HERITAGE COUNCIL OF WESTERN AUSTRA

REGISTER OF HERITAGE PLACES

Permanent Entry

1. **Data Base No** 3254
2. **Name** Rottnest Island Light Station (1896)
3. **Description of elements included in this entry** The Rottnest Island Lightstation precinct and associated buildings, and the land on which it stands being Swan Location 3110 on Diagram 7669, comprised in C/T 1245/513.
4. **Local Government Area** Shire of Cockburn
5. **Location** Rottnest Island, Cockburn
6. **Owner** Australian Maritime Safety Authority
7. **Statement of Significance of Place (Assessment in Detail)**

DOCUMENTARY EVIDENCE

The island of Rottnest was named by William de Vlamingh in 1696 after the quokkas, which de Vlamingh mistook for large rats. Over 130 years later, on 27 April 1829, Captain Fremantle arrived on the nearby coast of Western Australia, aboard the *H.M.S. Challenger.* Captain Fremantle officially annexed the area on 18 June, 1829 for the British Crown. In the same year, 25 ships, including the *Parmelia,* under the charge of Lt. Governor Stirling, landed at the mouth of the Swan River to begin a European settlement.

By 1831, settlers had been granted allotments on Rottnest Island in order to provide food resources, including fish, farm produce and salt, for the struggling colony. Problems of increasing conflicts between Aborigines and white settlers on the mainland spawned a proposal to use Rottnest as an island prison. Although this idea met with some resistance from those settlers already established on the island, the first prisoners were taken to Rottnest late in 1838. Constable Welch was the first Superintendent of the penal settlement and was given charge of construction works there. In August 1839, Welch was replaced by Mr Henry Vincent, who was responsible for the supervision of building works on the island. The majority of buildings on Rottnest were built by convict labour during Vincent's term of office including the first Lighthouse.

A Lighthouse was essential to protect the shipping which provided the colony with necessary supplies and communication with other colonies in Australia and

Europe.[1] As Superintendent of Public Works for the Swan River Colony, Henry Trigg, was responsible for the construction of the first Lighthouse and, presumably, designed it.[2] He laid the foundation stone in January 1842. The Lighthouse, built by Bayley Maycock and completed in 1849, was officially opened on 1 June 1851, on the same day that the lighthouse on Arthur's Head at Fremantle was opened, which coincided with the twenty-second anniversary of the colony.[3]

The Lighthouse was constructed of locally quarried limestone and measured 64 feet 6 inches high: 10 feet shorter than originally intended. The Light Keeper's quarters and a store room were constructed around the base of the tower. The lantern was octagonal, 11 feet high, and glazed with 160 panes of 3/8 inch thick glass. Assistant surveyor Augustus Gregory designed and also built a model of a unit to produce a revolving light. Governor Fitzgerald awarded him a gratuity of £50/0/0 for this and other work, remarking that it enabled the Rottnest Lighthouse to be opened a year earlier than if the apparatus had been imported from England.[4] In 1850, a contract was let to Alfred Carson to construct this revolving apparatus for £43/0/0. A week later it was reported that everything except the lanterns were of local manufacture at a total cost of £500/0/0.[5] The design comprised two sets of three oil burning lamps, each with a silvered parabolic reflector, with a characteristic five second flash followed by a 55 second eclipse, every two minutes. The light was visible for 16 miles.[6]

Although the light within the Lighthouse was upgraded in 1879 and 1881, ships continued to be wrecked around the island[7] and it was decided to build a new Lighthouse.

The second Lighthouse was originally designed in England in 1894. Although by the 1890s Australia had a number of Colonial Architects and Engineers capable of the design and construction of lighthouses, the Western Australian government requested British engineer William Tregarthen Douglass to act as consultant engineer and architect of the lighthouses at both Rottnest Island and Cape Leeuwin. Douglass was the son of Sir James Douglass (1826-1898) who was responsible for the design of twenty lighthouses in the United Kingdom. W.T. Douglass' influence may have been remote, but elements of his original design remain in the existing Lighthouse. Early drawings show his signature. The details appear to have been modified, possibly by the Engineer-in-Chief, C.Y. O'Connor, who was given the job of supervising the construction of the new structure.[8]

On 31 October, 1894 the tender of Messrs Parker and Rhodes for £3,237/4/9 was accepted. Some delay was experienced in starting. Construction began in March

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1 R. Danvers, *Conservation Plan, Rottnest Island Lightstation, Western Australia (*1993), p.9.

2 *ibid.*, p.89.

3 Moynihan, J. *All the News in a Flash. Rottnest Communications 1829- 1979* (Telecom Australia and the Institution of Engineers, Australia. Western Australia Division, 1988) p.13.

4 *Votes and Proceedings* of the Western Australuian Parliament, 1893, paper 21, PWD Annual Report of Works for 1892, pp. 9, 36. cited in Moynihan, J. *loc.cit.*

5 WA Blue Book 1892, p. 144 cited in Moynihan, J. *loc.cit.* p.13.

6 Danvers Architects: *op.cit.* p.10.

7 *ibid.* p.10.

8 *ibid.* p.89.

1895 and the foundation stone was laid by the Premier, Sir John Forrest, on 25 April 1895.[9]

Limestone for the lighthouse was taken from a nearby quarry and transported to the site on a tramway. When completed the new Lighthouse stood 112ft tall.[10]

The Governor, Sir Gerard Smith, officially opened the new Lighthouse by lighting the lamp for the first time on 17 March, 1896 at a ceremony attended by many local dignitaries. Speeches were made on a common theme of "this new light symbolises the progress and vigour of the colony".[11]

The *West Australian* reported on 17 March, 1896 "The light is a first order Holophotal Revolving Light of 920 millimetres focal distance constructed by Messrs. Chance Bros. and Coy. Ltd, Birmingham, England, to the order of the government...The pedestal is square and contains the actuating clock with accompanying gearing. Hand rotating gear was also supplied. The clock weighs 5cwt., the rate of decent being 10 feet per second.[12] The clock will run for a period of approximately three hours without rewinding...The optical apparatus consists of eight panels each subtending a horizontal angle of 45 degrees. The vertical angle of the lenses is 57 degrees, of the upper panels 48 degrees and the lower prisms 21 degrees. The upper prisms in each panel number 18, the central lenses 8 and the lower prisms 8. In one panel the lower prisms are omitted for convenience in entering the apparatus...The pressure lamp is of the "Chance" pattern, having a capacity of 12 gallons with suitable gearing.

The four burners (three to spare) are of the usual Trinity House old pattern. The candle power of the 6 wick burners gives and average service result per burner of 730 standard candles with 6 wicks in action. The consumption of heavy mineral oil with six wicks in action is 80.3 fluid ounces per hour."

The new light was much more powerful than the earlier light, and could be seen for a distance of 23 miles.[13]

New quarters were built for the Head Keeper, and the accommodation space at the base of the old Lighthouse was retained as quarters for Assistant Keeper. It is not known exactly when the first Lighthouse was demolished, although it was sometime after the completion of the second.[14]

For further historical and documentary evidence refer to R. Danvers, *Conservation Plan, Rottnest Island Lightstation, Western Australia* (1993)

PHYSICAL EVIDENCE

The Rottnest Island Lightstation comprises two distinct groups of buildings located within a relatively small reserve of just under one hectare.

The residential area is physically separated from the Lighthouse precinct by being located at the base of the hill on which the Lighthouse is positioned.

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9 Moynihan, J. *op.cit.* p.33.

10 Danvers Architects*op.cit.* p.10.

11 Moynihan, J. *op.cit.* p. 33.

12 *ibid.* Moynihan, who supplies the quote on pp.34-35 of his book has an author's note to the effect that the rate of descent was probably about 30 feet per hour instead!

13 Danvers Architects*op.cit.* p.11.

14 R.J. Ferguson, *Rottnest Island History and Architecture* (UWAP, 1986). In his report Ferguson states the date as 1896, but this is not substantiated by any specific source material.

Rottnest Island is the largest of a group of islands off the shore of Fremantle, with an area of about 1,900 hectares, being 11 kilometres long and 45 kilometres across at its widest point. The island is generally comprised of limestone, and gently undulating, with the highest elevation, Mount Wadjemup, being 45 metres above sea level. The Lighthouse has been constructed on this hill, located in the middle of the island. This area is relatively remote from the pockets of settlement on the island which are concentrated around Thomson Bay, about four kilometres to the east and Geordie Bay, two kilometres to the north east of the Lightstation complex.

The lack of vegetation on the hill in the vicinity of the Lighthouse emphasises the landmark quality of the structure. The residence and associated outbuildings are protected by trees and shrubs.[15]

According to a recent conservation plan done by Danvers Architects[16] the Lightstation complex comprises two distinct precincts: the Lighthouse precinct and the Residential precinct.

The Lighthouse precinct comprises the Lighthouse; store with the base of the original Lighthouse; power house water tanks and remains of the footing of the original keeper's quarters and stores. Together they comprise a compact group of buildings and structures located at the top of the hill, the highest point on Rottnest Island, some 80 metres to the north east corner of the residential precinct.

The current Lighthouse has been sited at the highest point of the island, as was the original Lighthouse, to enable the maximum possible range and visibility of the Light.[17] Two service buildings are located in close proximity to the Lighthouse, with the power house only a few metres to the east of the Lighthouse. Immediately to the south east of the service buildings are two water tanks; one rectangular, partially underground and roofed with corrugated iron, and the other mounted on an hexagonal concrete stand.

Each of the buildings within the precinct are of different construction, with the Lighthouse of dressed stone, the store of rendered stone work, and the power house of fibro cement. These buildings are all painted in an off-white colour, which provides some degree of unity to the complex.

A large area to the north of the Lighthouse and its service buildings is paved with bitumen. The area to the east of these buildings is natural ground surface, sparsely vegetated. A concrete path and steps leads down from the Lighthouse to the residential precinct.

The Residential precinct is located to the south of the Lighthouse, at the southern end of the Lightstation reserve, and comprises a residence; outhouse; garage; shed and water tank. There is only one Light Keeper's residence remaining at the Rottnest Island Lightstation, and thus the precinct is small in comparison with residential areas at other Lightstations, such as Capes Leeuwin and Naturaliste.

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15 Danvers Architects:*op.cit.* p. 28.

16 Danvers Architects: Draft *Conservation Plan Rottnest Island Lightstation. Western Australia* (Australian Maritime Safety Authority, November 1993)

17 *ibid.* p.28.

The residential precinct is separated from the Lighthouse precinct by a dense group of trees located on the hillside between the house and the Lighthouse. This precinct is more densely vegetated than the area surrounding the Lighthouse.

A 1.8 metre high corrugated fence surrounds the rear yard of the residence, which incorporates a small area of garden, water tank and outhouse. A small area to the front of the house is defined by a 1 metre high chain mesh fence. The house and outhouse are the oldest buildings in the precinct, dating from 1896. Other buildings within the precinct are of later construction, built to accommodate changing requirements of the Lighthouse.[18]

For a full description of the physical evidence including siting, and detailed building schedules see R. Danvers, *Conservation Plan, Rottnest Island Lightstation, Western Australia* (1993).

ASSESSMENT OF CULTURAL HERITAGE SIGNIFICANCE

The criteria adopted by the Heritage Council in September, 1991 have been used to determine the cultural heritage significance of the place.

1. AESTHETIC VALUE

The Lighthouse is the most prominent feature of Rottnest Island. It is seen from virtually everywhere on the island, day and night. It is an important distance marker and orientating component in the landscape, as well as providing scale to the panorama. From beyond Rottnest the Lighthouse is visible at enormous distances. The Lighthouse, not only has technical merit, but is also a beautiful object, which forms a unified complex with the nearby residence, and is in harmony with its island context.[19]

2. HISTORIC VALUE

As the development of the present Lighthouse is more or less continuous with the previous structure, the Rottnest Island Lightstation, as a precinct, demonstrates the development of visual navigational aids in the nineteenth and twentieth centuries.

The Rottnest Island Lightstation has important historic associations with shipping in Western Australia, the development of the Port of Fremantle, and the growth of Perth, as the capital city of the State.

The Rottnest Island Lightstation has important associations with C.Y. O'Connor and W.T. Douglass.

3. SCIENTIFIC VALUE

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18 *ibid.* p.29.

19 National Trust Assessment

Other than for the construction of the current Lighthouse, the ground around the base of this building is relatively undisturbed. The potential scientific and archaeological importance of the remaining footings of the previous Lighthouse, one of a few in Western Australia and one of the earliest in Australia, is considerable.

The Rottnest Island Lightstation, as a complex, has importance for educational purposes in relation to navigation and the history of signalling. The Lighthouse provides an example of early craftsmanship and technology in its construction, and its lens apparatus.

4. SOCIAL VALUE

The social value of the role of the Light Keeper in relation to the safety of the wider community is self-evident. For most of the settlers and traders in the Colony and, later the State, the role of the Rottnest Island Lightstation in assisting in the establishment of settlement, protection of shipping, and thus the continuous supply of goods to the settlement, was of great social importance.

The wide arc of the light across the waters which can be seen for a great distance contribute to the community's sense of place and being, not only on Rottnest Island, but also on the mainland. The Lighthouse is a major landmark on the Perth coast.

5. RARITY

The Rottnest Island Lighthouse is a fine example of Type 8.3D lighthouse structure, the other Western Australian example being at Cape Leeuwin. Few others exist in Australia.[20]

6. REPRESENTATIVENESS

The Rottnest Island Lightstation and the Lighthouse within it, is a representative example of the role lightstations played in protecting the coast of Australia, as well as a fine example of their design and navigational technology.

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20 National Trust Assessment

CONDITION

All of the original stone buildings remain in good functioning and habitable order. The alterations which have been undertaken to the residence have not greatly reduced that significance and with care and attention, it would be possible to restore the building to its earlier state. The Lighthouse remains in sound working condition.

INTEGRITY

The integrity of the Lightstation, including the Lighthouse and the associated residence, is high. See Danvers Architects: Draft *Conservation Plan Rottnest Island Lightstation. Western Australia* (Australian Maritime Safety Authority, November 1993)

AUTHENTICITY

The buildings retain a high degree of authenticity. For further information regarding authenticity see Danvers Architects: Draft *Conservation Plan Rottnest Island Lightstation. Western Australia* (Australian Maritime Safety Authority, November 1993)

7. STATEMENT OF SIGNIFICANCE

The Rottnest Island Lightstation has cultural heritage significance for the following:

historically, the Rottnest Island Lighthouse, completed in 1851 and rebuilt in 1896, has significance for its association with Western Australia's maritime history and the State's strong dependence on shipping for its survival.

the store is significant for comprising the remains of the oldest Lighthouse in Western Australia and for being part of the remains of one of very few lighthouses built in Australia which incorporated the Lighthouse keepers' quarters at its base.

the 1896 Lighthouse has significance as the fourth oldest extant lighthouse in Western Australia.

the Lightstation retains elements of two different stages of construction, demonstrating changes in building techniques and navigational technology.

the Lighthouse is one of Australia's tallest lighthouses, and one of only a few in Australia designed by British engineer W.T. Douglass.

environmentally, the Rottnest Island Lightstation precinct is important for its location on a significant and prominent geographical feature of the West Australian coastline. The Lighthouse is a prominent coastal landmark.

8. Register of Heritage Places

Interim Entry	08/01/1993
Permanent Entry	31/12/1993

9. Conservation Order

10. Heritage Agreement

11. References

National Trust Assessment Exposition
Australian Heritage Commission Data Sheet
Danvers, R., *Conservation Plan, Rottnest Island Lightstation, Western Australia* (1993).
Moynihan, J. *All the News in a Flash. Rottnest Communications 1829- 1979* (Telecom Australia and the Institution of Engineers, Australia. Western Australia Division, 1988)
Ferguson, R.J., *Rottnest Island History and Architecture* (UWAP, 1986).