern coast from Sydney; it was built in 1822 and was 191 m long. In June 1822, Alexander Berry departed Sydney on his cutter *Blanche* and sailed 150 km down the south coast to the Shoalhaven. Amongst Berry's crew on this ship was Hamilton Hume who later became famous as an explorer. On arrival, on June 21st 1822, it became clear that the entrance to Shoalhaven Heads was dangerous, two crew members volunteered to test it using the ship's boat. The boat then capsized during the trip and two men drowned. Berry then decided to sail up the Crookhaven River but was temporarily halted by a sand spit; the crew disregarded this and pushed the *Blanch* across the spit. Hamilton Hume was left with three men at the site to cut a passage through the isthmus with only the hand tools on the ship. This was the recorded first navigable canal to be cut in Australia. Over time the river has eroded the passage, widening and deepening it to its current size.

The Alexandra Canal (New South Wales)

The Alexandra Canal, 3.9 km long, is one of the main tributaries of the Cooks River and joins up near Sydney Airport. It was excavated between 1887 and completed in 1900 by unemployment relief workers during the depression era of the 1890s. The canal provided a transport link to industries and was also a water source of industrial purposes. It was originally planned to extend through to Sydney Harbour but this did not eventuate. The Alexandra Canal was named after Princess Alexandra of Denmark and is a rare example of 19th century canal construction; it is also one of only several navigable canals to be built in New South Wales.

Hawthorne Canal (New South Wales)

Hawthorne Canal is a navigable canal that runs from Parramatta River to Marion Street in Sydney. It was built after much deliberation in the 1890s when Long Cove Creek was made into a canal at the inner-western Sydney suburb of Haberfield. A daily ferry service began to operate out of the Haberfield Wharf in 1903, but sedimentation of the canal and popular nearby tram services soon put the ferry out of business.

North Creek Canal (New South Wales)

The North Creek Canal is located at Ballina on the far north coast of NSW, approximately 750 km north of Sydney. The canal was built in the late 19th century for the purpose of providing a safe and reliable route for the transport of sugar cane. It is approximately 3.5 km long. Prior to the construction of the canal, the transport of sugar cane was done by barges which travelled up North

Creek to the junction with the Richmond River, then the Richmond River to Broadwater. The channels near the junction of the rivers were highly unstable and navigation through the waters proved very difficult due to shifting sandbanks and strong waves, causing disruption of transportation. The canal was completed in 1896 by the NSW Department of Public Works and was 19 m wide and 2.4 m deep during low tide. The transport of sugar cane was improved by the canal, however, the use of the canal for that purpose declined steadily throughout the 20th century. The canal is currently in reasonably good condition.

Sale Canal (Victoria)

Sale Canal (located approximately 200 km east of Melbourne) is one of Australia's longest canals, being approximately 5 km long. It was constructed between 1886 and 1890 in order to connect the Port of Sale with the Gippsland Lakes and from there it would connect to Bass Strait.

Denison Canal (Tasmania)

Denison Canal was designed by William Denison who was a Governor of Tasmania during the mid-1800s. The canal was 2.4 km long, 17 m wide and 3 m deep at low tide. Denison Canal is cut through the isthmus of the Forester Peninsula at Dunalley in southern Tasmania. It shortens the trip from Tasmania's east coast to Hobart by 80 km.

ACKNOWLEDGMENTS, AUTHORSHIP AND GENERAL NOTES

Acknowledgments

We wish to acknowledge the assistance provided by the Port of Melbourne Authority, Museum Victoria, the State Library of Victoria and Heritage Victoria in the preparation of this nomination.

Nomination Preparation

This nomination was prepared by Mustafa Elmi and Alex Johnson, students in engineering at Victoria University. They were taking part in a student work experience project conducted by Victoria University and Engineers Australia, Victoria Division. The work was overseen and mentored by EHV Committee member Miles Pierce.

General Notes

This document has been prepared in accordance with the Commonwealth Government Style Manual for authors, editors and printers, Sixth Edition, revised by Snooks & Co, 2002.

The method of citation used in this document is the Vancouver System. See page 190 of the above Style Manual.

CHANGE CONTROL

VERSION 5	7 MARCH 2013	5 [™] DRAFT AS SUBMITTED
VERSION 6	9 MARCH 2013	TRACK CHANGES MARK UP OF 5 TH DRAFT
VERSION 7	24 MARCH 2013	TRACK CHANGES ACCEPTED AND SOME FURTHER MINOR CHANGES
VERSION 8	24 MARCH 2013	EXPANDED LOCATION OF INTERPRETATION TO INCLUDE VICTORIA HARBOUR, STANDARDISED
		CAPTIONS
VERSION 9	27 FEB 2014	SUGGESTED CHANGES BY DOUG BOLEYN
VERSION 10	3 APRIL 2016	INCORPORATED VIRTUAL INTERPRETATION SECTION IN INTERP PLAN (OWEN PEAKE)
VERSION 11	15 APRIL 2016	10063 WORDS CHECK READ AND MINOR EDITS (OWEN PEAKE)
VERSION 12	16 APRIL 2016	10063 WORDS CHECK FOOTNOTES, REFERENCES, TABLE OF CONTENTS (OWEN PEAKE)
VERSION 13	8 MAY 2016	10171 WORDS REVISED INTERP PLAN AS PER MP EMAIL OF 19 & 20 APRIL 2016