

= Cape Moreton Light =

Cape Moreton Light , also listed as North Point Range Rear Light , is an heritage @-@ listed active lighthouse located on Cape Moreton , a rocky headland located at the north eastern tip of Moreton Island , a large sand island on the eastern side of Moreton Bay , on the coast of South East Queensland , Australia . It marks the northern entrance to Moreton Bay and Brisbane and also serves as the rear light for the North Point Range . With its two distinctive red bands , it also serves as a daymark . It is the oldest lighthouse in Queensland , and the only one to be built by the New South Wales Government before the separation of Queensland , which took place in 1859 . It is also the only lighthouse in Queensland to be built of stone .

The lighthouse was established following an increase in traffic through the northern entrance to Moreton Bay in the 1840s . It was designed by Edmund Blacket in 1854 and established in 1857 . Over the years the light source went through several changes , from oil wick , to kerosene , to acetylene gas , to electricity , and finally to solar power . The structures also went through various modifications , the major one being an increase in the lighthouse height and rebuilding of several structures , in 1928 ? 1930 .

The station includes the lighthouse , three lighthouse keeper residences , and various buildings . The lighthouse is made of sandstone and topped by a concrete gallery and a cast iron lantern . The residences and most other structures are timber framed and fibro clad .

= = Establishment = =

In 1825 , Brisbane was established as a penal settlement . In spite of the hazards , the preferred access to Moreton Bay and Brisbane was through the southern entrance , between Moreton Island and North Stradbroke Island , mainly due to shorter shipping route and better shipping conditions . The southern entrance was therefore marked in 1825 and a pilot station was established at Amity Point on North Stradbroke Island in 1827 . Although the northern entrance was considered in the 1830s , it was only with the increased shipping activity due to proclamation of Moreton Bay as a free settlement in 1842 that vessels began to use the northern entrance . Buoys marking the entrance were laid in 1846 ? 1847 , and in 1848 the Pilot Station was moved to Bulwer on Moreton island . By then the northern entry was regarded as the main entry .

In 1850 , Brisbane residents petitioned the New South Wales Government , which controlled the Queensland area until Queensland 's separation in 1859 , to establish a lighthouse on Cape Moreton . The government also wanted to encourage ships to use the broader and safer northern passage . Planning for the structure therefore commenced in 1852 . The site was selected and surveyed in 1853 , and the lighthouse was designed in 1854 by Edmund Blacket the New South Wales Colonial Architect of the time . However , Blacket resigned on 10 June 1854 , for the private market , and left the office on 25 August . The office remained vacant until 1 October 1854 , when Blacket was succeeded by William Weaver . Drawings for the tower which were completed in September 1854 were signed by Alexander Beazeley , Foreman of Works in the Colonial Architect 's office . The tower was finally built during the office of Alexander Dawson who succeeded Weaver in 1856 , and signed further drawings made in April 1856 .

The tower was constructed by a contractor , Mark Farrell , for the cost of £ 15 @,@ 232 , using prison labor , and supervised by Beazeley . Both the lighthouse and three sandstone lighthouse keeper cottages were constructed from locally quarried sandstone . The lighthouse was first displayed in February 1857 , though tenders for painting the tower were called for only in December 1858 .

The original optical apparatus was a catoptric system consisting of 21 oil wick lamps with parabolic reflectors . The lighthouse was 67 @-@ foot @-@ high (20 m) , visible for 26 @.@ 5 nautical miles (49 @.@ 1 km ; 30 @.@ 5 mi) .

= = = Development = = =

In 1859 , control of the lightstation passed to the Government of Queensland , but it continued to be managed by the New South Wales Marine Board until the formation of the Queensland Department of Ports and Harbours in 1862 . In 1864 a telegraph office was opened at the Cape . In 1873 , the oil wick lamps were replaced with kerosene . During the 1860s and 1870s some further structures were constructed in the station including a schoolhouse (opened in 1879) , a stable , and other storage buildings . A telegraph line was constructed during the 1890s , and a Morse lamp visible for 20 miles (32 km) was installed in the 1910s . In 1913 the timber parts of the structures , which were damaged by ants , were replaced . A 1911 ? 1913 survey found the light in good shape , though the apparatus was found out of date and needing replacement . This replacement was to be delayed for a long time due to the transfer of all coastal lights to the Commonwealth , occurring officially October 1913 , though practically in July 1915 . A post office was operated by the light keepers between 1915 and the early 1920s .

In 1928 , the tower was extended and the lighthouse reached its current height of 75 feet (23 m) to increase its range . In 1928 ? 1930 , the keepers ' cottages were replaced with timber framed fibro clad structures . In 1930 , the lantern underwent major modification . The lantern house was replaced with 7 feet 1 inch (2 @. @ 16 m) diameter Chance Brothers lantern room . The optical apparatus was replaced with either a third order Chance Bros dioptric lens or a four panel 375 millimetres (14 @. @ 8 in) AGA catadioptric lens on an AGA pedestal . The light source was replaced by an AGA incandescent gas mantle operated by acetylene gas , and a sun valve was also installed .

= = = Electricity = = =

In 1937 , the light was converted to 110 V DC electricity . The two distinctive red bands were painted in 1942 . In 1967 the power source was replaced with 240 V AC power , being supplied by two diesel alternators , and a new lens , pedestal , bearing and optic drive may have been installed . The range of the 1967 light was 27 nautical miles (50 km ; 31 mi) . The light was modernised in July 1988 , with the installation of a 120 V 1 Kw tungsten halogen lamp . In 1990 , the handrails and stanchions of the balcony and external staircase were replaced and an access ladder to the dome was installed . On 8 December 1993 , the light was converted to solar powered operation and a VRB @- @ 25 apparatus was installed .

= = Current display = =

The light characteristic shown is four white flashes , separated by 3 @. @ 3 seconds , every 20 seconds (Fl . (4) W. 20s) , visible for 15 nautical miles (28 km ; 17 mi) . The light source is a 12 V 35 W Halogen lamp producing an intensity of 14 @, @ 000 cd . The light revolves three times per minute .

= = = Front light = = =

Cape Moreton Light is located 0 @. @ 86 nautical miles (1 @. @ 59 km ; 0 @. @ 99 mi) at 132 ° 30 ? from North Point Range Front Light . The front light is a square 22 @- @ foot @- @ high (6 @. @ 7 m) concrete house with a white lantern . It displays a quickly flashing white or red light , depending on the direction (Q.W.R.) . The white light , shown at 04 ° -192 ° and 244 ° -258 ° , is visible for 9 nautical miles (17 km ; 10 mi) . The red light , shown at 192 ° -244 ° and 258 ° -294 ° , is visible for 8 nautical miles (15 km ; 9 @. @ 2 mi) .

= = Structures = =

The structures of the station are built in three levels . On the highest level is the lighthouse , surrounded by the workshop , former powerhouse and fuel store , the head keeper cottage to the north and an office further north . On the second level is the first assistant keeper residence and two

sheds , a garage and a powerhouse . On the bottom level is the second assistant keeper residence , some distance to the south , and a fuel store to the north .

= = = Lighthouse = = =

The circular tower , 18 @.@ 5 metres (61 ft) high from the ground to the lantern , is made of sandstone blocks laid in regular courses . The ground level has thicker walls , topped by a timber floor . The tower shaft tapers slightly toward the top , where the cast iron lantern sits . Entrance to the tower is either through a timber door on the ground level , or through a timber door on the top of the original 1857 external masonry staircase (with a modern 1990 handrail) that circles the first floor , leading to the first floor . Two horizontal bands are painted close to the top , and the tower is otherwise unpainted , showing the sandstone color . Both the ground floor and the lantern floor are made of concrete . Access from the ground floor to the lantern is first via a ladder leading to a trapdoor in the first floor , then via the original internal cast iron spiral stair , ending in a landing below the lantern , and finally another short ladder leading to a trapdoor in the lantern floor . The internal is painted , and lit by small square glass panels in timber frames .

The tower is topped by the 1930 7 feet 1 inch (2 @.@ 16 m) diameter Chance Brothers lantern , painted white . The lantern cylindrical wall is made of six bolted cast iron panels . These support a continuous band of curved glass with cast iron glazing bars , and a small catwalk between the wall and the glazing . The cupola on top of the lantern is made of sheet copper , painted red , and it is topped by ball vent and a wind vane . An access ladder and safety rails , installed in 1990 , provide access to the cupola . In the center of the lantern is the VRB @-@ 25 apparatus , mounted on steel box .

Surrounding the lantern is a concrete gallery , accessible through a door in the lantern wall , with a white painted balustrade , and a 1990 railing . The solar panels are mounted on the gallery .

= = = Other structures = = =

The three keepers ' cottages were constructed in 1928 ? 1930 . The head keeper 's house is located close to the lighthouse , and on the tallest ground , and also includes a small fenced garden . The assistant keeper residence is located right to the west , but geographically lower . The second assistant residence is located at some distance from the main cluster of buildings , to the south , and even lower . The residences are square one storey structures , timber framed and fibro clad , with central rooms , no corridors , enclosed verandahs and hipped roofs . The head keeper 's house and the second assistant 's house have corrugated fibrous cement roof while the first assistant house has a newer corrugated zinc / aluminium alloy (ZINCALUME) metal roof . A museum was set in the second assistant 's quarters in 1988 . Two spherical steel rainwater tanks are set next to each of the houses .

The three sheds surrounding the lighthouse are the workshop to the south , the former powerhouse to the west and the fuel store to the north . They are all rectangular structures , timber framed and fibro clad with corrugated fibrous cement gable roofs . The workshop appears to be built on the remains of one of the early stone buildings , lying on a plinth with sandstone steps . It consists of two rooms with pivoting sash windows and timber framed doors and no internal lining . The former powerhouse and the fuel store have reinforced concrete floors , fibro lining , double @-@ hung sash windows and double timber framed doors .

The office to the north of the head keeper house is a small square room raised on short concrete pillars , constructed of timber framed fibro clad walls and corrugated fibrous cement roof . It has a continuous band of windows . The last three buildings , the garage , powerhouse and fuel store , are small brick buildings with metal roofs and reinforced concrete floors .

= = Site operation and visiting = =

The site and the light are operated by the Australian Maritime Safety Authority . The island can be

reached by ferry service from Scarborough , though visiting requires a permit and a four @-@ wheel drive is mandatory . The station is accessible , but the lighthouse is closed to the public .

= = Heritage listing = =

The lighthouse was added to the Queensland Heritage Register in 2004 .