Lights of the Victorian Coast

ROAD TOURING EBOOK

Basic Glossary

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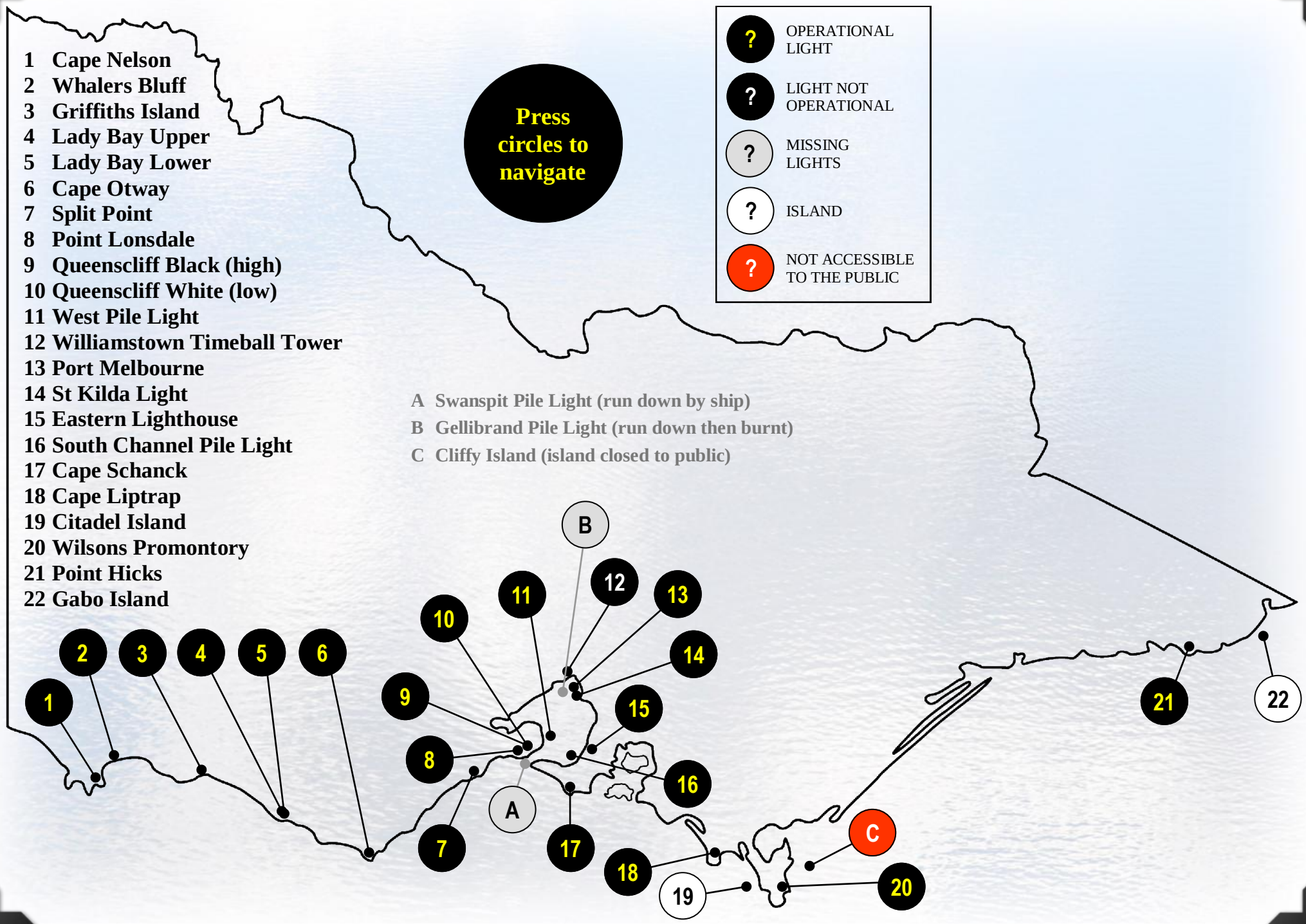
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Cape Nelson Lighthouse

NAME	**Cape Nelson Lighthouse**
LOCATION	12 km south of Portland
FIRST LIT	1884
HEIGHT	32 m / 75 m above sea level
CONSTRUCTION	Round bluestone
LIGHT	Flashing four times every 20 seconds

HISTORY

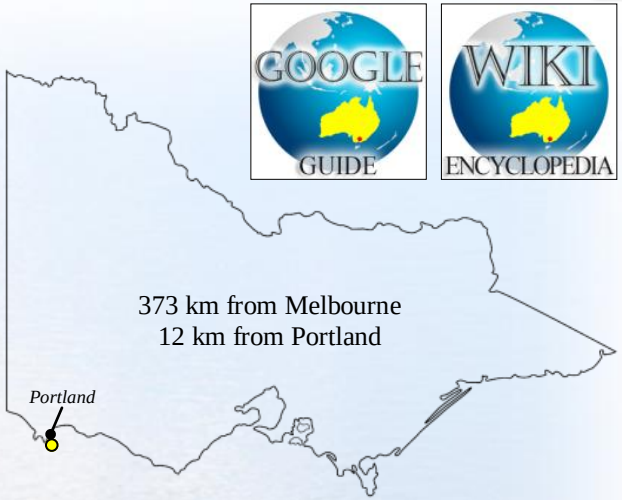
The Cape Nelson Lighthouse replaced an earlier square wooden tower believed to have been built during the 1870s which acted as a directional marker for shipping. The current tower and buildings were built between 1882 and 1884 and the lamp officially lit on 7 July 1884. The lamp was converted to incandescent kerosene in 1907 and electricity in 1934, becoming one of the first lighthouses in Australia to be powered by an electrical generator with a modern clockwork mechanism used to turn the light. In 1987 it was connected to mains electricity.

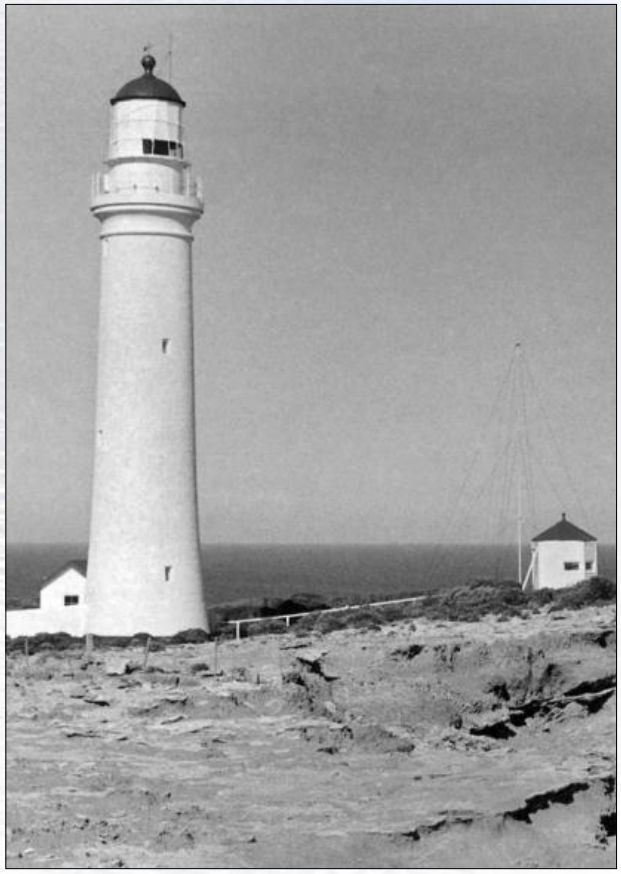
The site is prone to extreme winds, and as a result a 435 m long rubble wall was built around the Keeper's house and up to the lighthouse. The wall is 1.75 m high and 0.4 m wide.

TOURISM

Tours of the lighthouse operate daily and accommodation is available in the head light keeper's cottage and the assistant's cottage. A café operates at the site during peak holiday times.

Visit www.capenelsonlighthouse.com.au for more information.





Cape Nelson Lighthouse circa 1968 - Courtesy State Library Victoria - Photographer John T. Collins

Pharology

The study of lighthouses, including their lights and construction is known as Pharology. Those who study lighthouses are called Pharophiles.

Whalers Bluff Lighthouse

NAME	**Whalers Bluff Lighthouse**
LOCATION	Whalers Bluff, Portland
FIRST LIT	1889
HEIGHT	12 m / 41 m above sea level
CONSTRUCTION	Round bluestone
LIGHT	Flashing red and white every 30 seconds

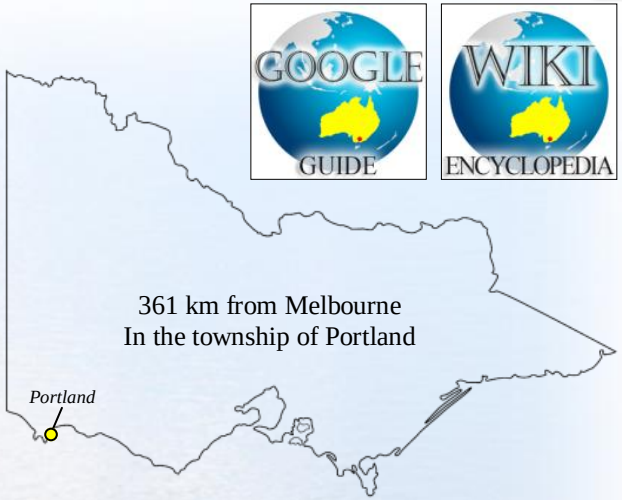
HISTORY

Also known as the Portland Bay Lighthouse, it was originally erected at Battery Point in 1857 along with the lighthouse keeper's quarters. It was first used in May 1859 and permanently lit on 1 September 1859. The Lighthouse and buildings were disassembled in 1889 and relocated stone by stone to Whalers Bluff (also known as North Bluff or Whalers Point). It was relocated to make way for gun emplacements on Battery Point and to make the lighthouse less vulnerable to attack in times of war, when it could have been more easily damaged.

It is now known as the Whalers Bluff Lighthouse and is a prominent feature from the Portland foreshore. The light is still used today to guide ships past the treacherous Whalers Reef into Portland Harbour. It is visible for over 20 km out to sea.

TOURISM

The light is located at the end of Lighthouse Street in the township of Portland, 1.5 km from the Portland Post Office. The structure is not open to the public, however can be viewed from Lighthouse Reserve which has 24 hours a day, seven days a week public access.



Whalers Bluff Lighthouse circa 1910 - Photographer George Rose - Courtesy State Library Victoria

Why we needed Lights

Early fires, beacons, flagstaffs, lighthouses, lights, lightships and buoys were established in Australian waters from as early as the 1790s. These aids helped reduce the risk of shipwreck.

Griffiths Island Lighthouse

NAME	**Griffiths Island Lighthouse**
LOCATION	Port Fairy
FIRST LIT	1859
HEIGHT	11 m / 12.5 m above sea level
CONSTRUCTION	Round bluestone
LIGHT	Flashing white, twice every 10 seconds

HISTORY

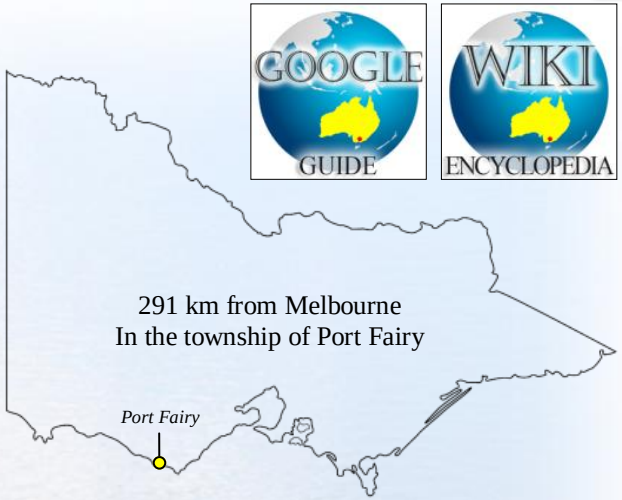
Originally called Rabbit Island, the Lighthouse is located on what is now referred to as the Moyne River and was originally built by Scottish stonemasons using locally sourced bluestone. Port Fairy was first a major whaling port and later became a entry port for immigrants and traders travelling to our shores.

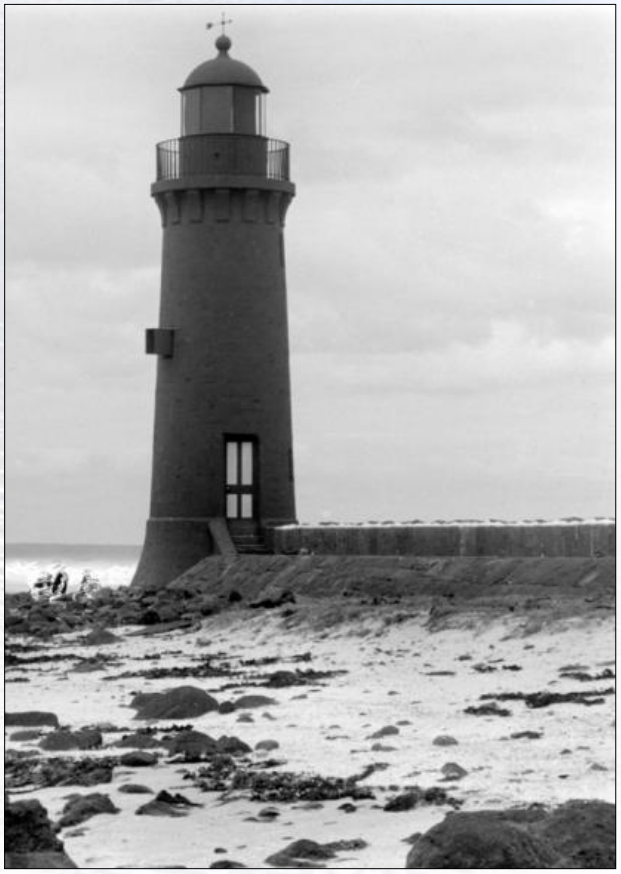
The light was automated in 1954 with the last light keeper leaving that same year. The Lighthouse Keeper's cottage was demolished around that same time. Today the light is powered by solar and wind power supplying electricity to a large bank of backup batteries which only require occasional servicing.

The lighthouse is known for its unusual internal staircase where every step has been cut into the bluestone.

TOURISM

The lighthouse and island are both accessible to the public. Access is via a footbridge and 400 m walk across the southern tip of the island. The lighthouse itself is closed to the public and there are no tours.





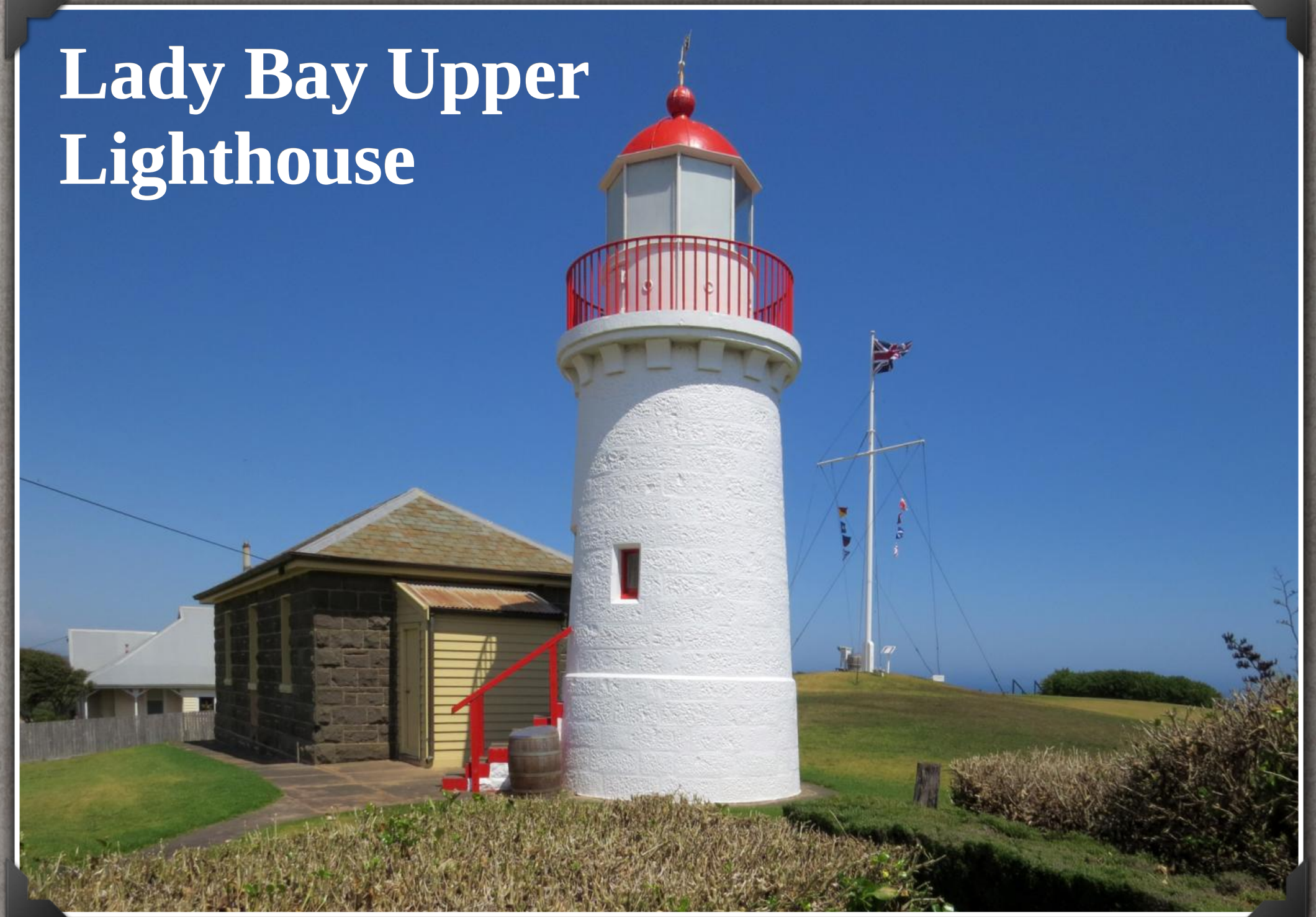
Port Fairy Lighthouse circa 1910 - Photographer George Rose - Courtesy State Library Victoria

Australian Shipwrecks

There are over 7,000 known shipwrecks in Australian waters. There are likely hundreds more that we may never know about.

The Australian National Shipwreck Database is a searchable public list of wrecks in Australia.

Lady Bay Upper Lighthouse



NAME	**Lady Bay Upper Lighthouse**
LOCATION	Warrnambool
FIRST LIT	1872
HEIGHT	7 m / 33 m above sea level
CONSTRUCTION	Round bluestone
LIGHT	Flashes white for one second every five seconds

HISTORY

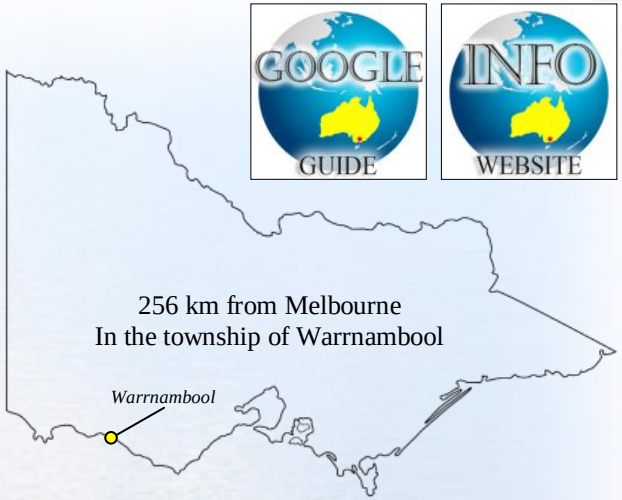
Originally built on Middle Island from bluestone imported from Maribyrnong in Melbourne in 1859. It was dismantled and moved in early 1871 to its present site on Flagstaff Hill, due to site erosion and dissatisfaction with its efficiency and named the 'Upper Lighthouse'. It is now contained within 'Flagstaff Hill Maritime Heritage Centre' and remains an operational light.

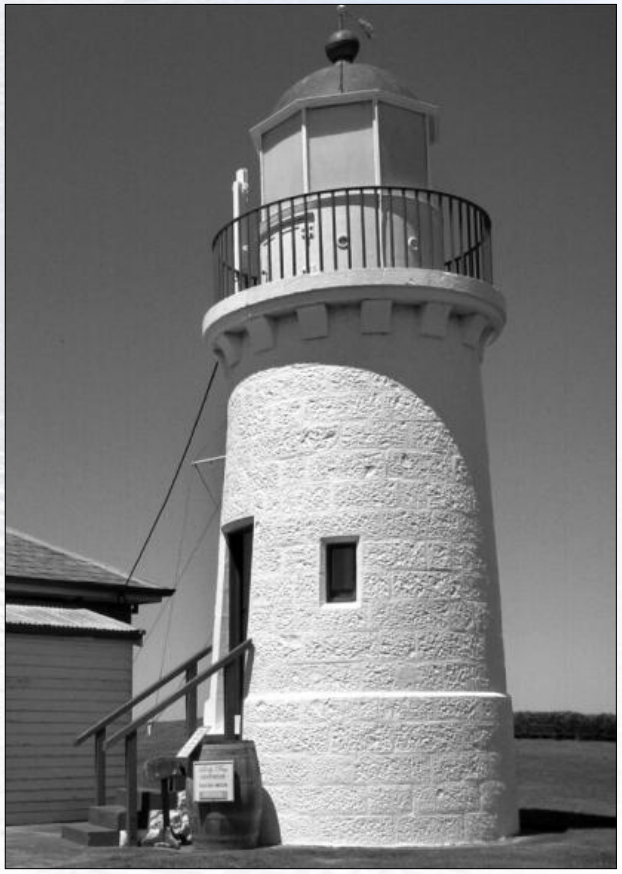
Both the Upper and the Lower Lighthouses are still in use, with their lights forming a safe path into Lady Bay when their lights are aligned.

TOURISM

You can access the lighthouse during opening times of the Flagstaff Hill Maritime Heritage Centre. Costs apply, so please check the website for costs and times before travelling.

Flagstaff Hill Maritime Heritage Centre
Website: www.flagstaffhill.com
Phone: 5559 4600 or 1800 556 111

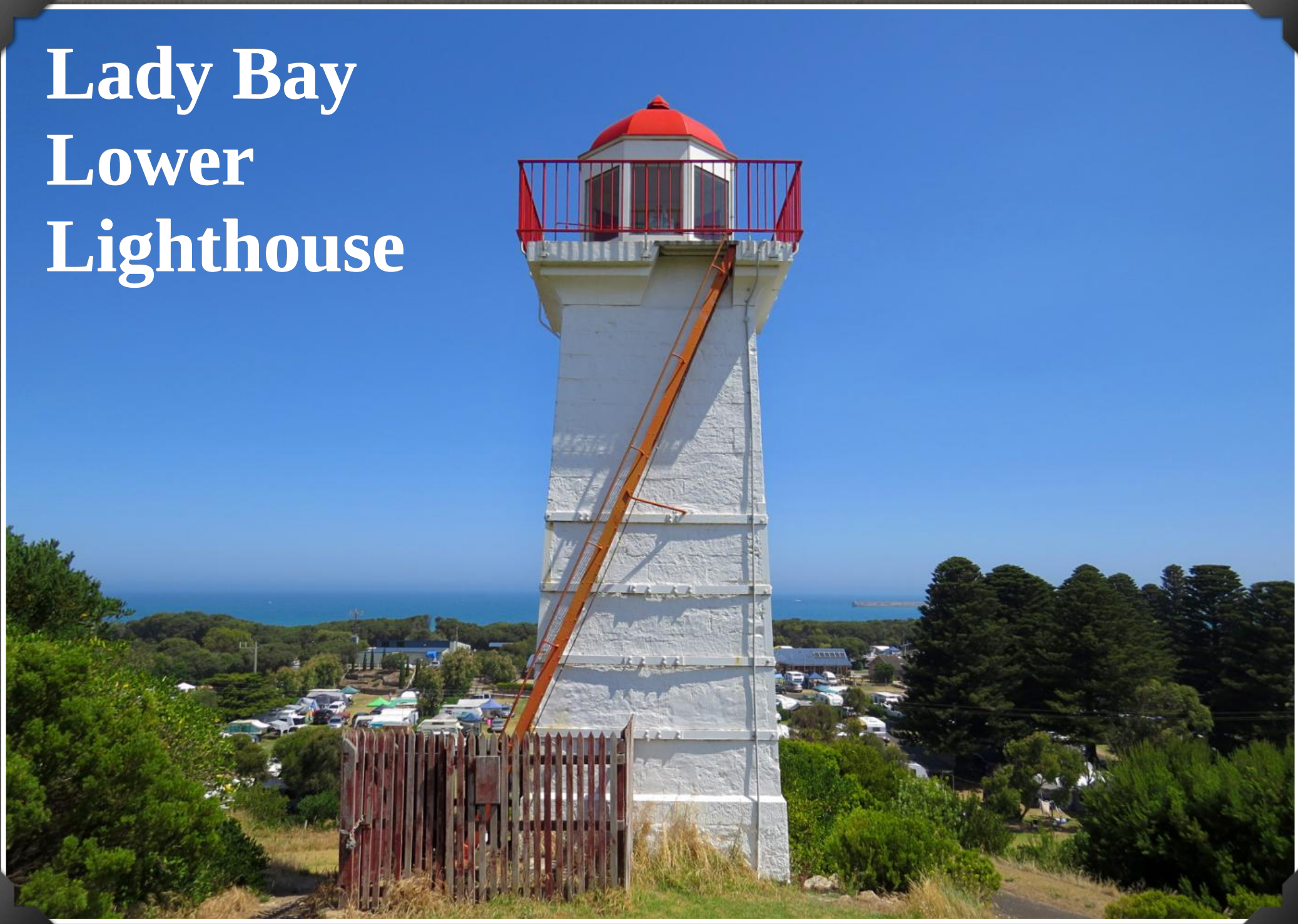




Victorian Shipwrecks

There are over 770 known shipwrecks along the Victorian Coast and most have not been located. Shipwrecks are still being found thanks to recreational scuba divers and wreck enthusiasts.

Lady Bay Lower Lighthouse



NAME	**Lady Bay Lower Lighthouse**
LOCATION	Warrnambool
FIRST LIT	1872
HEIGHT	8 m / 33 m above sea level
CONSTRUCTION	Square bluestone
LIGHT	Fixed light with red and green sectors

HISTORY

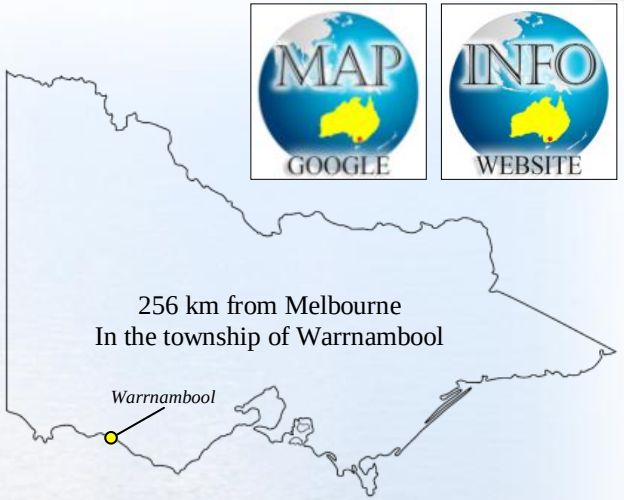
Originally built on the Lady Bay Beach from bluestone imported from Melbourne in 1859. It was dismantled and moved in 1871 to its present site on Flagstaff Hill, due to site erosion and general inefficiency because of its low elevation. It was renamed the 'Lower Lighthouse'. This lighthouse is now contained within 'Flagstaff Hill Maritime Heritage Centre' which is a major tourism attraction.

Both the Upper and the Lower Lighthouses are still in use, with their lights forming a safe path into Lady Bay when their lights are aligned.

TOURISM

You can access the lighthouse during opening times of the Flagstaff Hill Maritime Heritage Centre. Costs apply, so please check the website for costs and times before travelling.

Flagstaff Hill Maritime Heritage Centre
Website: www.flagstaffhill.com
Phone: 5559 4600 or 1800 556 111



The Shipwreck and Discovery Coasts

The coastline between Cape Otway and Port Fairy is called the Shipwreck Coast. The coastline between Port Fairy and the South Australian border is called the Discovery Coast. The Heritage Victoria page below lists many of the known wrecks along this coastline.

Brochure produced by Heritage Victoria, Australian Heritage Council and the Victorian Government. The coastline is promoted as the Historic Shipwreck Trail.

Cape Otway Lighthouse

NAME	**Cape Otway Lighthouse**
LOCATION	Cape Otway
FIRST LIT	1848
HEIGHT	20 m / 91 m above sea level
CONSTRUCTION	Bluestone
LIGHT	Triple flash every 18 seconds

HISTORY

First lit in 1848, the Cape Otway Lighthouse was the second light to be established on the Australian mainland and is the oldest surviving functional light on the Australian mainland.

The light was decommissioned in 1994 and replaced by a low powered GRP solar power light directly in front of the lighthouse. The lighthouse is in excellent condition and is testimony to the building techniques employed.

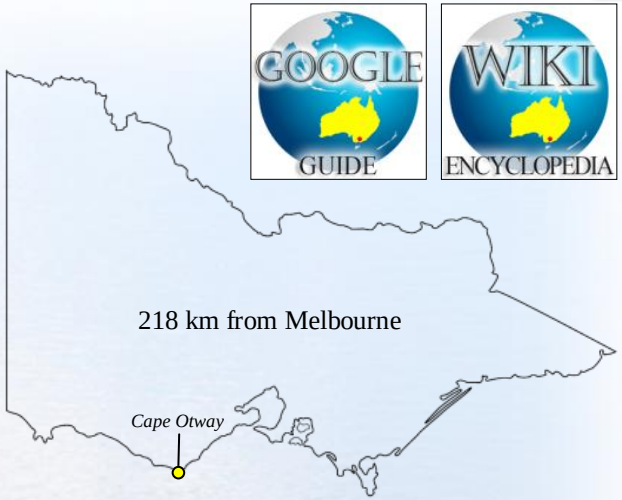
TOURISM

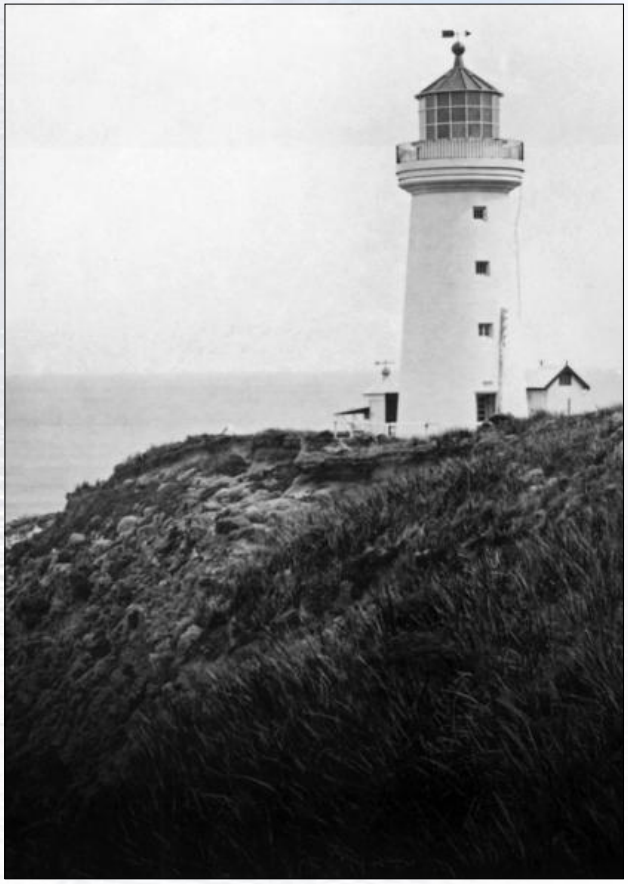
The site is managed by Parks Victoria and is open to the public. A high entrance fee is payable, however the fee includes access to the light, grounds and other buildings (most of which are set up like small museums). Tours of the light are held daily.

An onsite café overlooking the lighthouse is open during peak periods, though access to the Café is only for paying customers. Accommodation is available in the former keeper's quarters.

Further information can be found on the website below.

Website: Parks Victoria Cape Otway Lighthouse.





Shipwreck Tourism

In earlier days people would travel great distances to sit and watch a shipwreck as it broke-up on the coast. Although wrecks are far less common today, the same drive exists, and people still drive to see remnants of ships in museums or on the coast. Wreck Beach in the Otway Ranges is an example.

Split Point Lighthouse

NAME	**Split Point Lighthouse**
LOCATION	Aireys Inlet
FIRST LIT	1891
HEIGHT	34 m / 66 m above sea level
CONSTRUCTION	Rendered concrete
LIGHT	Group flash four every 20 seconds

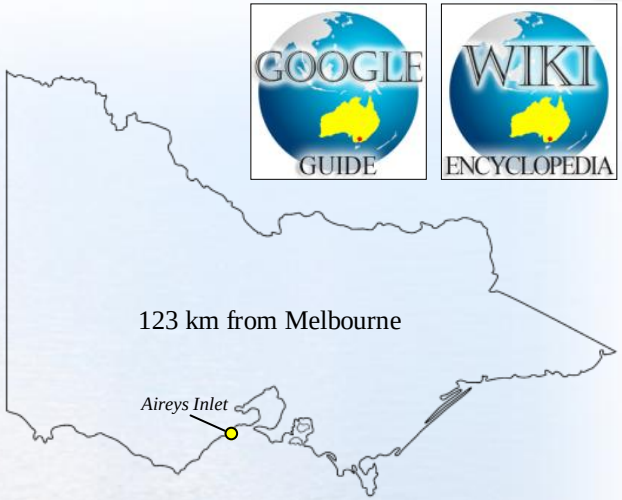
HISTORY

The Split Point Lighthouse was originally manned and known as Eagles Nest Point Lighthouse. It was also affectionately called the White Queen and White Lady Lighthouse.

The light was originally an incandescent vapour kerosene which was in service until 1919. The Commonwealth Government then assumed control and installed an automatic acetylene lamp. In 1972 the light was converted to mains electricity and a diesel backup was added in 1972. The British-made first order Fresnel lens first used at the light is still in use today and has been valued at over one million dollars. The light from the lighthouse can be seen for 37 km. The tower stands 34 m high and has 132 stairs leading to the light.

The original light keeper's residence is now a privately owned residence. Tours of the lighthouse are held regularly (weather permitting). Visit the website for more information. There are short walks around the area with interpretive signage.

TOURISM **Website:** splitpointlighthouse.com.au



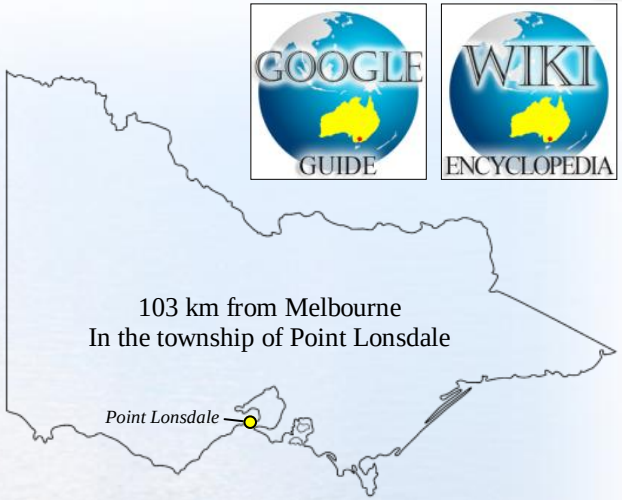
Split Point Lighthouse circa 1910 - Photographer George Rose - Photograph courtesy State Library Victoria

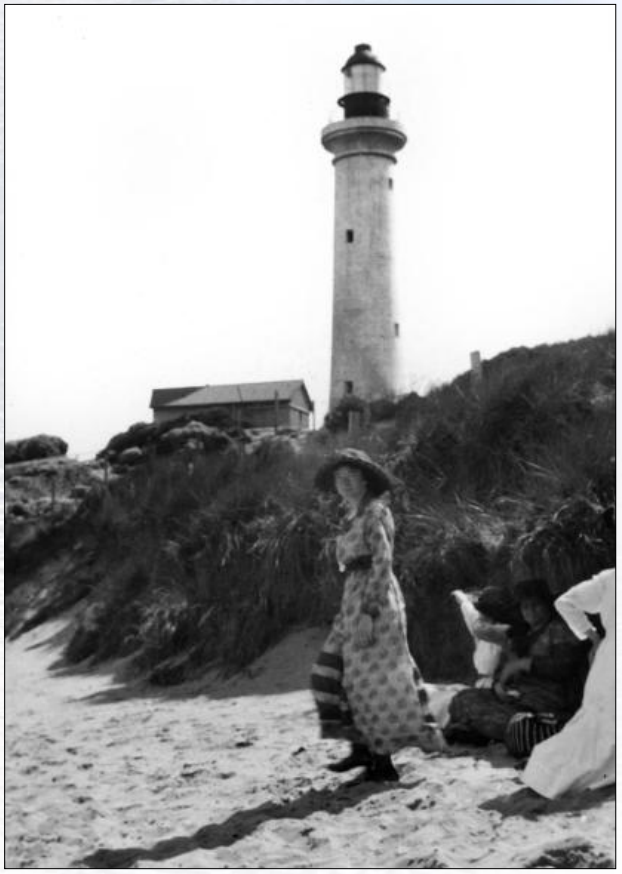
The Eye of the Needle

The Eye of the Needle is an 84 km wide strip of water in Bass Strait between Tasmania and the Australian mainland. The navigational accuracy demanded of ship's captains in this area was said to be akin to 'threading the eye of the needle'. Early lighthouses such as Cape Otway, Cape Schanck and Cape Wickham (on King Island) all played a vital role in making this area safer for mariners.

Point Lonsdale Lighthouse

NAME	**Point Lonsdale Lighthouse**
LOCATION	Point Lonsdale
FIRST LIT	1852
HEIGHT	21 m / 36 m above sea level
CONSTRUCTION	Round concrete
LIGHT	Horizontal white beam flashes twice every 15 seconds
HISTORY	Built in 1852 as a signal station, it was rebuilt as a red pillar beacon in 1856 to warn ships of Lonsdale Rock. In 1863 the wooden Shortland Bluff Lighthouse (first lit 1843) was dismantled and placed at Point Lonsdale. It served until 1902 when the present concrete lighthouse was built. Control of the lighthouse passed to the Commonwealth Government in 1915, however it was later determined to be a Harbour Light and control passed back to the Victorian Government. In 1950 the bottom of the structure was enlarged with the construction of a shipping control/observation room. The control room is staffed 24/7 and monitors all commercial shipping into and out of Port Phillip Bay. Permission must be gained by all commercial shipping from this control room before entering Port Phillip Bay. This is regarded as the last commercially manned lighthouse in Australia. It is reported that the first Australian shot of WWII was fired from Point Lonsdale, stopping a ship from leaving Port Phillip Bay.
TOURISM	The lighthouse is not open to the public but can be viewed from the beach, grounds and carpark.





Point Lonsdale Lighthouse 26 December 1919 - Courtesy National Library Australia.

The Rip

The Rip is a treacherous section of water between Point Nepean and Queenscliff. It is dangerous to navigate due to the strong currents that pass through the heads as the tide ebbs and flows. Many ships have been wrecked in this vicinity.

Queenscliff Black (high) Lighthouse

NAME **Black (high) Lighthouse**

LOCATION Shortland Bluff, Queenscliff

FIRST LIT 1862

HEIGHT 25 m / 40 m above sea level

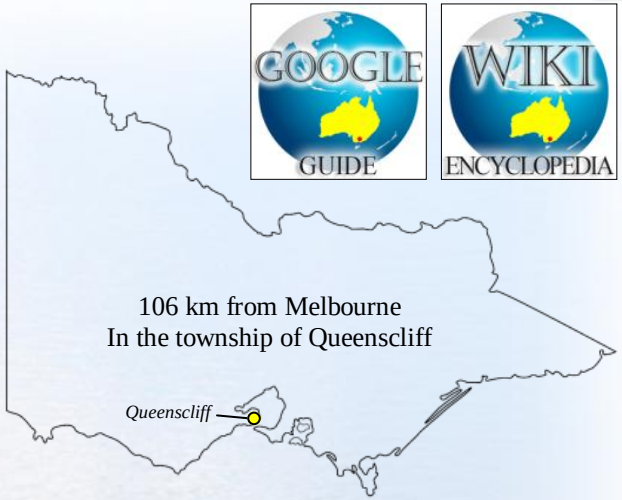
CONSTRUCTION Round bluestone

LIGHT Continuous white light

HISTORY Queenscliff was first called Shortland's Bluff and its first lighthouse built in 1842. In Georgiana McCrae's Journal she describes seeing it being built in 1841. By 1853 a second wooden light had been built further down the bluff to help guide ships through the heads. Both were replaced in 1862 with the current structures. The black lighthouse sits inside Fort Queenscliff and is the only black lighthouse in the Southern Hemisphere. Bluestone was sourced from the Footscray Bluestone Quarry, where bushrangers Ned Kelly and Harry Power later served hard labour together. It was then shipped to Queenscliff by barge. The light was converted to gas in 1890 and electricity in 1924. One of the first Victorian public telephone services was established at this lighthouse. When the white and black lighthouses are aligned from the ocean, they give a mid channel direction for approaching vessels.

TOURISM Today the light can be viewed from within Fort Queenscliff. See the website for tour times. The lighthouse can also be viewed from Citizens Park located beside the fort.

Website: www.fortqueenscliff.com.au
Address: Fort Queenscliff, King Street, Queenscliff, 3225
Phone: (03) 5258 1488



Black Lighthouse circa 1880 - Photographer C C Simpson - Courtesy State Library Victoria

Lightships

Lightships were floating hulls with lights mounted on top. They were anchored at specific locations as a navigational aid for shipping. There are no longer any lightships operating in Victorian waters.

Queenscliff White (low) Lighthouse

NAME	**White (low) Lighthouse**
LOCATION	Queenscliff
FIRST LIT	1862
HEIGHT	20 m / 28 m above sea level
CONSTRUCTION	Round bluestone painted white
LIGHT	Continuous white and red sectors

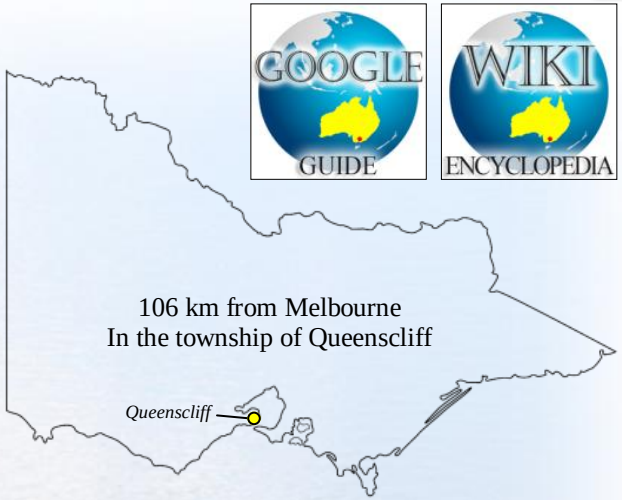
HISTORY

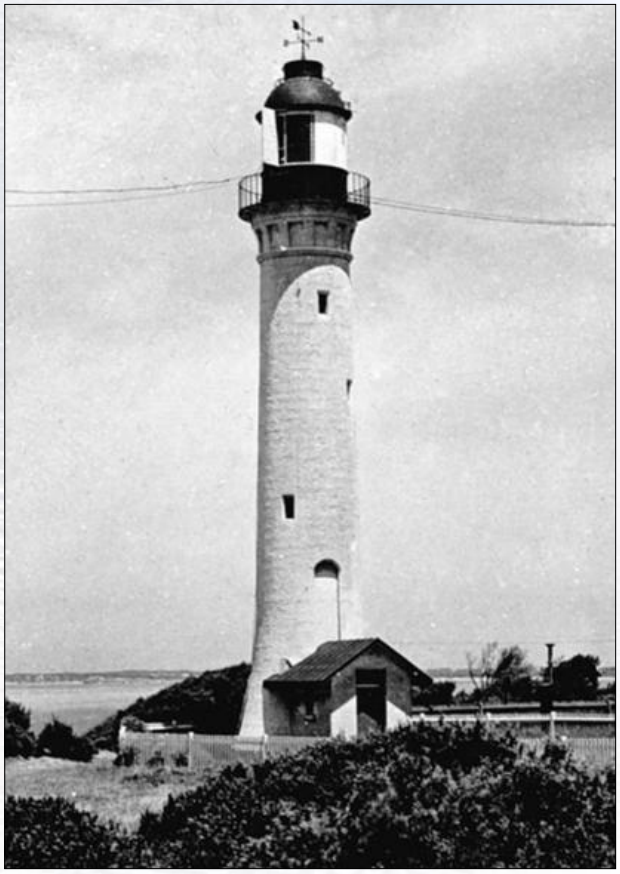
The White (lower) lighthouse is one of two lighthouses located at Queenscliff that were constructed to guide ships into Port Phillip Bay. The second of these was the white (lower) wooden lighthouse built in 1853. This allowed for ships to align the upper and lower lights to establish a safe 'centre of channel' alignment for entering the treacherous Port Phillip Bay. The first lighthouse at Queenscliff operated from 1843 at Shortland Bluff. In 1863 this was replaced by the current bluestone structure and painted white to distinguish it from the Black (high) Lighthouse.

The bluestone was sourced from the then operational Footscray Bluestone Quarry (where bushrangers Ned Kelly and Harry Power later served hard labour together) and shipped to Queenscliff by barge. The light was converted to gas in 1890 and electricity in 1924. When the white and black lighthouses are aligned, they give a mid channel direction for approaching ships and boats entering Port Phillip Bay.

TOURISM

The lighthouse is fenced off to the general public.





White Lighthouse 1935 - Photographer C C Simpson - Courtesy State Library Victoria

Pile Lights

Pile Lights were offshore lights sitting on wooden piles, driven into the sandy bottom. Port Phillip Bay had four main Pile Lights. Some, such as the Point Gellibrand Pile Light, had lights that were originally mounted on earlier lightships.

The four main Pile Lights in Port Phillip Bay were the Swanspit Pile Light, Pt Gellibrand Pile Light, West Channel Pile Light and South Channel Pile Light. Only the latter two remain.

West Channel Pile Light

West Channel Pile Light c1930 - Courtesy State Library Victoria

NAME	**West Channel Pile Light**
LOCATION	3.8 km off St Leonards Beach
FIRST LIT	1881
HEIGHT	11 m / 11 m above sea level
CONSTRUCTION	Wood
LIGHT	Flash every 6 seconds (red or white depending on direction)

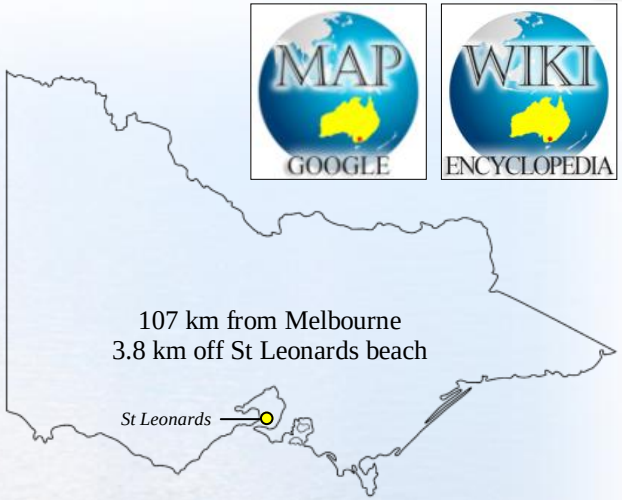
HISTORY

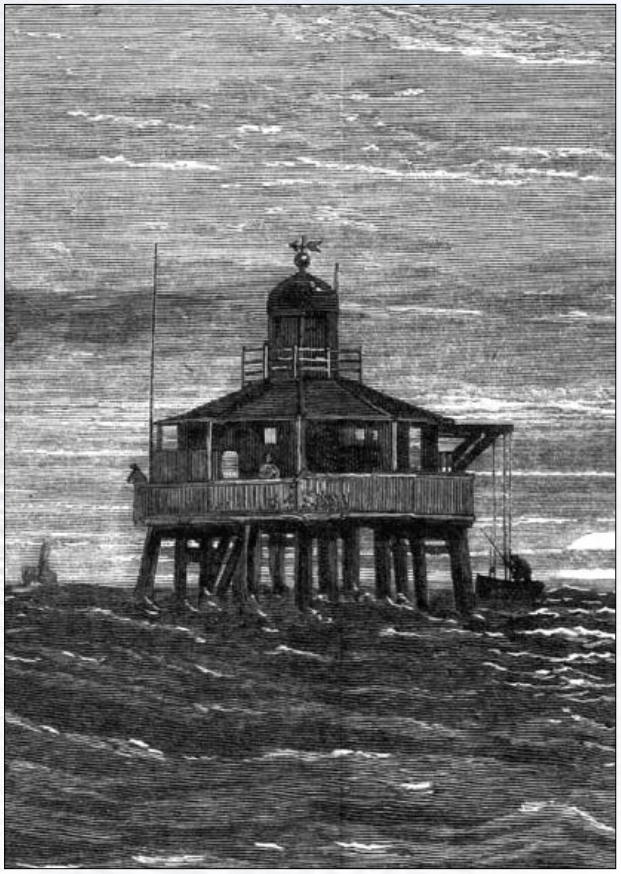
A lightship was anchored off St Leonards operated from 1854. The single story West Channel Pile Light was built to replace the lightship in 1881 and used the light relocated from the lightship. It was the second of the four pile lights built in Port Philip Bay as navigation aids. The Pile Light was an octagonal structure built on red gum piles. The light was powered by kerosene and was kept burning by the light keepers. The Pile Light included a living area with fireplace, single bedroom with four bunks and office/storeroom. A hole in the floor served as a toilet. In 1925 the light was converted to an acetylene gas light supplied by large bottles.

Today the light is solar powered and marks the western shipping lane. The West and South Pile Lights are the only surviving pile lights of their design in Australia. The West light is listed on the Victorian Heritage Register (Number H1518) and continues to have architectural and technological significance for its use of the lantern and upper tower from the 1954 lightship.

TOURISM

There is no access to the general public. It can however be viewed from a distance by private boat.





Passing the West Pile Light - Artists Alfred May and Alfred Martin Ebsworth, February 25, 1882. Courtesy State Library Victoria.

Navigational Aids

Some lighthouse structures (such as the Williamstown Timeball Tower) helped mariners reset their chronometers. These were early instruments for measuring time accurately at sea.

The Timeball tower has a replica Timeball on top of the structure. It is no longer operational as a navigation aid.

Point Gellibrand

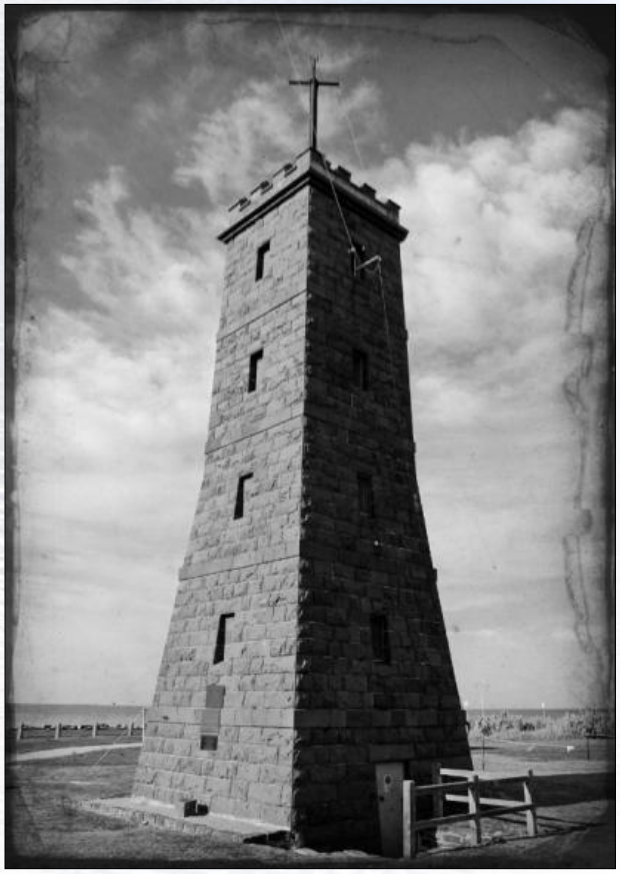
NAME	**Point Gellibrand**
LOCATION	Williamstown
FIRST LIT	1852
HEIGHT	17 m / 22 m above sea level
CONSTRUCTION	Square bluestone
LIGHT	No longer used as a light

HISTORY

A wooden light tower with rudimentary lighting was first established at Gellibrands Point in 1835. The current bluestone tower was built by convicts in 1852 to replace the previous light. The bluestone was likely sourced from the Bluestone Quarry located 500 m south (where bushrangers Ned Kelly and Harry Power later served hard labour together). From July 1853 a black painted Timeball was located on the nearby flagstaff and then in 1861 the tower was converted to a Timeball tower and the light moved to a lightship moored just offshore. When operational, the Timeball would drop daily at 1 pm so shipmasters could reset their chronometers. At two minutes before 8 pm the lantern was blocked for two minutes before the lantern re-appeared at 8 pm. The Timeball ceased operation in September 1926. In 1934 the tower was extended by 30 ft, painted white and green, and red electric lights installed. The extension was removed circa 1988 and the Timeball removed and lost. A replica was installed to commemorate the Timeball Tower which was reopened 1990. It is Victoria's second oldest lighthouse, behind Cape Otway. In 2000 the parkland was declared an historic site by then Premier Steve Bracks.

TOURISM

The Timeball tower is on public and accessible 24/7.



Lighthouse Alignment

Some sets of lighthouses were positioned so that when they were both aligned, mariners would know they were in the middle of the deeper channel. These include the Port Melbourne Channel Lights, the Queenscliff upper and lower lighthouses, and the Lady Bay upper and lower lighthouses.

Port Melbourne Channel Lights

NAME	**Port Melbourne Front Channel Light (water based)**
LOCATION	Port Melbourne
FIRST LIT	1924
HEIGHT	**Front:** 14 m / 16 m above sea level
CONSTRUCTION	Round concrete painted white
LIGHT	**Rear:** Flashing white every six seconds

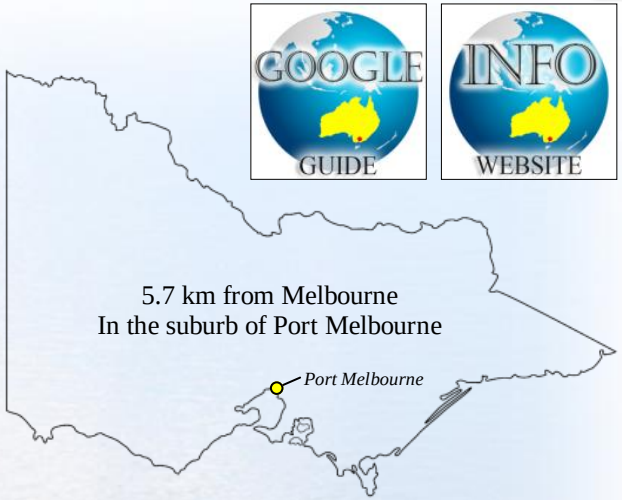
HISTORY

The two Port Melbourne Channel Lights were built in 1924 to replace earlier navigational aids. The rear light is 391 m inland and the front light is 117 m offshore in Port Phillip Bay. When aligned, the lights gave ships a safe passage via a 9 m deep channel to Station Pier.

The Port Melbourne Channel Lights have now been restored and incorporated into the Beacon Cove housing development. The rear light still functions as a Channel Light flashing a white light visible for over 35 km and a tri-colour visible for just over 25 km. The Tri-light displays red for the west of the channel, green for the east of the channel and white for the centre of the channel.

TOURISM

While access inside the Channel Lights is restricted, you can visit the land based light via Garden City Reserve, Port Melbourne. The water based Channel Light can be viewed from the Port Melbourne foreshore (at the end of Beacon Vista). The area includes interpretative signage, cafes and restaurants.



NAME	**Port Melbourne Rear Channel Light (land-based)**
LOCATION	Port Melbourne
FIRST LIT	1924
HEIGHT	**Rear:** 24 m / 26 m above sea level
CONSTRUCTION	Round concrete painted white
LIGHT	**Rear:** Flashing white every six seconds

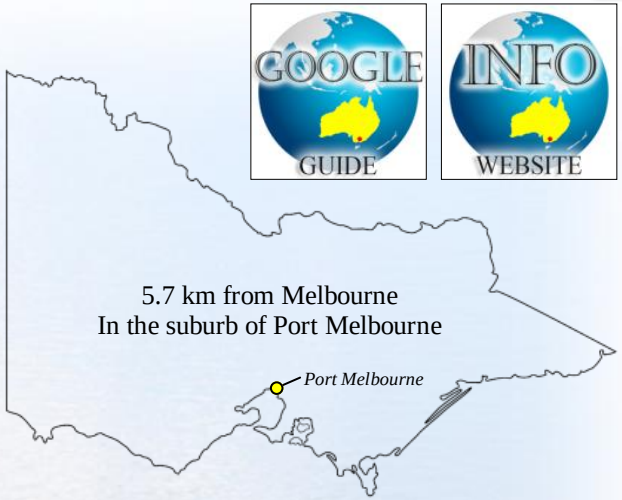
HISTORY

Built in 1924 to replace earlier navigational aids, the rear light is 600 m inland and the front light is 400 m offshore in Port Phillip Bay. When aligned, the lights gave ships and boats a safe passage via a 10 m deep channel dredged to Station Pier, Melbourne's main shipping dock.

The Port Melbourne Channel Lights have now been restored and incorporated into the *Beacon Cove* housing development. The rear light still functions as a Channel Light flashing a white light visible for over 35 km and a tri-colour visible for just over 25 km. The Tri-light displays red for the west of the channel, green for the east of the channel and white for the centre of the channel.

TOURISM

While access into the Channel Lights is restricted, you can access the land based light via Garden City Reserve. The water based Channel Light can be viewed from along the Port Melbourne foreshore at the end of Beacon Vista. The area includes historic boards and cafes and restaurants and has a lovely walk along the foreshore.



Flagstaffs

Flagstaffs were flagpoles (usually with a cross beam) designed for the displaying of flags as a form of communication between the land and ships. Melbourne's first Flagstaff was erected in 1840 on Batman Hill at what is now the Flagstaff Gardens.

St Kilda Marina Seaside light

NAME **St Kilda Marina Seaside Light**

LOCATION St Kilda Marina

FIRST LIT 1965

HEIGHT 18 m / 19 m above sea level

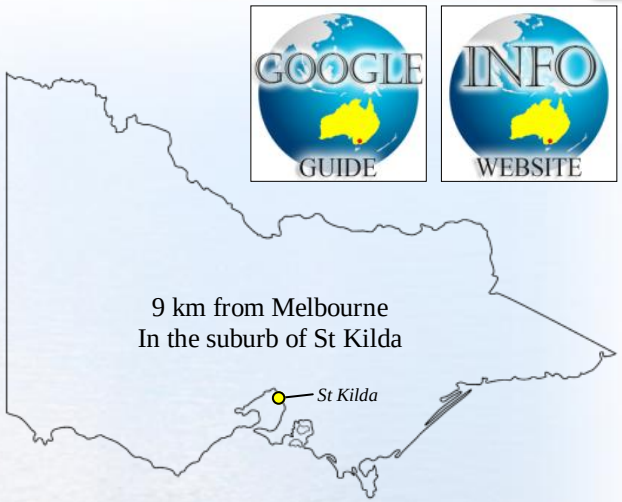
CONSTRUCTION Concrete

LIGHT Unknown

HISTORY A seaside light found at St Kilda in Port Phillip Bay. This is not officially a lighthouse, however we have included it in this eBook due to its high visibility and picturesque nature. It is highly visible from the popular St Kilda Beach and the St Kilda Pier where this photograph was taken.

TOURISM The light is only open to members of the St Kilda Yacht Club. For others, the light can be viewed from the St Kilda Beach and the St Kilda Pier, where this photograph was taken using a zoom lens.

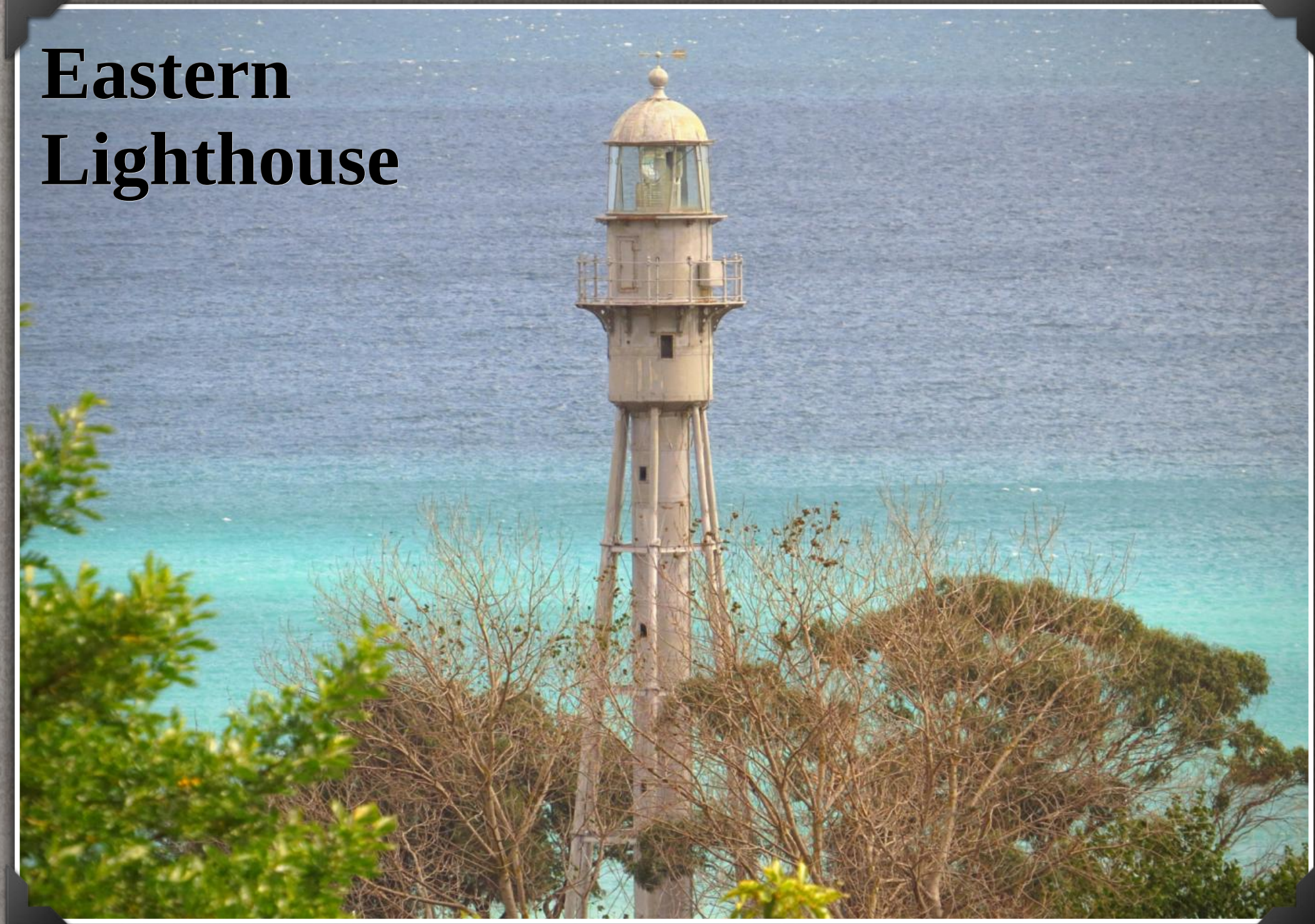
While this light is not considered a significant coastal light, and is located on private property, it does have the unique distinction of being one of the most observed lights in Victoria due to its prominent location.



The Lights

Early lights were simple fires lit to signal passing ships. Light technology developed over time and became more powerful. Lights today are electric, often solar powered, and can reach great distances.

Eastern Lighthouse



NAME **Eastern Lighthouse**

LOCATION McCrae

FIRST LIT 1883

HEIGHT 33 m / 45 m above sea level

CONSTRUCTION Steel

LIGHT Flash white every 15 seconds

HISTORY

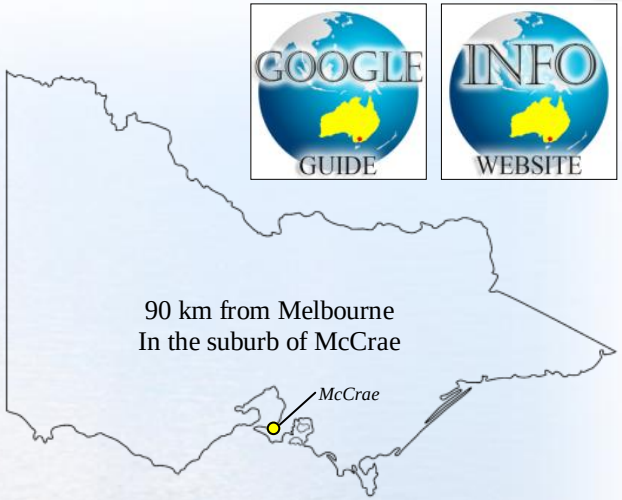
The original lighthouse was called the South Channel Lighthouse and was built of wood in 1854. It was replaced with the current steel structure built by 'Chance Brothers & Co.' in 1874. The structure was built in England and shipped to Victoria in pieces before being assembled on site.

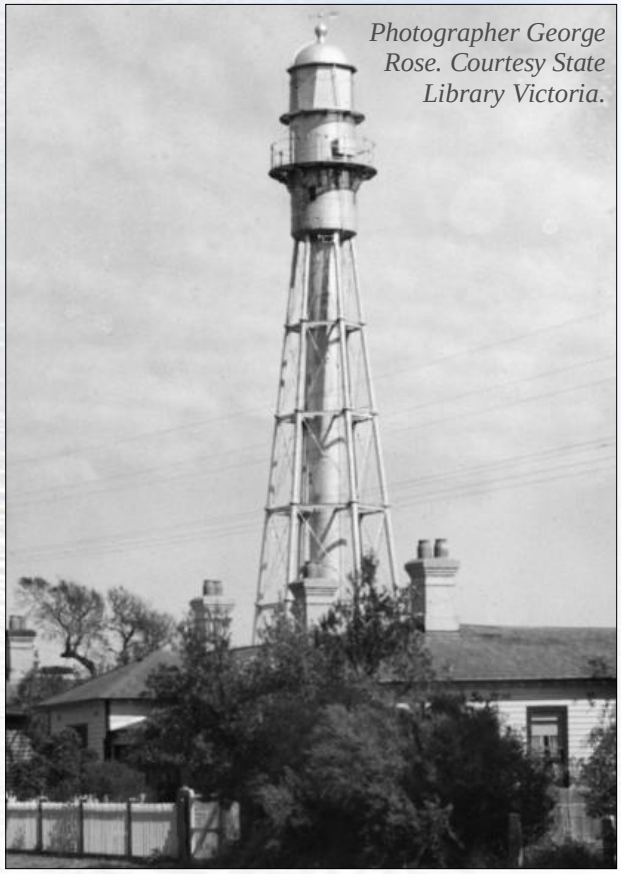
The light was decommissioned by the Port of Melbourne Authority in 1994 and responsibility for the light was transferred to the 'Foreshore Committee' in 1996. In 1998 substantial restoration works were undertaken by the Department of Natural Resources and Environment. It is now listed on the 'Victorian Historic Buildings Register'.

When it was operational, the light worked in conjunction with the South Channel Pile Light to establish a 'lights-in-line' channel centre for ships travelling towards Melbourne.

TOURISM

Today only the grounds around the light are open to the public. Access is via the carpark which is open 24 hours a day, 7 days a week.





Photographer George Rose. Courtesy State Library Victoria.

South Channel Lighthouse circa 1910 - Photographer George Rose - Courtesy State Library Victoria

The Lights

The source of light in a Lantern Room is called the 'lamp'. The magnification of the light is caused by the lens, which may also be referred to as the 'optic'.

Lighthouse
Light intensity Chart

Nautical Mile Range

- **Coal & Wood**
- **Small modern auto lights**
- **Kerosene and reflectors**
- **Kerosene and small lens**
- **Rotating modern auto light**
- **Kerosene and first order lens**
- **Electricity and first order lens**
- **One of Australia's more powerful lights**

The Nautical Mile is the unit used by sea and air navigators to measure distance at sea. The International Nautical Mile was defined by the first 'International Extraordinary Hydrographic Conference' held in Monaco in 1929 as being 1,852 metres.

Based on a display at the Cape Willoughby (Kangaroo Island, South Australia) lighthouse

South Channel Pile Light

NAME	**South Channel Pile Light**
LOCATION	3 km off Rye beach
FIRST LIT	1874
HEIGHT	7 m / 7 m above sea level
CONSTRUCTION	Wood
LIGHT	Unknown

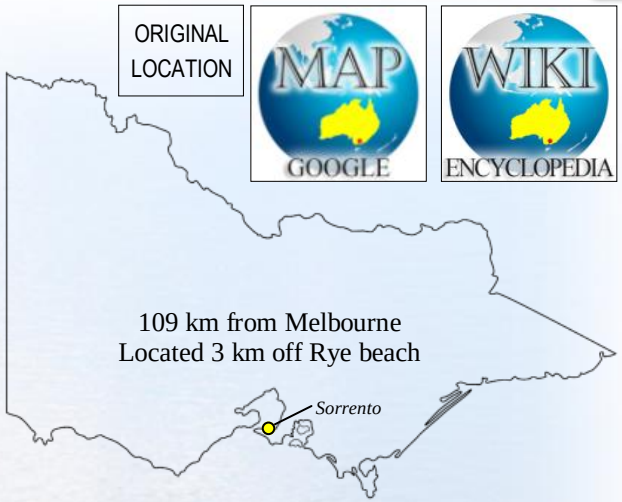
HISTORY

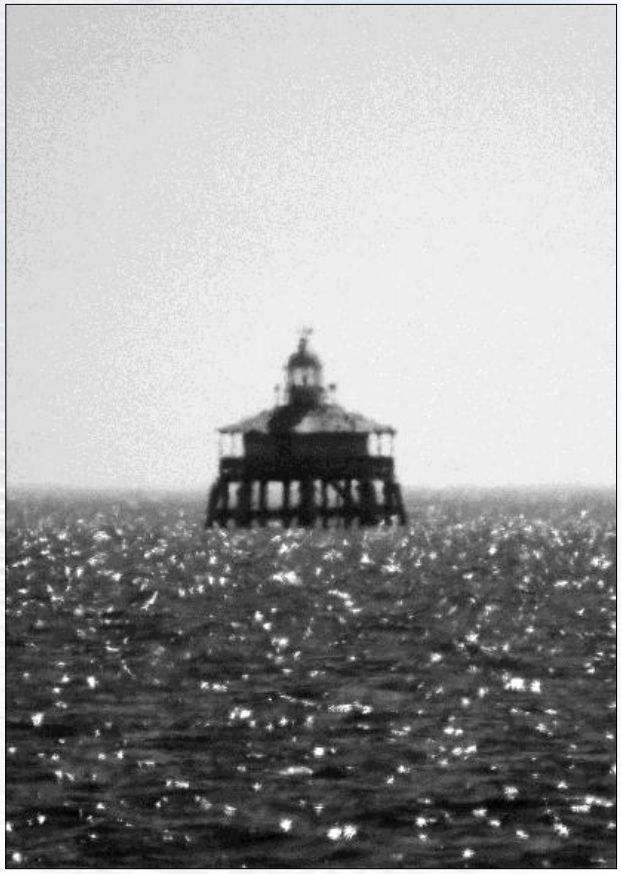
Originally there were four pile lights in Port Philip Bay, however today only the South and West survive. When it was operational, it worked in conjunction with the Eastern Lighthouse to create a navigational centre-of-channel line. The Eastern Lighthouse functioned as the back light and the South Channel Pile Light as the front light.

The original Pile Light was built on red gum piles and had a light powered by kerosene and kept burning by the keepers. The Pile Light included a living area with fireplace, single bedroom with four bunks and office/storeroom. A hole in the floor served as a toilet. In 1925 the light was converted to an acetylene gas light supplied by large bottles. The light operated for 111 years until 1985. In 1998 it was removed by Parks Victoria, restored and relocated off the coast of Rye, 3 km from its original home. It now serves as a navigational marker for small boats and is listed on the 'Victorian Heritage Register' (H1519).

TOURISM

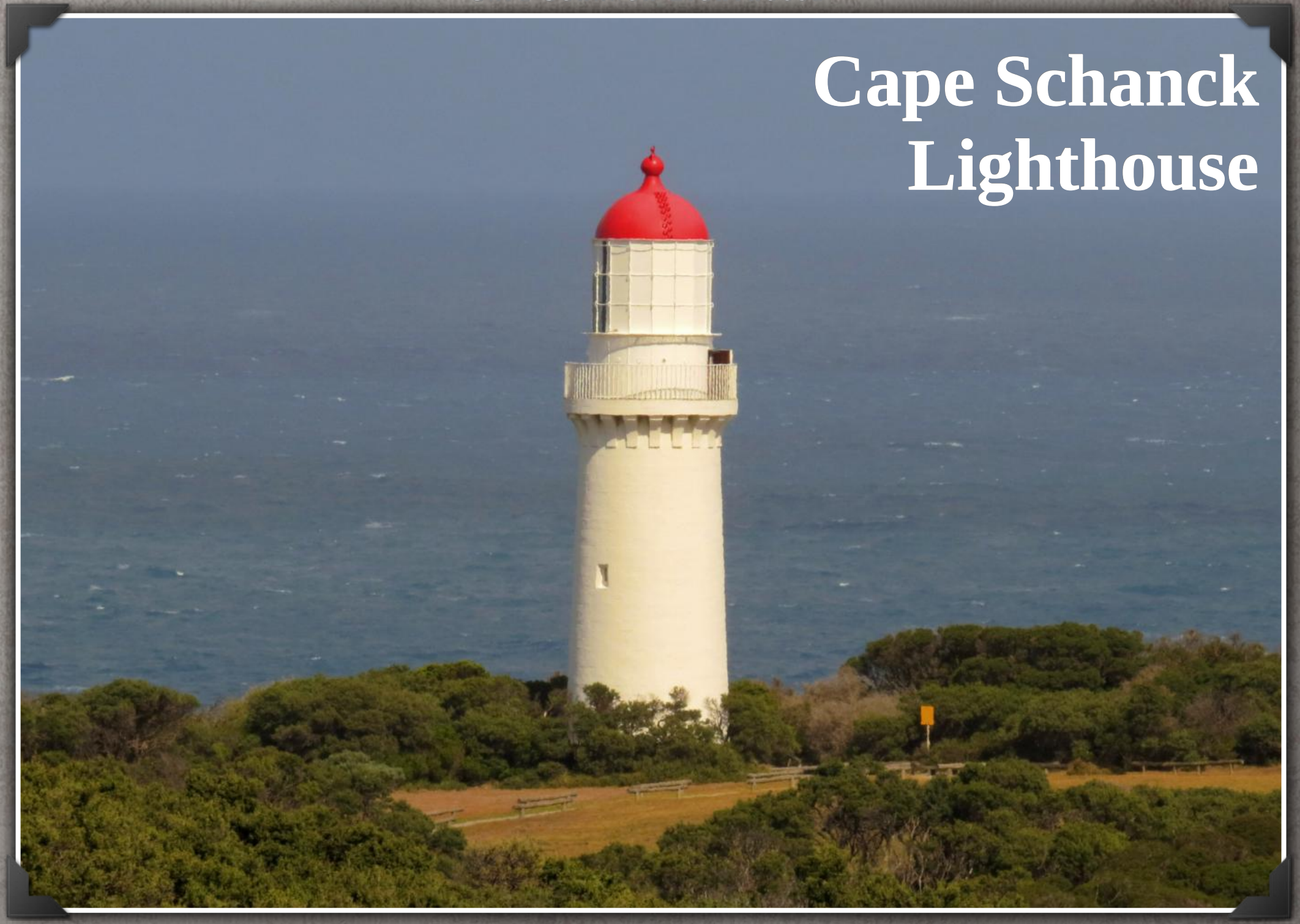
It can be viewed up close by private boat, though access onto the light is strictly prohibited. Boats can be hired locally.





Lantern Room

Lantern rooms are small areas that enclose the light and lens. These were often built separately from the tower and transported to the site later. Keepers would spend considerable time in their lantern room caring for the light and keeping the lens and windows clean.



Cape Schanck Lighthouse

NAME	**Cape Schanck Lighthouse**
LOCATION	Cape Schanck
FIRST LIT	1859
HEIGHT	21 m / 100 m above sea level
CONSTRUCTION	Local limestone/sandstone and painted white
LIGHT	10.8 sec light followed by flash. Colours change per bearing

HISTORY

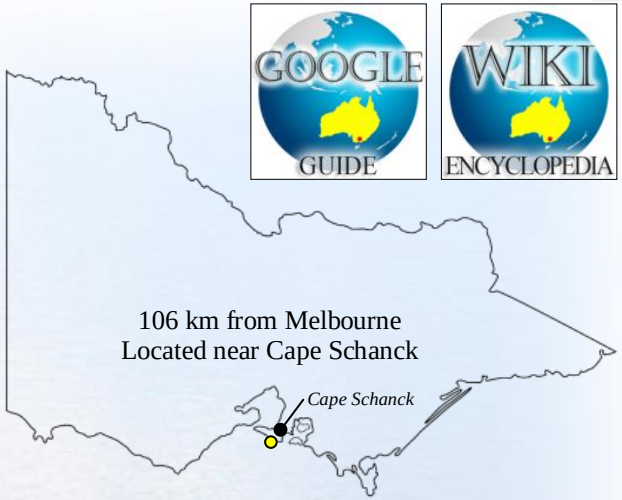
Located on the southern most tip of the Mornington Peninsula, it was the second coastal light to be established in Victoria. Built using locally sourced limestone and sandstone and painted white, it has a feature staircase made from stone instead of the normal wrought iron, seen in many other lighthouses of this era.

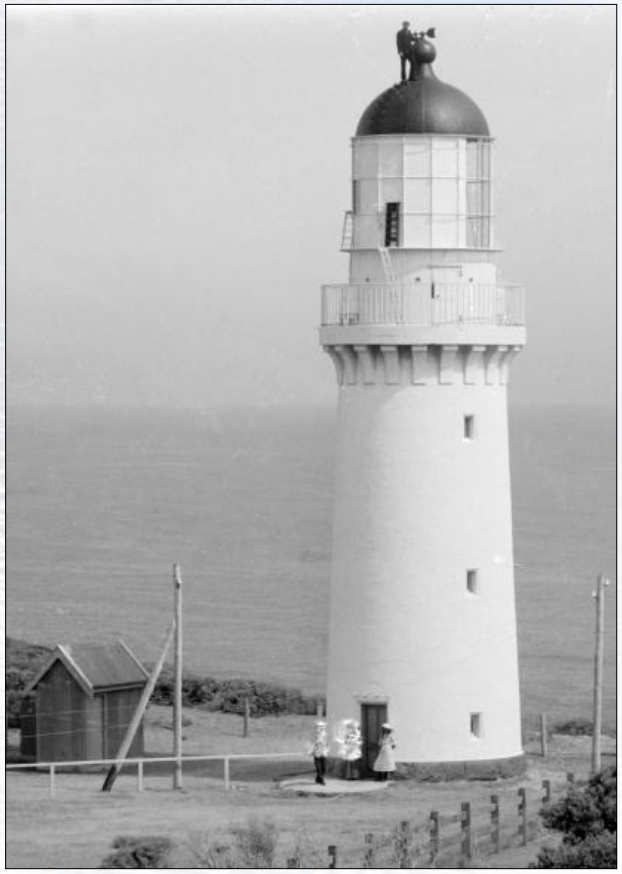
Originally lit in 1859, the light apparatus was replaced in 1915, with upgrades in 1907, 1917 and 1940. It was fully automated in 1987 with a new light with a range of 48 km. While the old clockwork apparatus no longer functions, it remains in place. The lighthouse continues to function as a beacon, operating mostly as it did when it was first established.

TOURISM

Today guided tours are conducted on most weekends (weather permitting). Call before travelling. A moderate fee is charged which also gains you access to the museum. See the website below for pricing. The lighthouse is not open during the week. Accommodation is available at the lighthouse.

Website: www.capeschancklighthouse.com.au
Phone: 1300 885 259



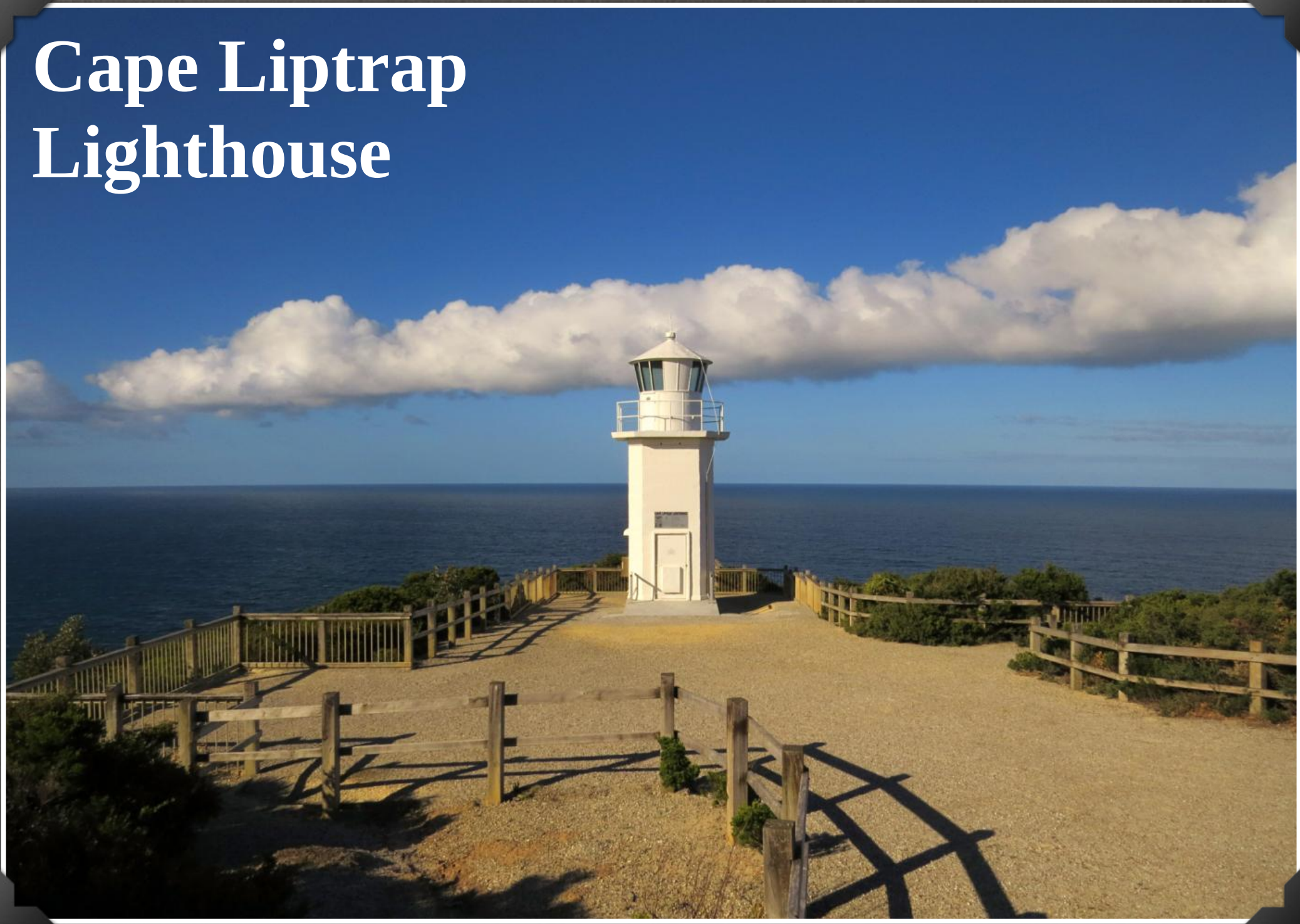


Cape Schanck Lighthouse circa 1910 - Photographer George Rose - Courtesy State Library Victoria

Lighthouse Shape

Many lighthouses were built round, as this shape made them more impervious to damage from strong winds hitting the structure from any direction. The Cape Liptrap light is one of just a few exceptions along the Victorian coast.

Cape Liptrap Lighthouse



NAME **Cape Liptrap Light**

LOCATION Cape Liptrap

FIRST LIT 1951

HEIGHT 10 m / 94 m above sea level

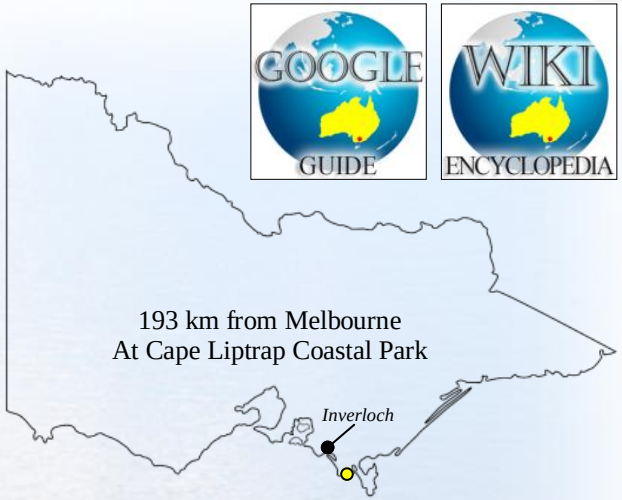
CONSTRUCTION Octagonal concrete painted white

LIGHT Flashing three times every 15 seconds

HISTORY The Cape Liptrap Light is situated on high cliffs in an isolated part of the coastline in South Gippsland. The light at Cape Liptrap was first built in 1913 as a navigational aid for shipping. At the time it was the second lighthouse in Australia built by the new Commonwealth Lighthouse Service (CLS). The first was Citadel Island and both were constructed to be fully automated. A lighthouse keeper remained on the island for the first six months to ensure the light operated correctly. It consisted of an acetylene light mounted on a 6 m high steel tower and was the first Commonwealth funded automated unattended light. The steel tower was dismantled in 1951 and replaced with the current octagonal concrete light. The light was converted to mains power in 1970 and remains operational today with a range of 34 km. Cape Liptrap Coastal Park was declared in 1997 and is managed by Parks Victoria.

TOURISM Today the light is accessible 24/7 and is a short walk from the carpark. Another interesting attraction near the light is the Walkerville South Lime Kilns, a large brick kiln with buttresses protruding from cliffs.

Website: parkweb.vic.gov.au



Cape Liptrap circa 1960 - Photograph courtesy State Library Victoria

Lenses

Lenses in lighthouses were designed to gather light from the light source and combine it into a powerful directional beam that could be viewed from greater distances. Lenses were generally made from highly polished glass.

Citadel Island Lighthouse

NAME	**Citadel Island**
LOCATION	8 km west of the coast of Wilsons Promontory
FIRST LIT	1913
HEIGHT	8 m / 90 m above sea level
CONSTRUCTION	Steel
LIGHT	White light flashes every six seconds

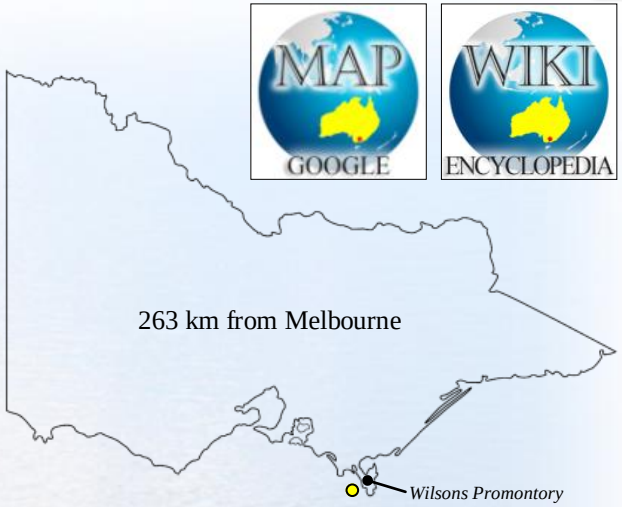
HISTORY

Citadel Island Lighthouse was built in 1913 and was named because of the island's fortress-like appearance. It is located off the west coast of Wilsons Promontory, in the Glennie group of islands, and was the first lighthouse in Australia to be built by the Commonwealth Lighthouse Service (CLS). The second was Cape Liptrap Lighthouse. Both were constructed to be fully automated, with Citadel Island being the site of the first automatic acetylene powered lighthouse in Australia.

The first light installed at the Citadel Islands Lighthouse included an AGA 400 mm Fresnel drum lens. In 1982 it was replaced with a solar powered light on a fibreglass tower. The old lamp and light room was removed in 1992 and sat in storage for many years before volunteers restored the light and constructed a new light room from parts of the original. Both went on display at the Gippsland Regional Maritime Museum in June 2004.

TOURISM

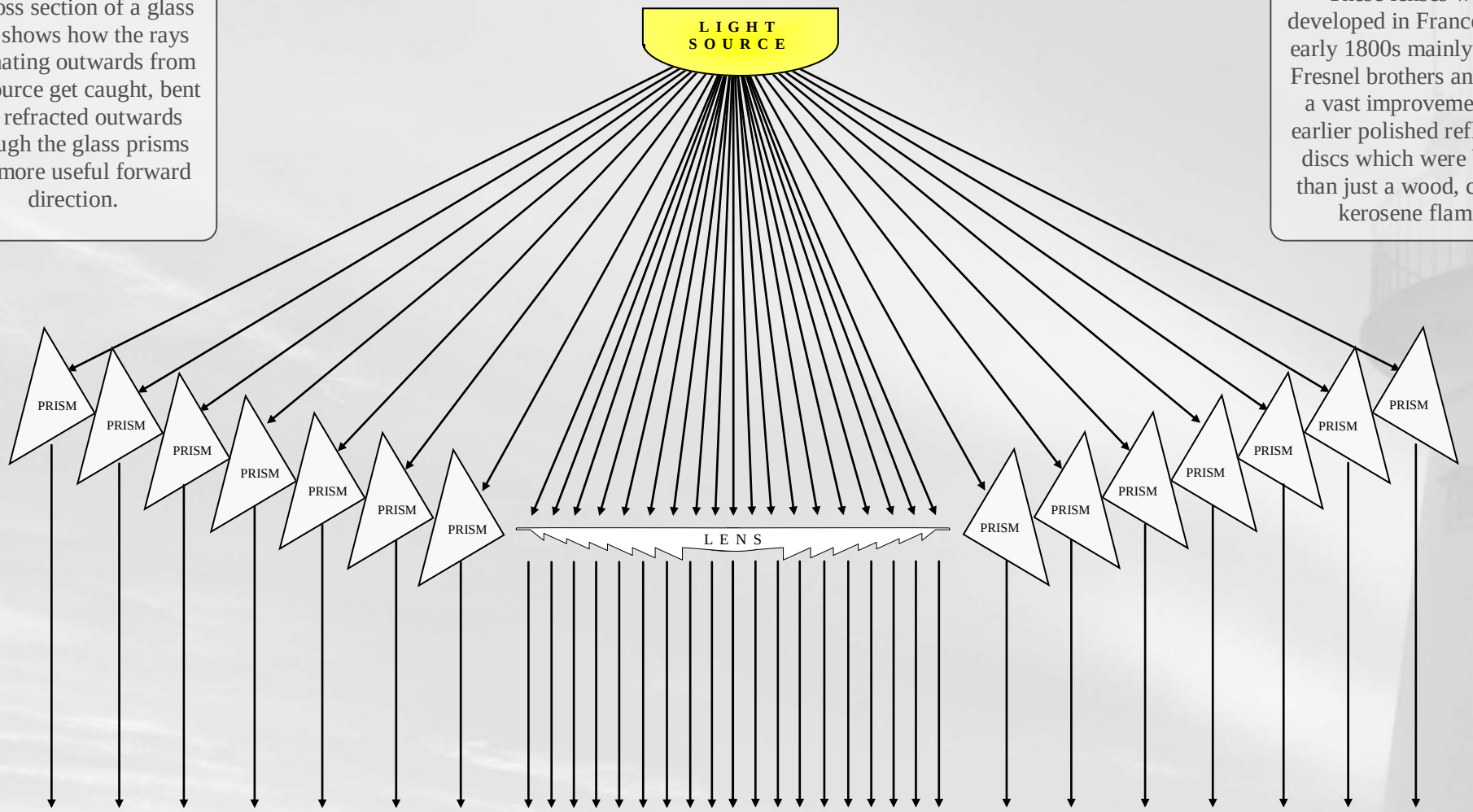
The light room is at the Gippsland Regional Maritime Museum
Website: yarrampa.customer.netspace.net.au
Address: Cnr Tarraville Rd & Bay St. Port Albert, Gippsland
Phone: 03 5183 2520



Lighthouse Lamp
Cross section (Light reflection)

A cross section of a glass lens shows how the rays emanating outwards from the source get caught, bent and refracted outwards through the glass prisms in a more useful forward direction.

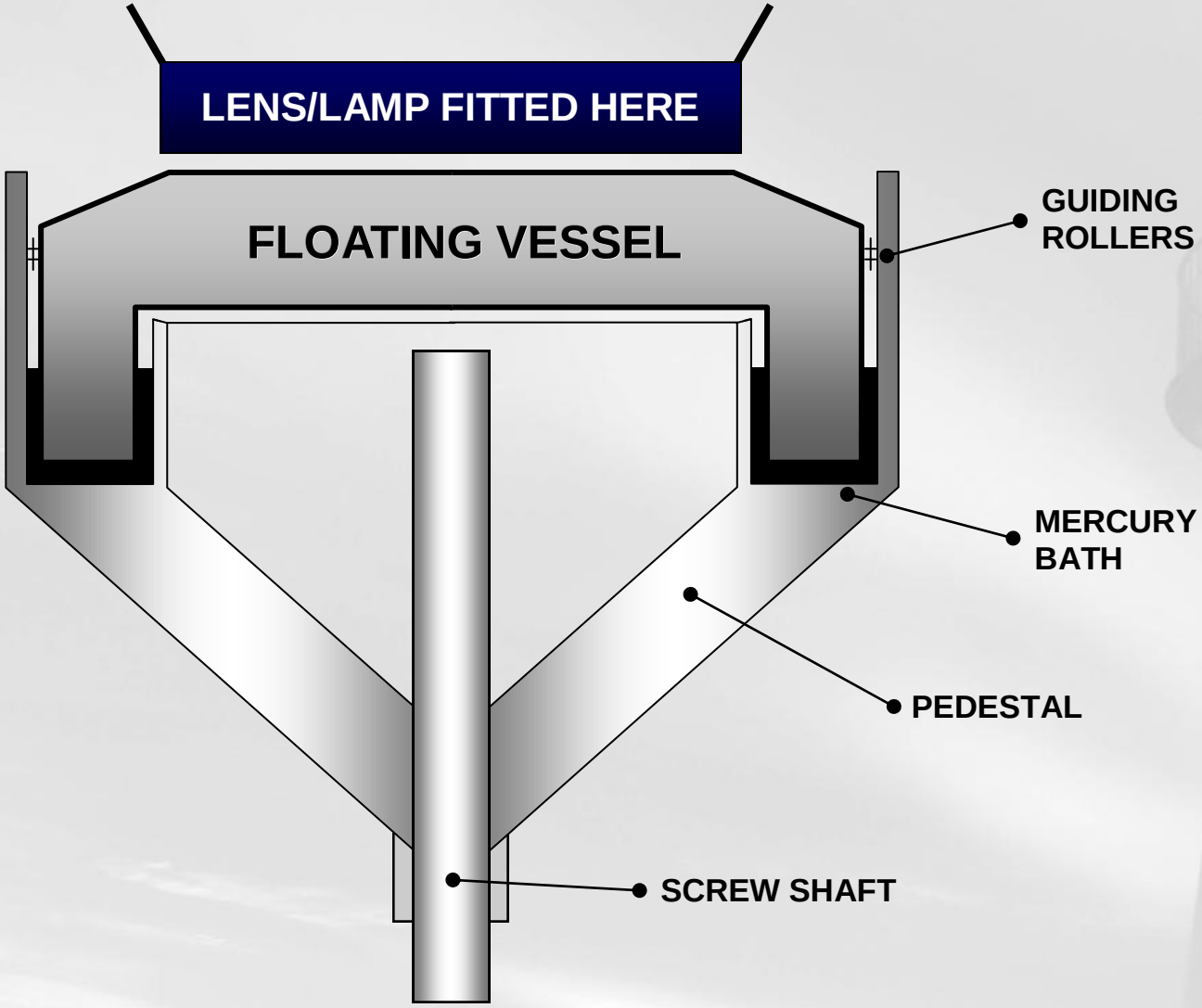
These lenses were developed in France in the early 1800s mainly by the Fresnel brothers and were a vast improvement on earlier polished reflecting discs which were better than just a wood, coal or kerosene flame.



Based on a display at the Cape Willoughby Lighthouse at Kangaroo Island in South Australia

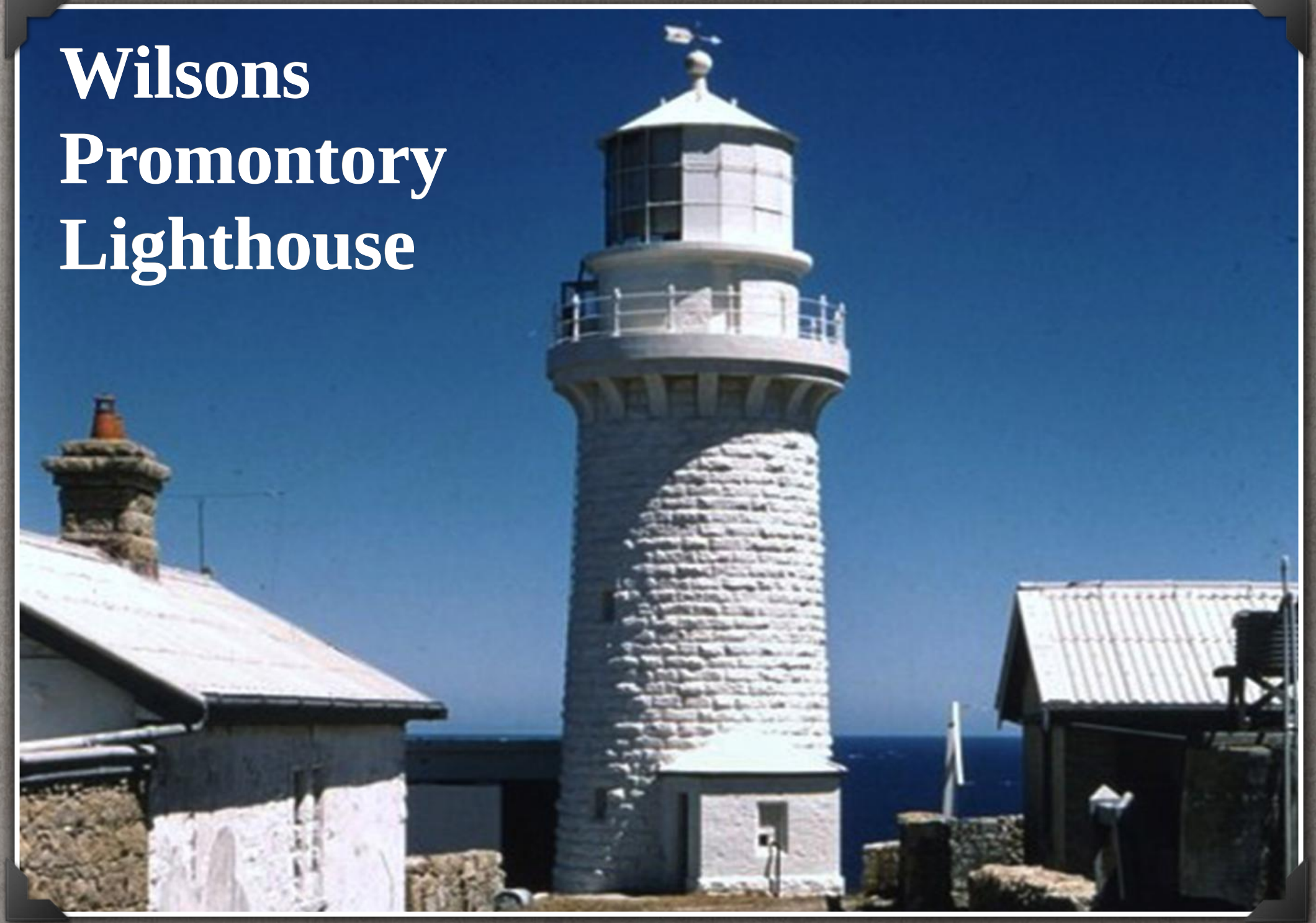
Lighthouse Lens/Lamp Mercury Float

Mercury was an important part of early lighthouse lamp design. Because mercury is 13.6 times heavier than water, it is possible for heavy fixtures such as lenses, to float on it. When a heavy rotating crystal Fresnel Lens was installed at a lighthouse, so was a Mercury Float to enable the heavy lens to float on the mercury and therefore rotate freely. Manufacturers also claimed the mercury helped smooth out vibrations caused by earthquakes.
It was later discovered that mercury had a detrimental effect on those handling it.



Based on a display at the Cape Willoughby Lighthouse, Kangaroo Island, South Australia

Wilsons Promontory Lighthouse



Wilsons Promontory Lighthouse painted white 1961 -

NAME	**Wilsons Promontory Lighthouse**
LOCATION	Wilsons Promontory
FIRST LIT	1859
HEIGHT	19 m / 117 m above sea level
CONSTRUCTION	Round granite
LIGHT	Flashes 0.2 second every 7.5 seconds

HISTORY

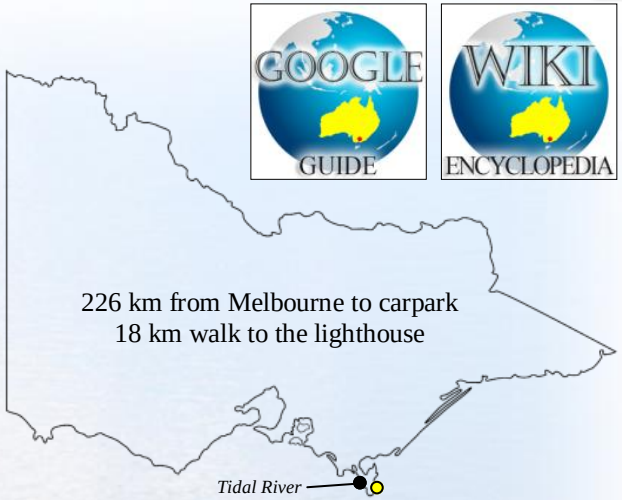
The Wilsons Promontory Lighthouse is a round tower built from locally sourced granite by convict labour in 1859 and initially painted white. It is a navigational aid warning of the many off-shore islands in this vicinity. The cost of constructing the lighthouse was shared equally between the New South Wales and Victorian Governments of the time. In the 1980s the paint was removed. The original light was a fixed catadioptric light with 32 wicks mounted in parabolic mirrors. This was upgraded to an incandescent kerosene mantle in 1913 and electric lamp (powered by generators) in 1975.

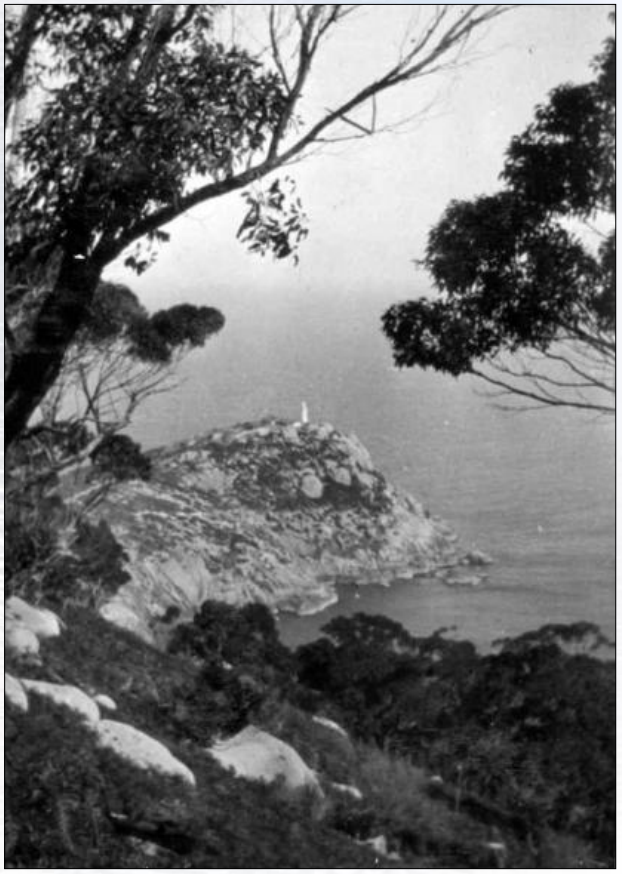
TOURISM

The lighthouse is managed by Parks Victoria and can be visited by hikers via Wilsons Promontory National Park. Refer to the website for the walking times of the two routes.

Accommodation is also available in the three keeper's cottages and bookings must be made in advance. Hikers are required to have hiking permits before starting any treks and they must be carried at all times.

Website: parkweb.vic.gov.au





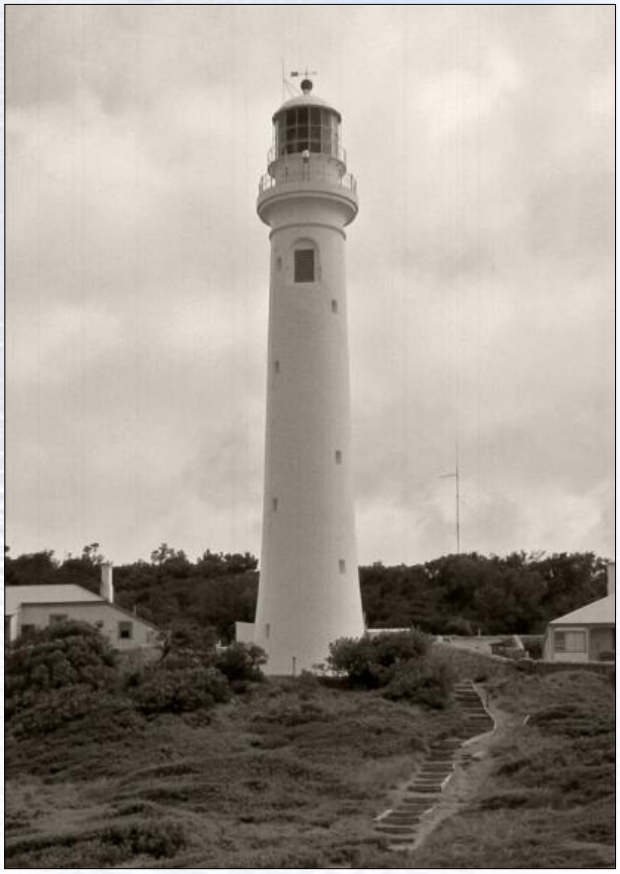
Wilsons Promontory Lighthouse circa 1900 - Photographer B Boehm - Courtesy State Library Victoria.

World's first established lighthouse

The world's first established lighthouse was the 'Lighthouse of Alexandria', built third Century BC in Egypt. It consisted of a furnace at the top and was used to signal the entrance to Port Alexandria.

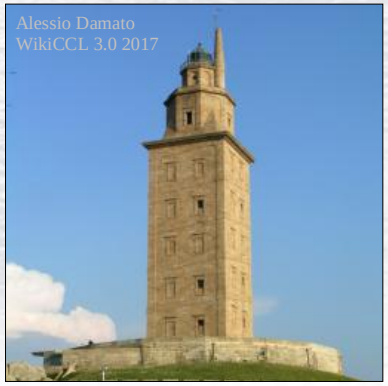
Point Hicks Lighthouse

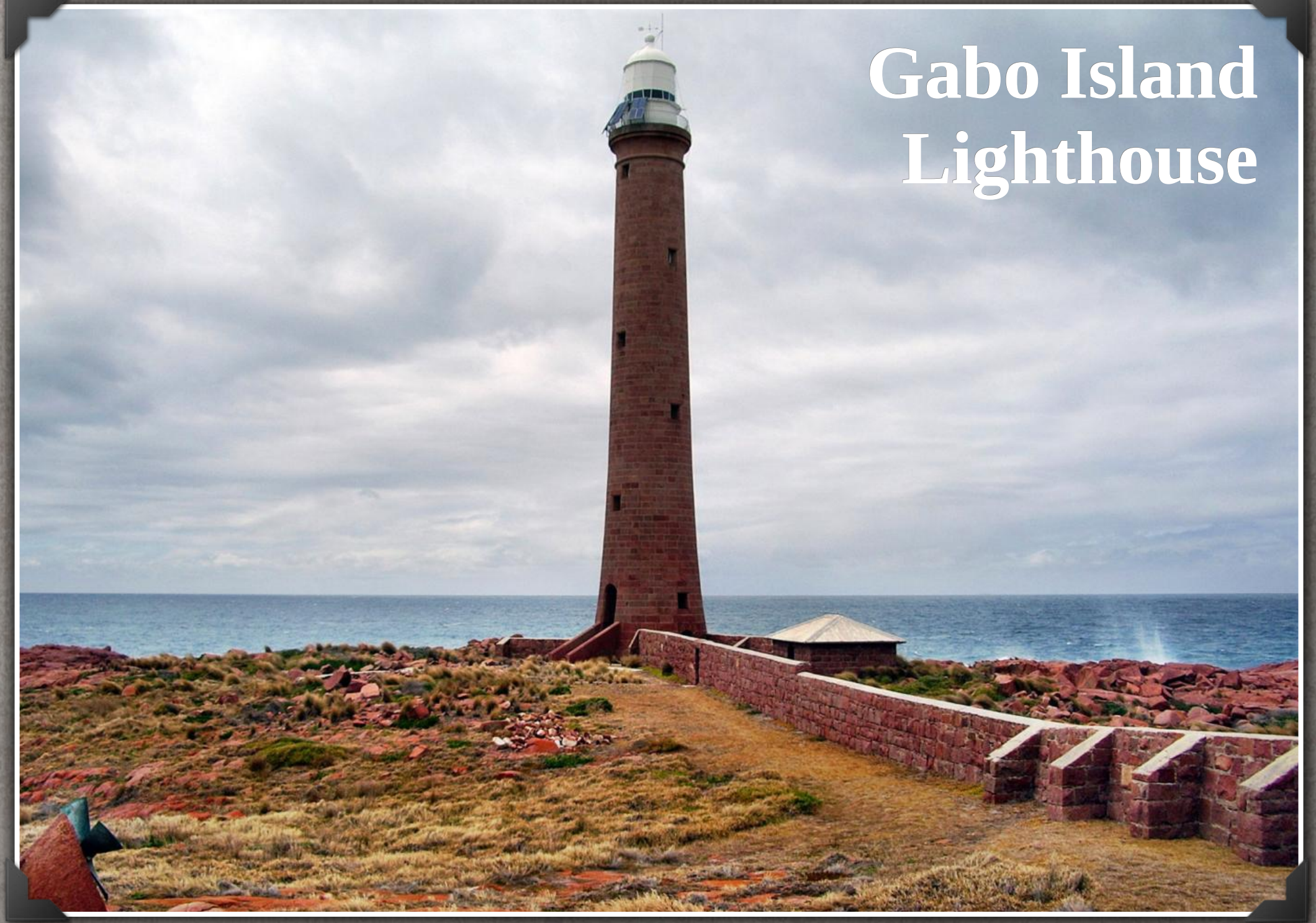
NAME	**Point Hicks Lighthouse**
LOCATION	Point Hicks
FIRST LIT	1890
HEIGHT	37 m / 57 m above sea level
CONSTRUCTION	Round concrete
LIGHT	Double white flash every ten seconds
HISTORY	Originally called the Cape Everard Lighthouse, it was renamed Point Hicks Lighthouse in 1970. The Lighthouse was built in 1890 of concrete. Granite was sourced below the lighthouse, crushed and mixed with cement (brought by ship and unloaded on the jetty on the west side of the point). Evidence of the granite quarry is still evident today. The lighthouse is significant as the tallest mass concrete tower in Australia. Thick dry stone walls were built (without mortar) and still surround the structure. The first light was a kerosene incandescent lamp with clockwork motor and chain and weights. A six sided lens floated on a large mercury bath. In 1965 the light was replaced with an electric light powered by two diesel generators. In 1991 two solar powered lights were installed on the outside of the balcony. In 2001 major renovations were undertaken.
TOURISM	The lighthouse can be viewed by parking in the carpark area (36 km from Cann River) and walking 2 km to the site. The lighthouse is open to tourists and accommodation is also available in cottages located at the site and pricing and availability can also be found on the above website. **Website:** pointhicks.com.au



World's oldest surviving lighthouse

The world's oldest surviving lighthouse is the 55 metre high 'Tower of Hercules'. It was originally built in the first century and is the world's oldest serving lighthouse.





NAME	**Gabo Island Lighthouse**
LOCATION	Island 500 m from the mainland and 13 km from Mallacoota
FIRST LIT	1862
HEIGHT	47 m / 55 m above sea level
CONSTRUCTION	Round from local red granite
LIGHT	Group flashing over 20 seconds

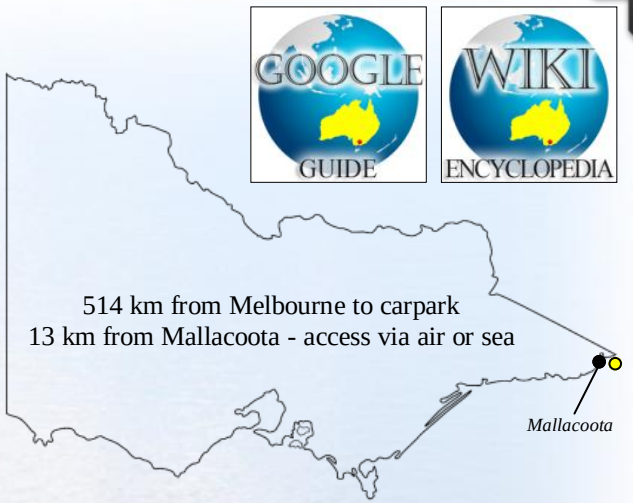
HISTORY

An attempt to establish a lighthouse at Gabo Island was first attempted in 1846, though was quickly abandoned. A wooden tower was then preassembled in Sydney and shipped to the site in 1853. The current lighthouse was built in 1862 from local red granite, replacing the wooden light. It is the tallest lighthouse in Victoria and the second tallest in Australia. The light was converted to a revolving light in 1913 and incandescent kerosene lamp in 1917. It was converted to generator electricity in 1935 and solar in 1993. Today it is Victoria's only island based lighthouse that is still operating as a navigational aid. The lighthouse still has a caretaker who is responsible for maintenance as well as taking and recording weather readings etc. They also serve as a tourist guide and a deterrent to vandalism.

TOURISM

The Gabo Island Lighthouse is managed by Parks Victoria and is a part of the 'Gabo Island Lighthouse Reserve'. Paid tours are available at certain times of the year, but are weather dependant. Bookings are to be made at the Parks Victoria Mallacoota Centre. See website for more.

Website: parkweb.vic.gov.au



Gabo Island Lighthouse circa 1880 - Courtesy State Library Victoria

World's tallest lighthouse

The world's tallest modern day lighthouse is the Jeddah Lighthouse at Jeddah in Saudi Arabia. It is 133 metres high and guards the entrance to the Jeddah Seaport.

GLOSSARY

Basic Seafaring Terms

GLOSSARY

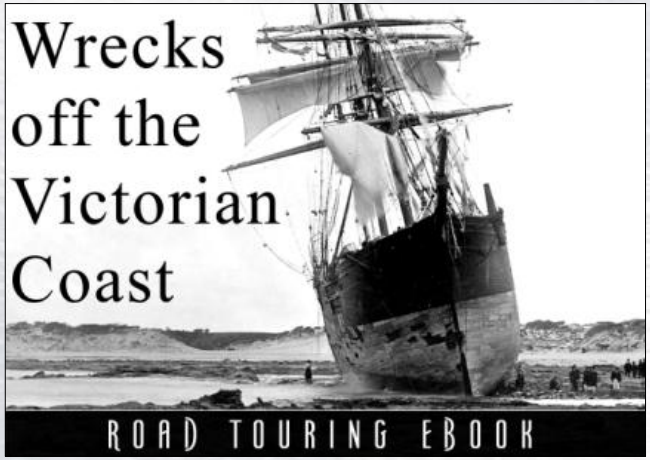
Buoy	Am object with a specific colour and shape designed to float on water and serve as an aid to navigation.
Cliff	A steep high rock face bounding the sea.
Established	When a lighthouse first became operational.
Flagstaff	A flagstaff is another name for a flagpole.
Gallery	A walkway outside the light room of a lighthouse.
Harbour Light	A light used to safely guide ships into a harbour.
Keeper	A person who has the job of caring for the light in a lighthouse and ensuring it is functioning as required.
Lamp	The apparatus behind the lens and used to create light.
Lens	An optical device for focusing light to a specific point.
Lightship	A light built onto a floating hull to help ships know their position and navigate past them safely.
Lighthouse	A land based structure with a light to help ships know their position and navigate past them safely. They usually consist of a tower and lantern room.
Light Room	The room incorporating the light and lens and normally found at the top of a lighthouse tower.
Loch	A land locked portion of the sea that is especially narrow.
Log	A paper book similar to a diary, for recording relevant information and data. Ship and lighthouses have logs.
Navigation	Accurately working out your position and planning and following a specific route.
Optic	Another name for a lens in a lighthouse.
Pharology	The scientific study of lighthouses and signal lights.
Prism	A transparent piece of glass used to refract light.
Reflector	A highly polished reflective mirror used to concentrate light through a lens.
Rocket	A ship-to-shore life saving apparatus invented by *Henry Trengrouse in* 1808 that was lighter and easier to deploy than other similar products available at the time and could be carried on ships.
Route	A course taken to travel from one point to another.
Semaphore	A system for sending messages by the displaying of flags according to an alphabetic code. The flags are usually displayed by hand, though can also include flags displayed on a flagstaff (flagpole).
Shoal	A shallow area of water such as above a sandbar of underwater rock formation.
Tower	The structure built to support the light room.

Wrecks

Off The Victorian Coast

This eBook is designed for use in conjunction with our Road Touring eBook *Wrecks off the Victorian Coast*.

You can download a copy below.



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Special thanks to contributors:
Ron & Yvonne Turner and Kathie Maynes

Photographers: Peter Grant, Ron Turner, Debbie Hibbert, David Hibbert

First published 2018