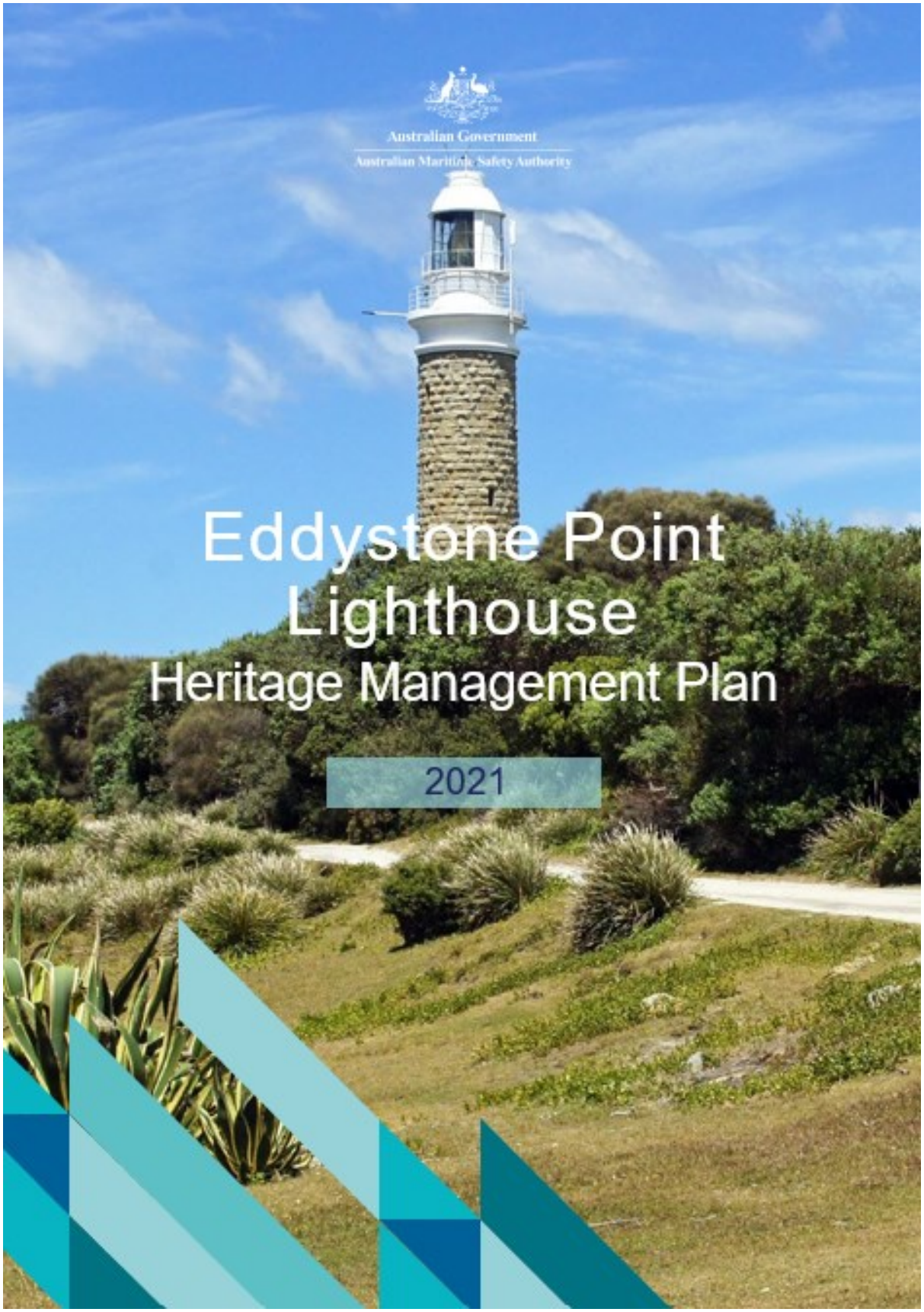

The Australian Maritime Safety Authority makes this heritage management plan under section 341S of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* for Eddystone Point Lighthouse within its ownership or control.

25 October 2021

Michael Kinley

Chief Executive Officer

Acknowledgements

The Australian Maritime Safety Authority acknowledges that the lighthouse is in the traditional country of the Palawa people and the Northeast People.

For additional information or any enquiries about this heritage management plan, contact the Australian Maritime Safety Authority, Manager Asset Management and Preparedness, PO Box 10790, Adelaide Street, Brisbane QLD 4000

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Australian Government

Australian Maritime Safety Authority

Eddystone Point Lighthouse

Heritage Management Plan

2021

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Executive Summary

Eddystone Point Lightstation was placed on the Commonwealth Heritage List in 2004. The lightstation has contributed to the establishment of marine Aids to Navigation (AtoNs) within the Bass Strait. It is known for the rarity of its architectural design, original Chance Bros lantern and mercury float pedestal, its intact 19th century composition, and aesthetic characteristics.

Eddystone Point Lightstation was listed on the Tasmanian heritage register for its historical significance, unique community associations, and demonstration of class characteristics of the 19th century. The landscape is also of high cultural significance to the Palawa people.

Situated atop Eddystone Point, the lighthouse was built on the south-eastern corner of the Bass Strait approximately 8 km north-east from Ansons Bay and approximately 112 km north-east of Launceston. Built in 1889, the Eddystone Point Lighthouse assisted in illuminating the Strait – a treacherous passage between the state of Victoria and Tasmania where hundreds of ships were wrecked throughout the 19th and 20th centuries. The lighthouse's unpainted rock-face and external flying staircase composition was designed by Robert Huckson in 1886.

Although the lighthouse remains fitted with its original lens assembly, an automated VEGA beacon attached to the balcony has replaced the lantern as the tower's light source. The equipment is serviced by the Australian Maritime Safety Authority's (AMSA) maintenance contractor who visits at least once per year. AMSA officers visit on an ad hoc basis for auditing, project and community liaison purposes.

As a working AtoN, the lighthouse remains the responsibility of AMSA. The larger part of the lightstation which contains an auxiliary light building and a quarters precinct containing three cottages, a graveyard, a shed/storeroom, a workshop, and garages. The auxiliary light and quarters precinct lies outside of the AMSA lease and is managed by the Tasmanian Parks and Wildlife Service (TPWS).

This heritage management plan is primarily concerned with the lighthouse, but also addresses the management of the surrounding precinct and land. The plan is intended to guide decisions and actions of AMSA who continues to operate the lighthouse. AMSA has prepared this plan to integrate the heritage values of the lightstation in accordance with the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act), and the *Environment Protection and Biodiversity Conservation Regulations 2000 (Cth)* (EPBC Regulations).

Well-built and generally well-maintained, the lighthouse precinct is in relatively good, stable condition. The policies and management guidelines set out in this heritage management plan strive to ensure the Commonwealth heritage values of the Eddystone Point Lightstation are recognised, maintained and preserved for future generations.

1. Introduction

1.1 Background and purpose

The Australian Maritime Safety Authority (AMSA) is the Commonwealth agency responsible for coastal AtoN. AMSA's network includes the Eddystone Point Lighthouse built in 1889.

Section 341S of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act) requires AMSA to prepare a management planfor Eddystone Point Lighthouse that addresses the matters prescribed in Schedules 7A and 7Bof the *Environment Protection and Biodiversity Conservation Regulations 2000 (Cth)* (EPBC Regulations). The principal features of this management plan are:

- a description of the place, its heritage values, their condition and the method used to assess its significance
- an administrative management framework
- a description of any proposals for change
- an array of conservation policies that protect and manage the place
- an implementation plan
- ways the policies will be monitored and how the management plan will be reviewed.

We have commissioned this heritage management plan to guide the future conservation of the place. This plan provides the framework and basis for the conservation and best practice management of the Eddystone Point Lighthouse in recognition of its heritage values. The policies in this plan indicate the objectives for identification, protection, conservation and presentation of the Commonwealth heritage values of the place. Figure 2 shows the basic planning process applied.

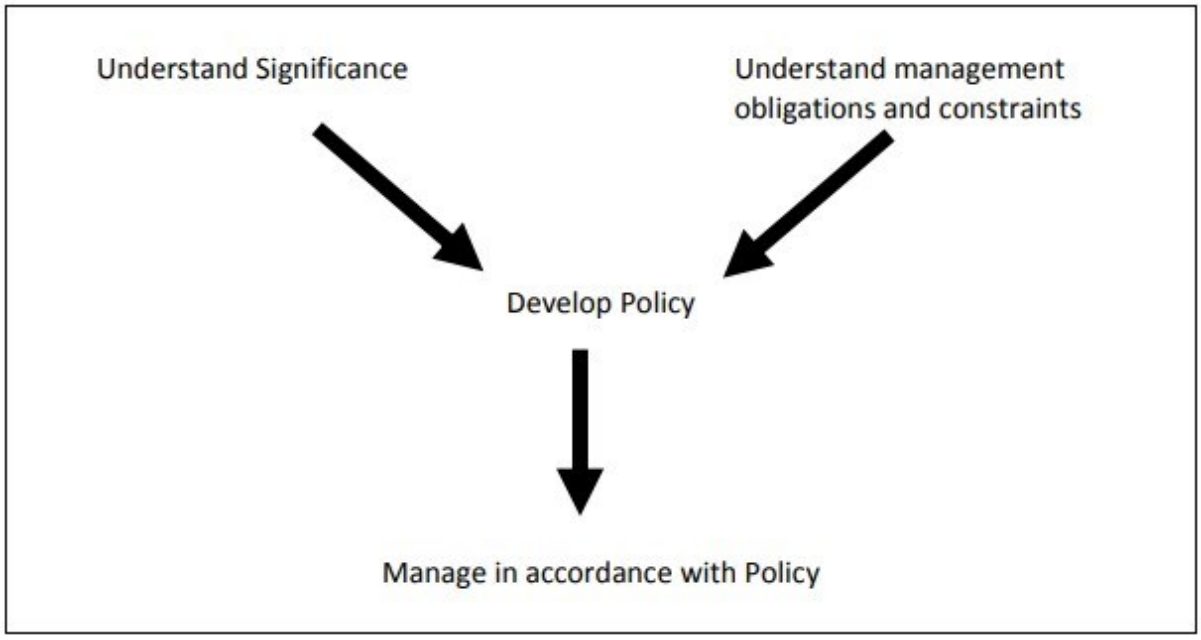


Figure 2. Planning process applied for heritage management (Source: *Australia ICOMOS, 1999*)

1.2 Heritage management plan objectives

The objectives of this heritage management plan are to:

- protect, conserve and manage the Commonwealth heritage values of Eddystone Point Lighthouse
- interpret and promote the Commonwealth heritage values of Eddystone Point Lighthouse
- manage use of the lightstation
- use best practice standards, including ongoing technical and community input, and apply best available knowledge and expertise when considering actions likely to have a substantial impact on Commonwealth heritage values.

In undertaking these objectives, this plan aims to:

- Provide for the protection and conservation of the heritage values of the place while minimising any impacts on the environment by applying the relevant environmental management requirements in a manner consistent with the Commonwealth heritage management principles.
- Take into account the significance of the surrounding region as a cultural landscape occupied by Aboriginal people over many thousands of years.
- Recognise that the site has been occupied by lease holders since the early 20th century.
- Encourage site use compatible with the historical fabric, infrastructure and general environment.
- Record and document maintenance works, and changes to the fabric, in the Eddystone Point fabric register (see Section 4).

The organisational planning cycle and associated budgeting process is used to confirm requirements, allocate funding, and manage delivery of maintenance activities. Detailed planning for the aids to navigation network is managed through our internal planning processes.

An interactive map showing many of AMSA's heritage sites, including Eddystone Point, can be found on AMSA's Interactive Lighthouse Map[1].

1.3 Methodology

The methodology used in the preparation of this plan is consistent with the recommendations of The Burra Charter and with the requirements of Chapter 5, Part 15 Division 1A of the EPBC Act. In particular, the plan:

- details the history of the site based on information sourced from archival research, expert knowledge and documentary resources.
- provides a description of the site based on information sourced from site inspection reports and fabric registers.
- details the Commonwealth heritage criterions satisfied by Eddystone Point Lighthouse as set out at schedule 7A of the EPBC Regulations.

The criterion set out at Schedule 7A (h) (i-xiii) informed the development of the required policies for the management of the Eddystone Point Lightstation, in conjunction with input from the Department of Agriculture, Water and the Environment on best practice management.

A developed draft was submitted to the Federal Minister through the Department of Agriculture, Water and the Environment where the Minister's delegate sought advice from the Australian Heritage Council.

Stakeholder consultations were undertaken throughout the preparation of this plan. Under direction from the Office of Aboriginal Affairs and Tasmania Parks and Wildlife, AMSA consulted with Graeme Gardner, Manager for the Aboriginal Land Council of Tasmania. Graeme engaged with the plan and provided crucial information concerning the history of larapuna, and its continued importance in the modern day. All feedback received was included in the final draft.

AMSA also consulted with the Friends of Eddystone Light Inc. who engaged with the plan and provided valuable historical information on the lighthouse. All feedback received was included in the final draft.

The plan was advertised via The Australian newspaper and was open for public perusal and comment on AMSA's website from 6 June 2020 to 26 June 2020. Several comments were received and this feedback was incorporated into the final draft.

1.4 Status

This plan has been adopted by AMSA in accordance with Schedule 7A (Management plans for Commonwealth Heritage places) and Schedule 7B (Commonwealth Heritage management principles) of the EPBC Regulations to guide the management of the place and for inclusion in the Federal Register of Legislative Instruments.

1.5 Authorship

This plan has been prepared by AMSA. At the initial time of publication, Australian Maritime Systems Group (AMSG) is the contract maintenance provider for the Commonwealth Government's AtoN network including the Eddystone Point Lighthouse.

1.6 Acknowledgements

AMSA acknowledges the professional assistance of Graeme Gardner, Manager for Aboriginal Land Council of Tasmania.

AMSA acknowledges the professional assistance of the Friends of Eddystone Light Inc.

AMSA acknowledges the professional assistance of Anthony Hordern.

1.7 Language

For clarity and consistency, some words in this plan, such as restoration, reconstruction, and preservation, are used with the meanings defined in the Burra Charter. (See Appendix 1. Glossary of Heritage Conservation Terms).

Also see Appendix 2. Glossary of lighthouse terminology relevant to Eddystone Point which sets out the technical terminology used in this plan.

1.8 Previous reports

A Conservation Management Plan was prepared in 1995 by Clive Lucas, Stapleton and Partners Pty. Ltd. for AMSA[2].

A Heritage Lighthouse Report was prepared in 2007 by Conservation Architect, Peter Marquis-Kyle, for AMSA[3].

A Heritage Asset Condition Report was prepared in 2019 by AMSG[4].

1.9 Sources of information and images

This plan has used a number of sources of information. This includes the National Archives of Australia (NAA), National Library of Australia (NLA), and AMSA's heritage collection.

Note: Some images display Eddystone Point with a Timber Flagstaff located on its balcony. This flagstaff was removed in June of 2017 and it no longer a part of the lighthouse fabric register.

2. Eddystone Point Lightstation Site

2.1 Location

The Eddystone Point lightstation is located on the north-eastern coast of the Tasmanian mainland (traditionally called larapuna) on the Eddystone Point headland. Located along the eastern edge of the Mount William National Park, the lighthouse is approximately 8 km north-east of Ansons Bay and 112 km north-east of the city of Launceston.

Coordinates: 40º 59.5804' S, 148º 20.8620' E

Figure 3. Map of Eddystone Point Lighthouse's location in Tasmanian (Map data: Google @2021, TerraMetrics)

2.2 Setting and landscape

The Eddystone Point Lightstation is located along the north-eastern coast of Tasmania. It is situated along the edge of the Mount William National Park and is surrounded by thick vegetation. The lightstation itself is mounted on the highest recorded point of the granite headland.

The Point itself is surrounded by various submerged rocks and crags which have proven disastrous to shipping in the vicinity. These include; Eddystone Rock, Norgate Rock, Greyhound Rock, Half Tide Rock and Black Reef.

Figure 4. Location of lighthouse on Eddystone Point (Map data: Google @2021, CNES Airbus, Maxar Technologies)

The Eddystone Point Lighthouse precinct comprises of:

- lighthouse tower
- auxiliary light building
- grave inscribed “Walter McFarlane Kirkwood, died 11th March 1898 aged 18 months. God is Love. J. Gillett, Hobart”

The nearby quarters precinct comprises of:

- head lightkeeper’s cottage
- two lightkeeper’s cottages
- shed/storeroom
- garages
- workshop

AMSA is responsible for the lighthouse tower and surrounding vegetation.

Fauna and flora

Within the Mount William National Park, Eddystone Point Lighthouse sits at the north end of the Bay of Fires conservation area which is recognised for its diverse fauna and flora.

Native flora species documented in the region include:

- Acacia *longifolia* subsp.

- coastal scrub
- saltmarsh
- coastal heathland
- Eucalyptus *amygdalina* forest and woodland
- Eucalyptus *obliqua* dry forest and woodland
- Eucalyptus *lobules*
- *Leptospermum* scrub

Threatened flora species documented in the region include:

- eastern eyebright – Euphrasia *collina*
- Tasmanian salt couch – Sporobolus *virginicus*
- juniper wattle – Acacia *ulicifolia*
- yellow onion-orchid – Mircotus *alratum*
- shining dogwood – Pomaderris *paniculosa* subsp. *Paralia*
- sand grasstree – Xanthorrhoea *areanaria*

Threatened fauna species documented in the region include the:

- swift parrot – Lathamus *discolour*
- fairy tern – Sterna *Nereis*
- hooded plover – Thinormis *rubricollis*
- little tern – Sterna *albifrons*
- white-bellied sea eagle – Haliaeetus *leucogaster*
- yellow-tailed black cockatoo – Calyptorhynchus *funereus*
- azure kingfisher – Alcedo *azurea*
- masked owl – Tyto *novaehollandiae*
- grey goshawk – Accipiter *novaehollandiae*
- New Holland mouse – Pseudomys *novaehollandiae*
- white-footed dunnart – Sminthopsis *leucopus*
- Tasmanian devil – Sarcophilus *harrisii*
- glossy grass skink – Pseudemoia *rawlinsoni*

A site plan for the conservation area was enacted by the Natural Resource Management North and the Tasmanian Parks and Wildlife Service in 2011[5]. The area is managed by Tasmanian Parks and Wildlife.

2.3 Lease and ownership

AMSA holds a lease for the lighthouse and land from the Minister administering the *National Parks and Wildlife Act 1970 (Tas*). The lease is currently administered through TPWS.

The AMSA lease consists of three parcels of land:

- Lot 1 – 400m2
- Lot 2 – 216m2
- Lot 3 – 400m2

The entire surface area equals a total of 2016m^2.

Figure 5. Eddystone Point Lighthouse lease map (Map data: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/ Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community)

The current lease was signed on 11 August 1998 commencing 1 May 1998. This lease lasts for 25 years with an option to renew for a further 25 years.

Due to interest in the site from the general public, a tourism licence between AMSA and the State of Tasmania was signed on 31 July 1998 for a period of 25 years with the option to renew for a further 25 years. The licence permits the practice of tours inside the lighthouse tower.

2.4 Listings

The table below details the various heritage listings of the Eddystone Point Lightstation.

Register	ID
Commonwealth Heritage List	105565[6]
Register of the National Estate	012660[7]
Tasmanian State Heritage List	599[8]

2.5 Access

Access to Eddystone Point Lighthouse is available to the general public. The site can be reached by vehicle via Eddystone Point Road (C846). No structures found on either the lighthouse precinct or the quarters precinct are accessible to the general public with exception to tour groups and prior bookings.

Figure 6. Access track leading from lightstation precinct to tower (Source: AMSA, 2018)

3. History

The following sections outline the history of lighthouses in Australia and Eddystone Point Lighthouse. Some sections were provided by heritage architect, Peter Marquis-Kyle, and are referenced via endnote.

3.1 General history of lighthouses in Australia

The first proper lighthouse in Australia, the Macquarie Lighthouse at the entrance to Port Jackson NSW, was lit in 1818. Governor Lachlan Macquarie, who ordered it and gave his name to it, decided to levy a charge on shipping to recover the cost of providing the light.

The costs and benefits of providing aids to navigation have been matters for debate ever since. Lighthouses were costly to build and operate but they reduced the risk of shipwreck and the cost was deemed worthwhile. Since Macquarie's time Australian aids to navigation have been administered by various government agencies, and the costs have largely been paid by the operators of ships, through various schemes of dues, levies and charges.

Each of the Australian colonies developed its own particular lighthouse designs and systems of lighthouse operation, reflecting the volume of shipping, the value of trade, the local building materials and the hazards to navigation in the waters of each colony. The earliest lighthouses were built in New South Wales—others in Van Diemen's Land (Tasmania), Victoria, South Australia, Western Australia, Queensland and the Northern Territory came later[9].

Lamps and optics – an overview

Since the 18th century, when parabolic mirrors were first proposed to be used with oil lamps, lamps and lenses have been at the heart of lighthouse design. Developments in the technology of lighting and optics have had a significant effect on the design and operation of lighthouses. In general, older equipment was much larger and more costly than newer equipment, and required more attention to keep it operating.

The earliest Australian lighthouses were lit with whale oil burned in Argand lamps. Around the 1850s, whale oil was replaced by colza oil, a less expensive vegetable oil extracted from brassica seeds. Colza was in turn replaced by kerosene, a mineral oil that was less viscous and less expensive. To make the light visible over a long distance a very bright light was needed, and this required a large flame supplied with fuel through multiple wicks[10].

Parabolic reflectors were first used in the lighthouses in Liverpool, United Kingdom, probably around 1763 when they were described in detail by William Hutchinson, the dock master. These were formed from wood and lined with pieces of looking glass or plates of tin.

When light hits a shiny surface, it is reflected at an angle equal to that at which it hit. With a light source placed in the focal point of a parabolic reflector, the light rays are reflected parallel to one another, producing a concentrated beam[11].

The catoptric system was largely obsolete from 1822 when Augustin Fresnel invented the dioptric glass lens. Dioptric systems were refined by Fresnel who took a convex lens and broke it down into a number of concentric annular rings. This design reduced the amount of light absorbed by the lens itself and reduced its overall weight.

The first dioptric lens was installed in the French lighthouse, Cordouan, in 1823. Fresnel's dioptric system dominated lighthouse lens technology for over 150 years. The majority of heritage listed lighthouses in Australia still have dioptric lenses invented by Fresnel but

made by others such as Chance Brothers (United Kingdom), Henry-LePaute (France), Barbier, Bernard & Turenne (France) and Svenska Aktiebolaget Gasaccumulator (Sweden).

Around 1900 incandescent burners came into use; in these, the fuel was supplied under pressure and burned inside an incandescent mantle, producing a brighter light within a smaller volume and with less fuel[12].

Throughout the hours of darkness the lightkeeper was required to keep pressure to the burner by manually pumping a handle as can be seen in Figure 7.

Figure 7. Incandescent oil vapour lamp by Chance Brothers (Source: AMSA)

Figure 8. Dioptric lens on display at Narooma (Source: AMSA)

Large dioptric lenses such as shown in Figure 8 gradually decreased in popularity due to cost and the move towards unmanned automatic lighthouses. By the early 1900s, Australia had stopped ordering such lenses with the last installed at Eclipse Island in Western Australia in 1927. It is interesting to note that prior to that the last was ordered in 1909 for Cape du Couedic in South Australia.

These optical systems were made in a range of standard sizes, called orders—see the Glossary of lighthouse terms in Appendix 2.

Smaller Fresnel lens assemblies continued to be made until the 1970s but eventually lost favour to cheaper plastic lanterns, which still used Fresnel's technology.

In 1912, the Swedish engineer Gustaf Dalén was awarded the Nobel Prize in physics for a series of inventions for acetylene-powered navigation lights. Dalén's system—including the

sun valve, the mixer, the flasher, and the cylinder containing compressed acetylene—proved efficient and reliable.

Acetylene was quickly adopted by the fledgling Commonwealth Lighthouse Service from 1915, and remained in use until it was finally phased out in the 1990s[13].

Since then electric lighting—using mains power, diesel generators, and solar-voltaic systems— has become the universal source of energy for Australian navigation lights.

Figure 9. Dalén's system – sunvalve, mixer, flasher and cylinder (Source: AMSA)

3.2 The Commonwealth lighthouse service

When the Australian colonies federated in 1901, it was decided that the new Commonwealth Government would be responsible for coastal lighthouses. This included only the major lights used by vessels travelling from port to port, not the minor lights used for navigation within harbours and rivers. There was a delay before this new arrangement came into effect and the existing lights continued to be operated by the states.

Since 1915, various Commonwealth departments have managed lighthouses. The Australian Maritime Safety Authority (AMSA), established under the *Australian Maritime Safety Authority Act 1990*, is now responsible for operating Commonwealth lighthouses and other marine aids to navigation, along with its other functions.

3.3 Tasmanian lighthouse administration

The table below details the authorities of TAS lighthouse management from 1915 to present.

Time Period	Administration
1915 – 1927	Lighthouse District No 3. (Victoria, New South Wales, Tasmania), Hobart Headquarters.
1927 – 1963	Deputy Director of Lighthouses and Navigation, Tasmania.
1963 – 1972	Department of Shipping and Transport, Regional Controller, Tasmania.
1972 – 1982	Department of Transport [III], Regional Controller, Tasmania.
1982 – 1983	Department of Transport and Construction. Victoria-Tasmania Region, Transport Division (Tasmania)
1983 – 1985	Department of Transport [IV] Victoria-Tasmania Region, Hobart Office.
1985 – 1987	Department of Transport [IV], Tasmanian Region.

1987 – 1990	Department of Transport and Communications, Tasmanian Region.
1991 –	Australian Maritime Safety Authority.

3.4 Eddystone Point: a history

Indigenous history

The following information was provided by Graeme Gardner, Manager for the Aboriginal Land Council of Tasmania:

> larapuna was a significant place in the territory of the northeast people, particularly the Pinterrairer and Panpekanner bands, and visited by Ben Lomond people in autumn (Ryan 1982). The bulk of the headland is effectively one huge midden, which now has coastal scrub over much of it. It would have been a most important tribal gathering point for a vast period of time. It was given the name Eddystone Point by Tobias Furneaux in 1773.
>
> As he sailed north on March 17th he had already named the long bay to the south of larapuna the Bay of Fires, due to the smoke he could see from a large number of fires burning in the bush inland from the beach. Larapuna is part of a much larger area called Lumaranatana, containing 90 midden sites and 60 artifact scatter sites[14].

Early European history

In 1773, the English navigator Captain Tobias Furneaux named Eddystone Point after the site of the famous lighthouse in Plymouth, England. Eddystone Point was allegedly a site for seal hunting throughout the early 19th century, and at one point, in 1941, applications were submitted to the colonial government to lease the land for whaling stations at the Point[15].

3.5 Planning a lighthouse

Why Eddystone Point?

Eddystone Point (larapuna) was recognised early on as a precarious spot along the Tasmanian east coast. Passing the Point required the successful navigation around Victoria Rocks, Georges Rocks and Black Reef which were considered to be exceedingly dangerous hazards to shipping entering and leaving Bass Strait[16].

An inter-colonial board was established in 1856 and was tasked with the construction and maintenance of lighthouses in Tasmania. It was here that suggestions for a lighthouse on Eddystone Point (larapuna) were first made. However, these suggestions were rejected as the perceived infrequency of shipping in the area did not warrant a lighthouse's construction and no action was taken[17].

In 1861, gold deposits were found in New Zealand and traffic passing through the Strait increased tenfold. In 1873, the Conference of Principal Officers of the Marine Department of the Australasian Colonies approved the construction of a lighthouse somewhere between Eddystone Point and King George Rock. Lieutenant J.H. Stanley surveyed the area in question and recommended that the Point be the chosen site as its highest point of 79ft would reduce the required height (and therefore overall cost) of the lighthouse[18].

Shortly after this recommendation, the Point became the site of a number of shipwrecks. In 1874, the iron barque *Wynaud* was grounded south of the point and it was stated by the *Hobart Town Chamber of Commerce* that:

> The recent loss of the Wynaud at the Eddystone would in all probability have been avoided had a light been exhibited on the point.[19]

The colonies of New Zealand, Tasmania, New South Wales and Victoria conducted further discussions in 1876 on funding a lighthouse on Eddystone Point, however New South Wales and New Zealand refrained from contributing to the costs – delaying construction further. Approvals for construction were finally granted in 1886[20].

Design

J.C. Clymie, Civil Engineer of Melbourne was originally commissioned in 1879 to design the plans for the lighthouse. However, the final plans were prepared and designed by Robert Huckson in 1886 for the Hobart Marine Board[21].

The design for the lighthouse incorporated the use of locally sourced granite for the tower. It also included a stone-flying staircase which was relatively unusual for lighthouse structures (see Figure 11).

Huckson & Hutchinsons also designed the master's quarters and assistants' quarters which were to be constructed to the north-west of the lighthouse tower (See Appendix 5. Master's and Assistants' Quarters Blueprints).

Huckson & Hutchinson
Huckson & Hutchinson was founded in 1887 by Robert Huckson and R. Hutchinson. The firm was responsible for the design of many Tasmanian lighthouses including Table Cape, Mersey Bluff, Eddystone Point, Maatsuyker, Cape Sorrell, and Low Head. The firm also designed various alterations and necessary repairs to lightstations across the state.

Construction

In September 1887, a correspondent from the *Hobart Mercury* newspaper visited the Eddystone Point construction site. The correspondent's report provided insight on the lighthouse progress and on the construction methods of late 19th century lighthouses in Australia:

> We first went to the quarry, where we saw immense blocks of granite being quarried out, squared, and put on the trollies, on which they were carried to the cutting or dressing shed, from which, after being dressed and numbered, they are taken to the tower. There are rails laid from the quarry to the lighthouse, the distance being about 60 yards (55m), over which one horse can easily draw two tons of stone.
>
> The lighthouse which is being constructed on Eddystone Point, is of massive granite blocks, on an elevated position, about 50ft (15m) above sea level. The walls at the bottom are 7ft (2.1m) in thickness, and will be 3 ft (0.9m) at the top. The tower at present is about 20ft (6m) high, and will be when finished about 80ft (24.4m) high. All the works are being carried out on in a very systematic manner, Every stone is measured and squared in the quarry, than at the shed they are dressed and numbered, every stone being cut and numbered for its place in the tower.
>
> There are employed on the works 4 builders,

18 cutters, 25 quarrymen, 10 labourers, 3 smiths,

3 strikers, 1 carpenter, 2 horse-drivers, 3 boys,

1 clerk, Mr Duffy (the foreman), and Mr Galloway (the Government inspector of masonry), in all 73 men and boys. The SS Warrentinna calls with provisions[22].

70-odd men were stationed at Eddystone Point during construction, a situation that saw the creation of a small 'village' complete with a store, stables, and workers' huts. A storekeeper, cook and baker were also stationed on-site, completing the little make-shift village[23].

James Galloway, a prominent townsman and stonemason from Glasgow, Scotland, headed the construction of the Eddystone Point Lightstation. The contractor was awarded instalments of £8505 in 1887 and £7630 in 1888[24].

Figure 10. The Eddystone Point Lighthouse, east coast of Tasmania, 1948. Image courtesy of the National Archives of Australia. NAA: A1200, L11291 (© Commonwealth of Australia, National Archives of Australia)

The later instalments were largely due to extra excavations undertaken at site. It was originally thought a solid foundation had been found 10 feet below the surface. However, further investigations revealed the surrounding area to be unsuitable which required "288 yards of additional excavation had to be made costing £432"[25].

As proposed within Huckson's designs, the tower was constructed from locally-sourced granite which was left unpainted. The tower and flying-stone staircase came to a combined cost of £11,500, and the combined cost of the lantern, lighting apparatus, side light and fixing was £4,300. The total cost of the lighthouse was allegedly £22,248[26].

Equipment when built

Upon completion, the Eddystone Point Lighthouse stood as a rough-hewn granite tower 35 m from base to dome. The *Newcastle Morning Herald and Miners' Advocate* reported on the Chance Bros. 1st Order dioptric light installed which had:

> fifteen sides and two lower panels suppressed from access to show triple flashes at intervals of half a minute, the time of revolution of the five groups being two and a half minutes[27]

An auxiliary light was also installed beside the tower which had 'a radius of two and [sic] half miles, and is of a sixth order port light for 242deg. red.'[28].

The nearby quarters precinct was fitted with three large cottages constructed of squared granite.

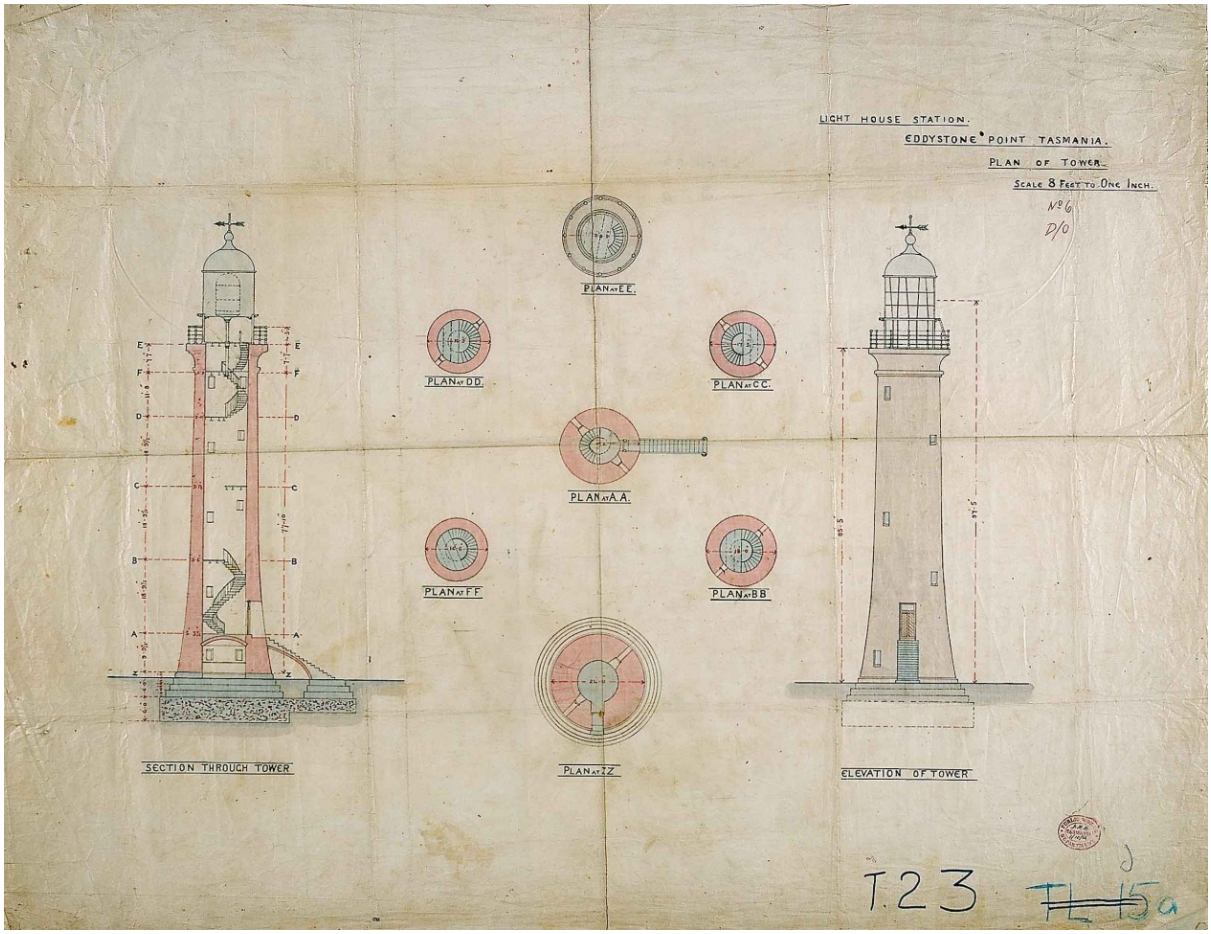


Figure 11. Eddystone Point Plan of Tower (1886) Image courtesy of the National Archives of Australia. NAA: A9568, 5/2/2 (© Commonwealth of Australia, National Archives of Australia)

3.6 Lighthouse keepers

A complete list of the Eddystone Point Lighthouse keepers has been collated and preserved by Friends of the Eddystone Light Inc. Please see Appendix 6 for the full list.

Figure 12. The SS Cape York bringing supplies to Eddystone Point lighthouse, East Tasmania (1948) Image courtesy of the National Archives of Australia. NAA: A1200, L11292 (© Commonwealth of Australia, National Archives of Australia)

3.7 Chronology of major events

The following table details the various events to have impacted Eddystone Point Lighthouse from in the decades following its construction.

Date	Event Details
1897	Jetty constructed at Eddystone Point[29]
Pre-1910	Lightstation connected to Gladstone by telephone
Apr 1910	The Schooner Relic wrecked off Eddystone Point – no recorded fatalities[30]
18 Dec 1911	Eddystone Point Lighthouse and quarters experience small earth tremor – no damage recorded[31]
1912	Commander C. R. W. Brewis surveys the Eddystone Point Lighthouse
22 Oct 1954	Lighthouse keepers rescue three men from the wrecked *La Poloma* half a mile from the lighthouse[32]
13 Nov 1961	1st Order Chance Bros. double flashing lens and mercury pedestal (ex-Cape du Couedic lighthouse) installed in place of original fixed lens.
Jan 1990	100th Anniversary of the Eddystone Point Lighthouse celebrated.
2001	Lighthouse de-manned.
23 Feb 2011	Chance Bros. lens de-commissioned – replaced by

	VEGA beacon attached to lighthouse balcony.
14 Jun 2014	125th Anniversary of the Eddystone Point lighthouse celebrated.
2017	Timber flagstaff removed from lighthouse balcony.

3.8 Changes and conservation over time

The following section details alterations made to Eddystone Point Lighthouse over the course of its history.

The Brewis Report (1913)

Commander CRW Brewis, RN retired naval surveyor was commissioned in 1911 by the Commonwealth Government to report on the condition of existing lights and to recommend any additional ones. Brewis visited every lighthouse in Australia between June and December 1912 and produced a series of reports published in their final form in March 1913.

These reports were the basis for future decisions.

Brewis' recommendations for Eddystone Point included:

- Increasing the power of the light from 22,200 c.d. to 100,000 c.d. by installing an 85mm, kerosene-fuelled incandescent mantle.
- Removing the red shades from the light's character, leaving a purely white group of flashes
- Altering the red auxiliary light to shine white.

Brewis' recommendations were considered and in 1921, the Eddystone Point light was upgraded to incandescent kerosene operation.

Eddystone Point Light[33]
70 miles from Cape Forestier. Lat. 40º 59 ½ 'S., Long. 148º 21' E., Charts Nos. 1079 and 1706. – Established in the year 1889. Lloyd's signal station, connected with Gladstone by telephone. *Character:* One alternating, red and white, group flashing, three flashes every 30 seconds. Dioptric 1st Order, 22,200c.p. Illuminant, kerosene. Granite tower 85 feet. Height of focal plane, 139 feet above high water. Visible, in clear weather, 18 nautical miles. Also subsidiary light, fixed, showing red over Victoria rocks. Visible, 2 ¼ nautical miles. *Condition and State of Efficiency:* The light-house tower and apparatus are in serviceable condition. The dwellings require extensive repairs; the foundations are solid. The sand blows have invaded the light-house reserve to a considerable extent, rendering the land of no value except for light-house purposes, and threatening the dwellings. Steps are being taken to obviate this by sowing marram grass. The system of red and white flashes is unnecessarily complicated. The subsidiary light should be improved. Three light-keepers are stationed here. *Communication:* By road, 20 miles to Gladstone. Quarterly by steamer carrying stores by contract. An acetylene Morse lamp is required to facilitate communication with passing vessels – necessary in case of emergency.

RECOMMENDED:
(a) The power of the light be increased from 22,200 to 100,000 c.p., and economy effected in the consumption of oil by installing an 85 mm. incandescent mantle; illuminant, vaporized kerosene.
(b) The red shades be taken out of the light, altering the character to White, group flashing, three flashes every 30 seconds.
(c) The red subsidiary light, which is now visible only 2 ¼ miles, be altered to white occulting every ten seconds, thereby increasing its visibility to about 10 miles, from S. 2º E., screened off vertically so that the plane of the light passes over Victoria Rocks, visible seaward from 2,000 yards outside the rocks; then a mariner whose height of eye is 15 feet above the sea having the white occulting light in sight may assume that his vessel is at least a mile outside these dangers. This subsidiary light is also obscured over Salamander Rock, George Rocks, Eucalyptus Rock, &c.

Note- It is necessary that the subsidiary light should be of an occulting character, otherwise it might be mistaken for a light in the light-keeper's dwellings.

(d) Acetylene Morse lamp provided.

Alterations to the Light

The table below outlines major alterations made to the Eddystone Point light.

Date	Alteration
1921	Converted to incandescent kerosene operation. (See Figure 18) A 55mm incandescent mantle is installed. Intensity: 70,000 cd
31 Aug 1926	Intensity increased to 174,000 cd.
1930	Converted to electric operation.
13 Nov 1961	Chance Bros 1st Order double flashing lens with mercury pedestal (From Cape du Couedic lighthouse) installed in place of fixed lens. Auxiliary light discontinued.
1979-81	Mains electric with diesel backup Intensity: 1,200,000 cd.
23 Feb 2011	First order lens de-commissioned. Rotating lens remains operating in position but unlit – AtoN light provided by Vega VRB 25 beacon mounted on balcony handrail. (Action taken due to extreme loss of bird life (Short-tailed Shearwaters) from flying into the lighthouse. Beacon significantly lowered this loss.)

Conservation Works

The Eddystone Point lightstation has undergone a number of changes since its construction.

Date	Works Completed
1938-40	Lightning conductor installed at Eddystone Point
1961	Lantern room handrail installed.
1960s	Top row of glazing replaced by fibro cement sheeting.
3 Oct 2013	New lens drive motor guard installed in pedestal.

Figure 13. 1st Order Chance Bros. Lantern currently at Eddystone Point, ex. Cape du Couedic Lighthouse (Source: AMSA)

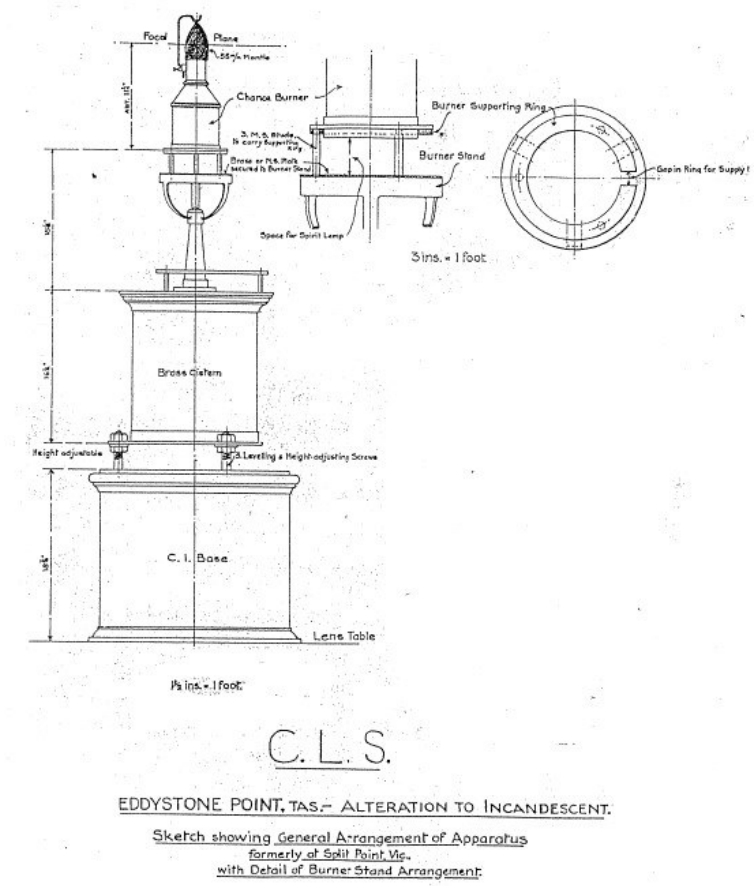


Figure 14. Blueprint for alterations made to Incandescent lamp c.1921 (Source: AMSA)

3.9 Summary of current and former uses

From its construction in 1889, Eddystone Point Lighthouse has been used as a marine AtoN for mariners at sea. Its AtoN capabilities remains its primary use.

Eddystone Point Lighthouse as a key tourism site developed over recent decades following the de- inhabitation of the keepers on-site. The keepers' cottages are now used as accommodation for the general public. Guided tours are carried out inside the lighthouse, and this touristic use remains secondary to its primary use as a working AtoN.

3.10 Summary of past and present community associations

Indigenous associations – Northeast people

The following information was provided by Graeme Gardner, Manager for the Aboriginal Land Council of Tasmania:

> 'My mother's country is Cape Portland; roamed from George's Bay and Falmouth to Low Head lighthouse, all the north-east,' said Henry Beeton, son of Watanimarina, in 1909 (Tasmanian Aboriginal Centre 2004). Watanimarina was the mother of Lucy, James, Henry and Jane Beeton and had been taken from Big Mussel Roe. In March 1773 the Englishman Furneaux saw so many fires burning along the shore behind the beach at larapuna that he named it Bay of Fires. The French expedition of Baudin 29 years later in 1802, also in March, recorded that they would have given it the same name for the same reason, and noted that the resources of the area seemed to support a denser population than elsewhere on the island (Tasmanian Aboriginal Centre Language & History Unit 2000).
>
> That the headland at the northern end of larapuna was important to the northeast people is attested to by the fact that it is effectively one large midden. It would have been an important gathering place for a very long time.
>
> The headland, now leased, has finally become an important gathering place again, long after Robinson in 1830 persuaded the last few northeast people who had survived the violent raids of the white sealers to leave their country with him. Larapuna has become somewhere for Aboriginal people from all over Tasmania to reconnect spiritually with country and each other. In February 2003 there was a festival held at larapuna as part of the Kickin' Up Dust program of four Aboriginal festivals around Australia. This resulted in an exhibition of photographs from all four festivals touring the country. The gathering at larapuna was seen as a chance for the community 'to celebrate its survival as a people and the revival and maintenance of its culture' (DFAT 2003).
>
> Since that year there have been similar annual gatherings in late January or early February, providing an opportunity for Aboriginal people from around Tasmania to learn from each other and to pass on knowledge to the young, reviving the language and traditional skills and crafts, and gathering food from the sea as was done traditionally. The history and culture of the original northeast people return to its home again.'

The lease granted to the Tasmanian Aboriginal Land Council (ALCT) as lessee, permits the use of the site for the purpose of Aboriginal cultural activities and anything related to them for a period of 40 years from February 2006 for a nominal rent of $1 per year. The

agreement also permits collection of flora and fauna from the lease area and from Mt. William National Park for cultural activities[34].

Local, National, and International associations

Eddystone Point is renowned amongst locals as one of the oldest heritage sites in the Gladstone region. As the most eastern Tasmanian lighthouse, the structure is admired both state-wide and nationally as a prominent historical site of distinctive character.

AMSA received a submission from the Friends of Eddystone Light, and notes their aim is to promote, protect and preserve the infrastructure, history, heritage and natural assets within the original Eddystone Point Reserve of North East Tasmania for all to enjoy and admire.

Objectives and purpose of the Association

To promote, protect and preserve the infrastructure, history, heritage and natural assets within the original Eddystone Point Reserve of North East Tasmania for all to enjoy and admire by:

a. Researching and sharing the maritime history, local history and heritage values of the area.
b. Seeking and raising funds for projects to promote, protect and preserve the Infrastructure, history, heritage and natural assets within the original Eddystone Point Reserve.
c. Liaising with local, state and federal authorities, history and heritage societies and organisations as well as other interested parties to determine suitable outcomes for the Reserve.

Eddystone Point Lighthouse is also regarded as a significant feature within the nation-wide Geodetic Survey of Australia. Eddystone Point was the only lighthouse tower in Tasmania to serve as a LaPlace Azimuth and Geodial station. The results of this national survey determined the Australian Geodetic Datum in 1966, the first whole-of-continent consistent geodetic datum in the world.

3.11 Unresolved questions or historical conflicts

Dates on various alterations made to the lighthouse are also relatively unknown. Little is known about features such as the engine house, the first telephone connection, and flagstaff, in terms of when and why their installation took place.

3.12 Recommendations for further research

The location of the small village constructed to house the 70 odd workers during construction of the lighthouse is unknown. Research into its location may provide beneficial insight into the early European social history of the site.

Further research into the alterations made to the lighthouse throughout the 19th and 20th centuries would also benefit a greater understanding of the lightstation's history and heritage values.

4. Fabric

4.1 Fabric register

The cultural significance of the lighthouse resides in its fabric and in its intangible aspects, such as the meanings people ascribe to it, and its connections to other places and things. The survival of its cultural value depends on an understanding of what is significant and on clear thinking about the consequences of change. The Burra Charter sets out good practice for conserving cultural significance.

Criterion listed under 'Heritage Significance' refer to the criterion satisfied within the specific Commonwealth heritage listing (see section 5.1).

(All images included in sub-sections 4.1 and 4.2 – Source: AMSA)

Lighthouse feature: Lantern roof

Description and condition

1889 Chance Bros part-spherical dome of copper sheets lapped and screwed to ribs.

- Ribs – Chance Bros cast iron radial ribs.
- Inner skin – none (removed).
- Ventilator – drum type with wind vane and direction pointers attached. Wind vane tail broken off so not operational.
- Lightning conductor – vertical pole beside ventilator, with three spikes at top, and two braces to ventilator. Eight vertical spikes attached near the gutter.
- Drip tray – copper dish suspended under ventilator, with central hole for heat tube closed off.
- Gutter – polygonal fabricated gutter attached to ring of cast iron pieces bolted together.

- Ladder rail – attached to underside of gutter.
- Handrails – one circular hand rail attached to lantern roof, another attached to top of ventilator drum.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The lantern roof is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The lantern roof contributes to the aesthetic value of the lighthouse (criterion e).

Lighthouse feature: Lantern glazing

Description and condition

1889 Chance Bros.

- Panes – flat trapezoidal glass, three tiers. Blank panes to landward side.
- Astragals – Chance Bros vertical and horizontal astragals of rectangular and triangular section, bolted to gutter ring at top, and to lantern base below.
- Downpipes – four copper downpipes tracking along slope of astragal.
- Hand holds – two sets, fixed to cover strips.

Finish: astragals: painted
glazing strips: bare metal
Condition: intact and sound
Integrity: high
Significance: high

Maintenance: keep in service; reglaze as necessary, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The lantern glazing is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

Lighthouse feature: Lantern base

Description and Condition

1889 Chance Bros, cylindrical in form. Curved panels of cast iron bolted together with flanged joints.

- Internal lining – curved iron plates screwed to the outer cast iron panels.
- Ventilators – round external air inlets cast as part of wall panels. Large round copper alloy regulators below internal catwalk, small ones above.
- Door – iron framed and sheeted door hung on copper alloy hinges. Copper alloy mortise lock with copper alloy bar handles inside and out.

Finish: painted
Condition: intact and sound
Integrity: high

Significance: high
Maintenance: keep in service, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The lantern base is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

Lighthouse feature: Lantern floor

Description and condition

1889 floor of slate slabs supported on rolled iron I section beams built into the tower walls. Later steel support angle noggings, hole in the floor for clock weight, and two steel pipe columns to support the floor under the pedestal.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The lantern floor is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

Lighthouse feature: Lens assembly

Description and condition

1909 Chance Brothers 920mm focal radius catadioptric rotating lens assembly of glass and gunmetal, rotating at 1.33 rpm. Gives three double- flashes in each revolution.

- Bearing – 1909 Chance Bros mercury float, see pedestal below.

Eddystone Point is one of six AMSA lighthouses still operating with a 1st order rotating optical apparatus and mercury float pedestal. The 1909 apparatus was removed from Cape du Couedic in 1957, and installed here in 1961. This lens assembly is currently unlit, but still rotating.

Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, clean at normal intervals
Rectification works: none

Heritage significance: High

The lens assembly is a historic part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The 1st Order Chance Brothers assembly is one of six still in operation in an AMSA lighthouse (criterion b).

Lighthouse feature: Light source

Description and condition

1000W-120V tungsten halogen lamp in UVLA 590 lamp changer (temporarily removed).

Note: The 1st Order lens assembly have been temporarily decommissioned; replaced by a VRB- 25 beacon mounted on the handrails. The lamp was turned off due to its overwhelming contribution to the decrease in population of Short-tailed Shearwater birds in the area. The lamp caused the birds to fly into the lighthouse, damaging the Shear- water population and lighthouse.

Condition: not assessed
Integrity: not assessed
Significance: low
Maintenance: not assessed
Rectification works: none

Heritage significance: Low

Lighthouse feature: Pedestal

Description and condition

1909 Chance Bros mercury float pedestal.

- Base – Chance Bros cast iron, with central circular base for pillar.
- Pillar – Chance Bros cast ferrous pillar with machined thread for adjustment of mercury trough.
- Mercury trough – Chance Bros cast iron circular trough with integral circular and radial strengthening ribs underneath, fitted to threaded top of the pillar. The mercury is still in place. Manhole and iron ladder to allow access to lamp. Driving pinion, spindle and carrier still in place.
- Mercury float – Chance Bros cast iron annular float inside the trough.
- Lamp platform – Chance Bros cast iron platform with ribbed top surface.
- Lamp stand – Chance Bros burner stand of cast iron, with later adapter added on top to support the lamp changer.
- Drive mechanism – two motor/gearbox units, on 1961 steel cabinet (clock removed).

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare and repaint pedestal at normal intervals
Rectification works: none

Heritage significance: High

The pedestal is an historic and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The lighthouse retains its original mercury float pedestal (criterion b).

Lighthouse feature: Equipment

Description and condition

Old telephone. Recent equipment cabinet (non- AMSA) with rack mounted mobile phone radio equipment. This cabinet, and the lens drive motors, are behind a locked stainless steel mesh enclosure.

Condition: not assessed
Integrity: not assessed
Significance: low
Maintenance: not assessed
Rectification works: none

Heritage significance: Low

Lighthouse feature: Internal catwalk

Description and condition

Cast iron lattice floor panels supported on solid cast iron brackets bolted to the upper section of the lantern base.

- Ladder – fixed ladder with cast iron treads on wrought iron strings.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The internal catwalk is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

Lighthouse feature: External catwalk

Description and condition

1889 Chance Bros, cast iron lattice floor panels supported on openwork cast iron brackets bolted to lantern base.

- Handrail – rectangular section metal stanchions, round topped section rail, bolted to floor panels.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The external catwalk is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The external catwalk contributes to the aesthetic value of the lighthouse (criterion e).

Lighthouse feature: Balcony floor

Description and condition

1889 stone slab floor, supported on the cornice and top of the tower wall.

Finish: membrane painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, maintain seal joints prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The balcony floor is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

Lighthouse feature: Balcony balustrade

Description and condition

Wrought iron stanchions with four iron rod rails.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare at normal intervals
Rectification works: none

Heritage significance: High

The balcony balustrade is an essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The balcony balustrade contributes to the aesthetic value of the lighthouse (criterion e).

Lighthouse feature: Walls

Description and condition

1889 walls of local granite, rock faced outside, chiselled inside.

Finish: bare stone
Condition: previous evidence of water penetration through the joints but this does not appear to have caused damage to the stone external pointing has had recent repairs and some local erosion of internal pointing remains, otherwise intact and sound
Integrity: medium
Significance: high
Maintenance: keep in service; monitor condition of pointing and stonework
Rectification works: none

Heritage significance: High

The tower walls are an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The unpainted rock-faced stone walls is that of a rare construction style (criterion b).

The unpainted rock-faced stone walls contribute to the aesthetic value of the lighthouse (criterion e).

Lighthouse feature: Windows

Description and condition

1889 window openings with recent stainless steel frames and casement sashes.

Finish: frames and sashes: painted, glass: clear
Condition: sound
Integrity: high
Significance: original openings: high, recent stainless steel and glass: low
Maintenance: keep in service; prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The window openings are an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The windows contribute to the aesthetic value of the lighthouse (criterion e).

Lighthouse feature: Doors

Description and condition

Timber framed and sheeted doors in timber frames to the entrance floor and to the ground floor. Entrance floor door has fixed fanlight above.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare and maintain polish at normal intervals
Rectification works: none

Heritage significance: High

The doors are an essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

Lighthouse feature: Weight tube

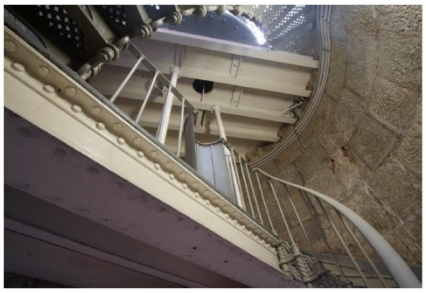
Description and condition

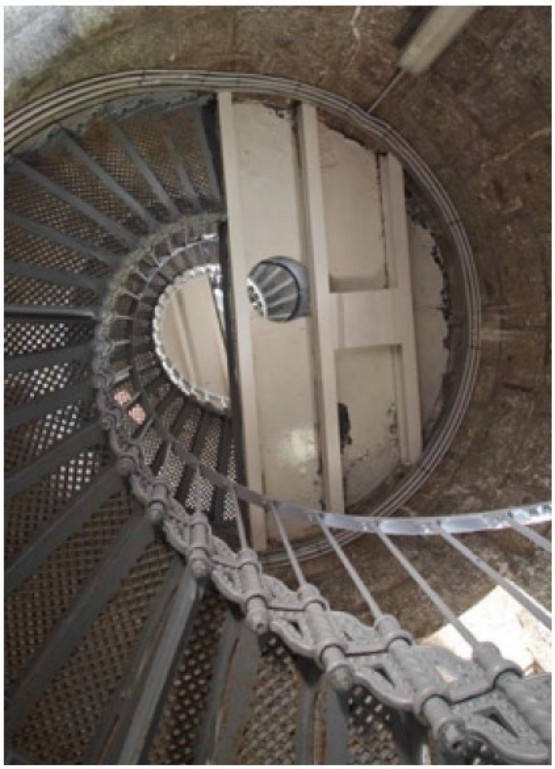
1961 modification to the intermediate floor to accommodate drive weights in the open centre of the tower. Hole cut through the slate floor, with steel balustrade.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: moderate
Maintenance: preserve, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: Moderate

The weight tube is an essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).





Lighthouse feature: Intermediate floors

Description and condition

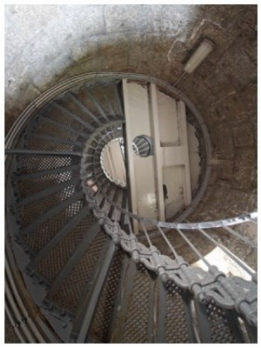
Slate floor on riveted composite iron beams built into tower walls.

Finish: painted
Condition: some cracks identified in the slate slabs, otherwise intact and sound
Integrity: high
Significance: high
Maintenance: keep in service; prepare and repaint at normal intervals
Rectification works: detailed location and extent of cracking in slate slabs should be provided to engineer for evaluation

Heritage significance: High

The intermediate floors are an essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).



Lighthouse feature: Kennedy & Sons Foundry Stairs

Description and condition

1889 geometric stair with cast iron treads/risers bolted together and to curved iron string against tower walls.

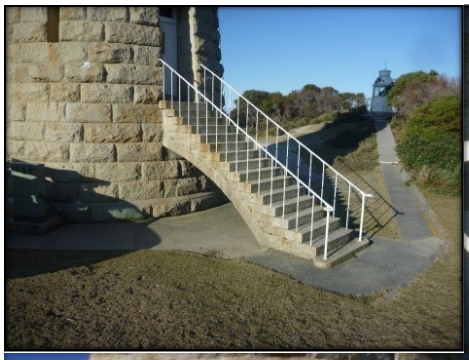
- Balustrade – wrought iron handrail and stanchions.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service; prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The tower stairs are an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The tower stairs contribute to the aesthetic value of the lighthouse (criterion e).



Lighthouse feature: Entrance stair

Description and condition

1889 external granite stair from the ground to the entrance door, supported on a shallow vault. Balustrade with wrought iron balusters and handrail.

Finish: stone: bare, balustrade: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service; prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The stone-flying external staircase is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

The original 1889 stone-flying external staircase is of a rare construction design (criterion b).

The original 1889 stone-flying external staircase contributes to the aesthetic value of the lighthouse (criterion e).

Lighthouse feature: Ground floor

Description and condition

1889 concrete slab on ground.

Finish: painted
Condition: intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The ground floor is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).



Lighthouse feature: Entrance floor

Description and condition

1889 concrete topping over masonry part-spherical vault.

Finish: painted
Condition: Intact and sound
Integrity: high
Significance: high
Maintenance: keep in service, prepare and repaint at normal intervals
Rectification works: none

Heritage significance: High

The entrance floor is an original and essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).

Lighthouse feature: Apron

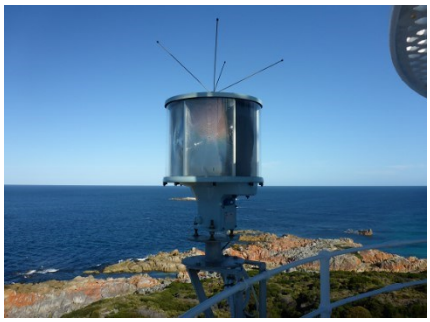
Description and condition

Concrete paved apron around the base of the tower, and paths leading to auxiliary light (outside AMSA area).

Finish: bare concrete
Condition: sound
Integrity: high
Significance: moderate
Maintenance: none
Rectification works: none

Heritage significance: High

The apron paving is an essential part of a lighthouse associated with the development of marine AtoN in the Bass Strait (criterion a).



Lighthouse feature: Beacon (mounted on balcony handrails)

Description and condition

Vega VRB-25 self-contained rotating beacon mounted externally to lantern room affixed to balcony handrails.

Note: This beacon currently serves as the lit aid for this site.

Condition: not assessed
Integrity: not assessed
Significance: low
Maintenance: not assessed
Rectification works: not assessed

Heritage significance: Low

4.2 Related object and associated AMSA artefact

There is a collection of related objects/associated artefacts that are currently on display inside the Eddystone Point Lighthouse.

Aldis lamp in black timber box

Maximo ID: AR0654

Location in lighthouse: Lantern room

Condition: Good condition

Telephone magneto type – timber cased

Maximo ID: AR0655

Location in lighthouse: Lantern room

Condition: Good condition

4.3 Comparative analysis

Wilson's Promontory (VIC) bears the closest compositional resemblance to Eddystone Point. Although Wilsons Promontory Lighthouse was originally painted white, both lighthouses now support unpainted, rough-hewn natural granite walls.

Figure 15. Wilson's Promontory VIC (Source: AMSA)

Figure 16. Eddystone Point Lighthouse (Source: AMSA, 2018)

5. Heritage significance

5.1 Commonwealth heritage list – Eddystone Point Lighthouse

Statement of Commonwealth heritage significance:

The following information is taken from the Eddystone Point Lighthouse listing on the Australian Heritage Database (Place ID: 105565).

> The Eddystone Lighthouse, built in 1887-89, is important for its association with the development of navigational aids in the Bass Strait region. Its construction demonstrated the importance of Banks Strait to shipping between Melbourne, Hobart and Launceston during the latter half of the nineteenth century. (Criterion A) (Australian Historic Themes
>
> 3.8.1 Shipping to and from Australian ports; 3.8.2 Safeguarding Australian products for long journeys and 3.16.1 Dealing with hazards and disasters)
>
> The Eddystone Lighthouse is significant as a dramatic landmark feature, located on Eddystone Point, a prominent granite headland. The lighthouse, constructed of locally quarried granite, has a high level of aesthetic appeal. (Criterion E)
>
> The Eddystone Lighthouse is part of a substantially intact later-nineteenth century complex of lighthouses, three associated residences and a grave, which contributes to its significance. The lighthouse is constructed of unpainted rock-faced stone, which is uncommon, and has an unusual stone-flying external staircase. It retains its original Chance Bros. lantern, as well as an early twentieth century Chance Bros. optic and mercury float optic pedestal. (Criterion B and D).

Commonwealth heritage values – criteria

There are nine criteria for inclusion in the Commonwealth heritage list – meeting any one of these is sufficient for listing a place. These criteria are similar to those used in other Commonwealth, state and local heritage legislation, although thresholds differ. In the following sections, the Eddystone Point Lighthouse is discussed in relation to each of the criteria as based on the current Commonwealth heritage listing (Place ID 105565).

Criterion	Relevant Attributes Identified	Values
Criterion A – Processes This criterion is satisfied by places that have significant heritage value because of [their] importance in the course, or pattern, of Australia's natural or cultural history.	The whole of the lighthouse including its prominence and setting.	The Eddystone Lighthouse, built in 1887- 89, is important for its association with the development of navigational aids in the Bass Strait region. Its construction demonstrates the importance of Banks Strait to shipping between Melbourne, Hobart and Launceston during the latter half of the nineteenth century.
Criterion B – Rarity This criterion is satisfied by	Historic fabric	The lighthouse is constructed of unpainted

places that have significant heritage value because of [their] possession of uncommon, rare or endangered aspects of Australia's natural or cultural history.	Unpainted rock-faced stone Stone flying external staircase Original Chance Bros. lantern Early 20th century Chance Bros. optic and mercury float pedestal.	rock-faced stone, which is uncommon, and has an unusual stone flying external staircase. It retains its original Chance Bros. lantern, as well as an early twentieth century Chance Bros. optic and mercury float optic pedestal.
Criterion D – Typicality This criterion is satisfied by places that have significant heritage values because of [their] importance in demonstrating the principal characteristics of a class of Australia's natural or cultural history.	The integrity of the lighthouse as a feature of the lightstation, which includes the lighthouse tower, three residences and grave.	The Eddystone Lighthouse is part of a substantially intact late-nineteenth century complex of lighthouse, three associated residences and a grave, which contributes to its significance.
Criterion E – Aesthetics This criterion is satisfied by places that have significant heritage value because of [their] importance in exhibiting particular aesthetic characteristics values by a community or cultural group.	Granite construction Prominent location Landscape setting	The Eddystone Lighthouse is significant as a dramatic landmark feature, located on Eddystone Point, a prominent granite headland. The lighthouse, constructed of locally quarried granite, has a high level of aesthetic appeal.

5.2 TAS State heritage register – Eddystone Lightstation

The following information is taken directly from the Tasmanian heritage register – Eddystone Lightstation listing (Place ID 599).

TAS State heritage – statement of significance

No statement is provided for places listed prior to 2007.

TAS heritage values criteria

The following table lists the eight criterion of the TAS State Heritage Register.

TAS State Heritage criterion	Evidence/Explanation
Criterion a) The place is important to the course or pattern of Tasmania's history	The tower and three residences are important for their association with the development of navigational aids along the Tasmanian coast and provided a turning point for shipping entering or leaving Banks Strait.
Criterion b) The place possesses uncommon or rare aspects of Tasmania's	No relevant attributes

history	
Criterion c) The place has the potential to yield information that will contribute to an understanding of Tasmania's history.	No relevant attributes
Criterion d) The place is important in demonstrating the principal characteristics of a class of place in Tasmania's history.	Eddystone Lightstation, built in 1889 is of historic heritage significance because it represents the principal characteristics of a late 19th century light station complex.
Criterion e) The place is important in demonstrating a high degree of creative or technical achievement.	No relevant attributes
Criterion f) The place has a strong or special association with a particular community or cultural group for social or spiritual reasons.	The Eddystone Lighthouse group, comprising the tower and three cottages is situated on Eddystone Point, a prominent granite headland, and is of historic heritage significance as a dramatic landmark feature valued by the community.
Criterion g) The place has a special association with the life or works of a person, or group of persons, of importance in Tasmania's history.	No relevant attributes
Criterion h) The place is important in exhibiting particular aesthetic characteristics.	No relevant attributes

These heritage values, identified and explained in the Commonwealth heritage list and the state heritage register, will form the basis of the management of Eddystone Point Lighthouse. In the event of necessary works, all criteria will be consulted to inform best practice management of the values associated with the lightstation. (See Section 7. Conservation management policies for further information on strategies to conserve heritage values of the Eddystone Point Lighthouse).

5.3 Condition and integrity of the commonwealth heritage values

Assessment of the condition and integrity of Eddystone Point Lighthouse's heritage values are derived from the latest available inspection and audit reports conducted by both AMSA and AMSG (2019–20).

Condition is measured on a Good – Fair – Poor scale and incorporates the current condition of the specific value.

Integrity is measured on a High – Medium – Low scale which incorporates the value's intactness.

As a whole, the heritage values of Eddystone Point Lighthouse demonstrate good to fair condition. All attributes of the heritage values are sound with exception of the granite tower walls which display some signs of water penetration and erosion. The heritage values of the

lighthouse demonstrate high integrity due to the intactness of the site. Despite not being currently used, the original 20th century Chance Bros. optic and mercury float pedestal remain in situ and continue to rotate.

Criteria	Values (including attributes)	Condition	Integrity
Criterion A - Process	The lighthouse's value as a place associated with the development of navigational aids in the Bass Strait region, and rates the importance of Banks Strait to shipping between Melbourne, Hobart and Launceston during the latter half of the nineteenth century.	Good	High
Criterion B – Rarity	The lighthouse's value as a rare unpainted rock-faced stone tower with unusual stone flying external staircase, housing its original Chance Bros. lantern, and early twentieth century Chance Bros. optic and mercury float optic pedestal.	Good	High
Criterion D – Typicality	The lighthouse's value as an integral part of an intact late-nineteenth century lightstation including residences and grave.	Good	High
Criterion E – Aesthetics	The lighthouse's value as an aesthetic granite landmark feature on Eddystone Point.	Good	High

5.4 Gain/loss of heritage values

Evidence for the potential gain or loss of heritage values will be documented within this section of future versions of this heritage management plan.

6. Opportunities and constraints

6.1 Implications arising from significance

The Statement of Significance (section 5.1 above) demonstrates Eddystone Point Lighthouse is a place of considerable heritage value due to its contribution to the establishment of marine AtoNs in the Bass Straits region, and its importance to shipping between Melbourne, Hobart and Launceston in the 19th and 20th centuries.

The implication arising from this assessment is that key aspects of the place should be conserved to retain this significance. The key features requiring conservation include:

- the continued use of the lighthouse as an AtoN
- the architectural quality of the building
- original Chance Bros. lantern, early twentieth century Chance Bros. optic and mercury float pedestal
- moveable artefacts (the aldis lamp in black timber box, telephone magneto type – timber cased)
- interior spaces and features, which are notable for their design, details and/or their original lighthouse function. These include:
    - intermediate floors
    - ground floor
    - entrance room
    - lantern room
    - lens assembly
    - tower stairs
- The external spaces and features, which are notable for their design, details, and/or their original lighthouse function. These include:
    - lantern roof and glazing
    - external catwalk and balcony
    - tower walls and windows
    - external flying staircase
    - doors
    - apron paving

Referral and approvals of action

The EPBC Act requires approval from the Minister for the Environment for all actions likely to have a significant impact on matters of National Environmental Significance (NES).

The Act provides that actions:

- taken on Commonwealth land which are likely to have a significant impact on the environment will require the approval of the Minister.
- taken outside Commonwealth land which are likely to have a significant impact on the environment on Commonwealth land, will require the approval by the Minister.
- taken by the Australian Government or its agencies which are likely to have a significant impact on the environment anywhere will require approval by the Minister.

The definition of ‘environment’ in the EPBC Act includes the cultural heritage values of places.

Heritage Strategy

If an Australian Government agency owns or controls one or more places with Commonwealth heritage values, it must prepare a heritage strategy within two years from the first time they own or control a heritage place.

A heritage strategy is a written document that integrates heritage conservation and management within an agency's overall property planning and management framework. Its purpose is to help an agency manage and report on the steps it has taken to protect and conserve the Commonwealth heritage values of the properties under its ownership or control.

The heritage strategy for AMSA's AtoN assets was completed and approved by the Minister for the Environment in 2018[35].

Natural and Indigenous Heritage Values

Eddystone Point (larapuna) as a whole is notable for its natural and Indigenous heritage values. Although these values lie outside of the Commonwealth heritage listing curtilage and AMSA's lease, the potential remains for future works at the lighthouse to impact these values. At the time this plan was written, no plans have been made for future works at Eddystone Point Lighthouse. In the event major works at the lighthouse are to be carried out, AMSA will seek to minimise impacts to the surrounding area by:

- Consulting with local Indigenous community to ensure work does not infringe on areas of significance, and is not carried out during periods of ceremony or significant days,
- Utilising specific access tracks to ensure no damage to surrounding vegetation,
- Ensuring project footprint is limited to the AMSA lease. In any instance that work is required outside of this footprint, approvals will be sought from the appropriate stakeholders.

6.2 Framework: sensitivity to change

Owing to the site's desired intactness and aesthetic qualities, Eddystone Point Lighthouse is of high significance. Therefore, work actioned by AMSA on the Lighthouse's fabric harnesses the potential to reduce or eradicate the significance of the site's heritage values.

Conservation works, including restoration and reconstruction, or adaption works of the absolute minimum so as to continue the lighthouse's usefulness as an AtoN are the only works that should be actioned by AMSA on Eddystone Point Lighthouse. Some exceptions are made for health and safety requirements, however any and all work carried out must be conducted in line with heritage considerations and requirements of the EPBC Act.

The table below demonstrates the level of sensitivity attributed to the various elements of the fabric register in the face of works resulting in change.

These are measured on a High-Moderate-Low spectrum depending on the action's possible threat to the site's heritage values.

High sensitivity

High sensitivity to change includes instances wherein a change would pose a major threat to the heritage value of a specific fabric, or the Lightstation as a whole. A major threat is one that would lead to substantial or total loss of the heritage value.

Moderate sensitivity

Moderate sensitivity to change includes instances wherein a change would pose a moderate threat to the heritage value of a specific fabric, or would pose a threat to the heritage significance of a specific fabric in another part of the building. A moderate threat is one that would diminish the heritage value, or diminish the ability of an observer to appreciate the value.

Low sensitivity

Low sensitivity to change includes instances wherein a change would pose little to no threat to the heritage value of a specific fabric, and would pose little to no threat to heritage significance in another part of the building.

Component	Level of sensitivity	Nature of change impacting heritage values
Eddystone Point Lighthouse structure (excluding auxiliary light building)	High	• Changes to façade materials and design • Reduction of the all-round visibility of the structure and its setting on Eddystone Point • Painting of stone materials in structure • Removal of the stone-flying external staircase
	Low	• Removal of asbestos/lead paint or other toxic materials • Repairs to masonry materials
Lantern room, balcony and balustrades	High	• Removal of original lantern house
	Low	• Replacement of lantern glazing panes • Repainting of lantern room in like colours
Intermediate floors, staircase and weight tube	High	• Removal of original staircase
	Low	• Reparation works on original staircase • Painting of staircase, intermediate floor platforms, and weight tube in like colours
Lens assembly, light source and pedestal	High	• Removal of 1st Order Chance Bros. lens from lighthouse • Removal of the mercury bath • Removal of pedestal
	Low	• Maintenance to, or cleaning of, the mercury bath
VEGA Beacon	Low	• Light upgrade • Removal or replacement of beacon • Change to the light's character
Windows and doors	Medium	• Alteration of original window and door openings
	Low	• Repair of wooden of doors and door jambs

		• Replacement of window panes and stainless steel frames
Entry room and ground floor	High	• Painting of internal granite walls
	Low	• Placement of operational equipment within ground floor

6.3 Statutory and legislative requirements

Below are listed the various Acts and Code that influence the management of Eddystone Point Lighthouse in terms of heritage, navigation, and work health and safety.

Act or Code	Description
Environment Protection and Biodiversity Conservation Act 1999 (Cth)	*The Environment Protection & Biodiversity Conservation Act (Cth)* (EPBC Act) requires agencies to prepare management plans that satisfy the obligations included in Schedule 7A and 7B of the EPBC Regulations.
Environment Protection and Biodiversity Conservation Regulations 2000 (Cth) Schedule 7B	The Commonwealth Department of the Agriculture, Water and the Environment has determined these principles as essential for guidance in managing heritage properties. • The objective in managing Commonwealth heritage places is to identify, protect, conserve, present and transmit, to all generations, their Commonwealth Heritage values. • The management of Commonwealth heritage places should use the best available knowledge, skills and standards for those places, and include ongoing technical and community input to decisions and actions that may have a significant impact on their Commonwealth Heritage values. • The management of Commonwealth heritage places should respect all heritage values of the place and seek to integrate, where appropriate, any Commonwealth, State, Territory and local government responsibilities for those places. • The management of Commonwealth heritage places should ensure that their use and presentation is consistent with the conservation of their Commonwealth Heritage values. • The management of Commonwealth heritage places should make timely and appropriate provision for community involvement, especially by people who: (a) have a particular interest in, or associations with, the place; and (b) may be affected by the management of the place; • Indigenous people are the primary source of information on the value of their heritage and that the active participation of Indigenous people in identification, assessment and management is integral to the effective protection of Indigenous heritage values. • The management of Commonwealth heritage places should provide for regular monitoring, review and reporting on the conservation of Commonwealth

	heritage values.
AMSA Heritage Strategy 2018	As the custodian of many iconic sites, AMSA has long recognised the importance of preserving their cultural heritage. This Heritage Strategy is in response to section 341ZA of the EPBC Regulations which obliges AMSA to prepare and maintain a heritage strategy, along with obliging AMSA to: • assist in identification, assessment and monitoring of places of heritage value in its care; • prepare and maintain a register of its places of heritage value; • protect the heritage value of places when they are sold or leased; • provide this heritage strategy, and any subsequent major updates, to the relevant minister. The strategy derives from the *AMSA Corporate Plan* and achievements are reported through the *AMSA Annual Report.* The 2018-19 AMSA Annual report can be found online.[36]
Navigation Act 2012 (Cth)	Part 5 of the Act outlines AMSA's power to establish, maintain and inspect marine aids to navigation (such as Eddystone Point Lighthouse). (1) AMSA may: (a) establish and maintain aids to navigation; and (b) add to, alter or remove any aid to navigation that is owned or controlled by AMSA; and (c) vary the character of any aid to navigation that is owned or controlled by AMSA. (2) AMSA, or person authorised in writing by AMSA may, at any reasonable time of the day or night: (a) inspect any aid to navigation or any lamp or light which, in the opinion of AMSA or the authorised person, may affect the safety or convenience of navigation, whether the aid to navigation of the lamp or light is the property of: (i) a State or Territory; or (ii) an agency of a State or Territory; or (iii) any other person; and (b) enter any property, whether public or private, for the purposes of an inspection under paragraph (a); and (c) transport, or cause to be transported, any good through any property, whether public or private, for any purpose in connection with: (i) the maintenance of an aid to navigation that is owned or controlled by AMSA; or (ii) the establishment of any aid to navigation by AMSA.
Australian Heritage Council Act 2003 (Cth)	This Act establishes the Australian Heritage Council, whose functions are: • to make assessments under Division 1A and 3A of Part 15 of the EPBC Act 1999;

	• to advise the Minister on conserving and protecting places included, or being considered for inclusion, in the National Heritage List or Commonwealth Heritage List; • to nominate places for inclusion in the National Heritage List or Commonwealth Heritage List; • to promote the identification, assessment, conservation and monitoring of heritage; • to keep the Register of the National Estate; • to organise and engage in research and investigations necessary for the performance of its functions; • to provide advice directly to any person or body or agency either if its own initiative of at the request of the Minister; and • to make reports as outlined in the Act.
TAS Historic Cultural Heritage Act 1995 (Tas)	This Act establishes the Tasmanian Heritage Council. 7 General functions and powers of Heritage Council (1) The functions of the Heritage council are – a) to advise the Minister on matters relating to Tasmania's historic cultural heritage and the measures necessary to conserve that heritage for the benefit of the present community and future generations; and b) to work within the planning system to achieve the proper protection of Tasmania's historic cultural heritage; and c) to co-operate and collaborate with Federal, State and local authorities in the conservation of places of historic cultural heritage significance; and d) to encourage and assist in the proper management of places of historic cultural heritage significance; and e) to encourage public interest in, and understanding of, issues relevant to the conservation of Tasmania's historic cultural heritage; and f) to encourage and provide public education in respect of Tasmania's historic cultural heritage; and g) to assist in the promotion of tourism in respect of places of historic cultural heritage significance; and h) to keep proper records, and encourage others to keep proper records, of places of historic cultural heritage significance; and i) to perform any other function the Minister determines. (2) The Heritage Council may do anything necessary or convenient to perform its functions.
Building Code of Australia	The Code is the definitive regulatory resource for building construction, providing a nationally accepted and uniform approach to technical requirements for the building industry. It specifies matters relating to building work in order to achieve a range of health and safety objectives, including fire safety. As far as possible, Commonwealth agencies aim to achieve compliance with the Code, although this may not be entirely possible because of the nature of and constraints provided by existing circumstances, such as an existing building.

Work Health and Safety Act 2011 (Cth)	The objectives of this Act include: (1) The main object of this Act is to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces by: a) protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work; and b) providing for fair and effective workplace representation, consultation, co-operation and issue resolution in relation to work health and safety; and c) encouraging unions and employer organisations to take a constructive role in promoting improvements in work health and safety practices, and assisting persons conducting businesses or undertakings and workers to achieve a healthier and safer working environment; and d) promoting the provision of advice, information, education and training in relation to work health and safety; and e) securing compliance with this Act through effective and appropriate compliance and enforcement measures; and f) ensuring appropriate scrutiny and review of actions taken by persons exercising powers and performing functions under this Act; and g) providing a framework for continuous improvement and progressively higher standards of work health and safety; and h) maintaining and strengthening the national harmonisation of laws relating to work health and safety and to facilitate a consistent national approach to work health and safety in this jurisdiction. (2) In furthering subsection (1)(a), regard must be had to the principle that workers and other persons should be given the highest level of protection against harm to their health, safety and welfare from hazards and risks arising from work as is reasonably practicable. [Quoted from Division 2 of Act] This has implications for Eddystone Point Lighthouse of Australia as it is related to AMSA staff, contractors and visitors.

6.4 Operational requirements and occupier needs

As a working AtoN, the operational needs of Eddystone Point Lighthouse are primarily concerned with navigational requirements.

Operation details and requirements

Below are the operational details and requirements of the Eddystone Point light as outlined by AMSA.

1	Objective/rationale	An AtoN is required on Eddystone Point to mark the point

		itself and to provide a navigation mark for vessels transiting North / South on the East coast of Tasmania. It warns of inshore dangers up to 2.5 nautical miles to the East. It provides a 20 nautical miles landfall mark for traffic approaching on the North West corner of Tasmania.
2	Required type(s) of AtoN	A fixed structure is required to act as a day mark. A distinctive light is required for use at night.
3	Priority/significance	An AtoN at this site is important for the navigation of commercial ships.
4	Required measure of performance	The service performance of the AtoN must comply with the IALA Availability Target Category 2 (99.0%).
5	Primary and secondary means (if any) of identification	The day mark must be conspicuous. The existing 35 m grey round granite tower with white lantern at an elevation of 42 m meets this requirement. The light must comply with the requirements of rhythmic characters of light as per the IALA NAVGUIDE. The light must have distinct characteristics that are easy to recognise and identify. The present flashing (2) white light every 15 seconds meets this requirement.
6	Visual range	During daytime, the AtoN structure should be visible from at least 5 nautical miles. At night, the white light must have a nominal range of at least 26 nautical miles.
7	Radar conspicuousness	As the Point itself will provide a good radar echo, no additional radar enhancement is required for this site.

Tourist access

The existing licence for tour operation within the Eddystone Point Lighthouse includes additional operational requirements. Access is required by the licencee to conduct tours inside the lighthouse tower (in-keeping with AMSA work safety requirements). The tourism licencee must comply with any requirements, notices or orders any government agency having jurisdiction or authority in respect of the land or the use of the land.

Tourism licencees must have an adequate understanding of the site's heritage values, and new staff must be educated in the site's history and significance.

AMSA's goals

AMSA is responsible, under the *Navigation Act (Cth)*, for maintaining a network of marine AtoN around Australia's coastline that assist mariners to make safe and efficient passages.

AMSA's present network of 500 marine AtoN includes traditional lighthouses such as Eddystone Point Lighthouse, beacons, buoys, racons, automatic identification system stations, metocean sensors including broadcasting tide gauges, current meter, directional wave rider buoys and a weather station.

Technological developments in the area of vessel traffic management have also contributed to increasing navigation safety and helped promote marine environment protection. AMSA aims to meet international standards for the reliability of lighthouses set by the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA).

On preparation of this management plan, the major goal for the Eddystone Point Lighthouse primarily encompassed continuing its utilisation as an AtoN for as long as necessary while upkeeping the appropriate maintenance to conserve and preserve the heritage values of the lightstation.

Lighthouse performance standards

AMSA aims to meet international standards for the reliability of lighthouses set by IALA. Eddystone Point light is designated as an IALA Availability Category 2 AtoN (within a scale of Category 1 to Category 3, Category 1 aids are most critical). Category 2 aids have an availability target of 99.0%.

Access to the Lighthouse

One practical effect of this performance standard is that the operational equipment and structure of the light need to be kept in good repair by regular preventative maintenance and equipment that fails in service is repaired quickly. Routine maintenance and emergency repairs are carried out by AMSA's maintenance contractor. The contractor needs reliable access to the site for this work, and AMSA officers need access for occasional inspections of the site including auditing the contractor's performance.

6.5 Proposals for change

Preventative maintenance works are carried out on the lightstation to maintain its status as a working marine AtoN and to assist in the site's conservation.

A list of scheduled maintenance is identified within the 04/03/2020 AMSG Maritime Report of Inspection. The information provided below was taken from this report:

Maintenance Description	Expected Maintenance Date
Eddystone Point lantern room paint	25/03/2021
Eddystone Point lantern change	08/08/2021
Eddystone Point Light Motor No. 1 Changeout	15/03/2028
Eddystone Point Structure Paint	28/08/2029

6.6 Potential pressures

A significant pressure that harnesses the potential to effect the Commonwealth heritage values of the place would be the obligation to remove or replace original fabric materials from the lightstation owing to unavoidable and irreversible deterioration.

In the case of Eddystone Point, the mercury float mechanism found within the lighthouse tower may create a hazardous environment in the event of a spill and the release of mercury vapours. WHS may require in the future to modify this mechanism by removing the mercury which would alter the Commonwealth heritage values identified in Criterion B (Rarity). At the time of preparing this management plan, no plans have been made to modify the mercury float mechanism.

In the event plans are made to modify or remove the mercury float, work will be conducted in line with the heritage considerations and requirements of the EPBC Act.

The increasing amount of tourism identified at Eddystone Point harnesses the potential to cause additional wear and tear to the precinct.

6.7 Process for decision-making

Processes for decision-making are required in the event of incidents that impact the heritage values of the site. The following incidents are included due to their likelihood of occurrence at Eddystone Point Lighthouse.

Incident	Procedure
Damage to lighthouse's fabric (heritage significance)	• AMSA or selected contractors to assess extent of damage • Seek heritage advice on restoration of heritage fabric impacted • Identify possible loss of heritage value at both State and Commonwealth level • Seek appropriate approvals for restoration of heritage fabric impacted • Implement best practice management of restoration work in keeping with the original character of the place • In the case of a loss of heritage value, prepare report for submission • Update record-keeping of incident and make available to relevant personnel.
Damage to lighthouse's fabric (no heritage significance)	• AMSA or selected contractors to assess extent of damage • Identify possible impact on heritage fabric in any work carried out to restore fabric • Implement best practice management of restoration work • Update record-keeping of incident and make available to relevant personnel.
Light upgrade	• Assess possible loss of heritage value in the event of an upgrade • Seek expert heritage advice on process of upgrade • Seek heritage approvals for the upgrade of light • Implement best practice management of light upgrade work • Update record-keeping and make available to relevant personnel.
Modification to	• Assess possible obstruction to light

lighthouse (eg adding of attachment)	• Seek heritage approvals for attachment to tower • Monitor attachment and update record-keeping.
Unforeseen discovery of Indigenous artefacts on-site.	• Immediate stop-work. • Notify Land Council and TAS Parks & Wildlife. • Delay work on site until artefacts have been appropriately extracted and further investigations carried out in surrounding area. • Update record-keeping of unforeseen discovery and make available to relevant personnel.
Divestment of lighthouse from AMSA	• Transfer ownership or control of heritage assets to TAS State Government. • Terminate lease of Eddystone Point site with the TAS State Government. • Transfer relevant records and historical information held by AMSA to the TAS State Government.

7. Conservation management policies

Policies

Note: The management of sensitive information is not relevant to AMSA's heritage strategy and therefore bears no relevance in this management plan.

Fabric and setting

Policy 1 – Protect and conserve the significant external and internal fabric of the lightstation, including existing buildings, layout and setting.

Routine servicing is performed by maintenance contractors every 12 months and, from time to time, other contractors may be engaged to carry out projects. Regular written reports from these visits will be sent for review by Asset Management and Preparedness and any work requirements identified will be scheduled accordingly. AMSA's main purpose is to facilitate ongoing operation of the site as a marine AtoN while preserving heritage values. Should for some unforeseen reason the site no longer be viable as a marine AtoN, ownership will be passed to an appropriate state or federal authority to ensure preservation of the heritage assets.

Implementation strategy:

- AtoN Maintenance contractor will continue scheduled periodic maintenance of the lighthouse and marine aids to navigation every 12 months to ensure condition is monitored for early warning of deterioration. Schedule must be approved by AMSA Asset Management and Preparedness.
- AMSA Asset Management and Preparedness to arrange for maintenance to be carried out on the lighthouse as required while continuing to operate as an AMSA marine aids to navigation.
- AMSA Asset Management and Preparedness to arrange for the replacement and upgrading of marine aids to navigation equipment in the lighthouse as required to meet AMSA's service commitment, in a manner that preserves the original fabric of the lighthouse.
- AMSA Asset Management and Preparedness to maintain information on the heritage fabric of the lighthouse including any and all actions, treatments and inspection outcomes within the heritage fabric register. See section 4.1 for fabric register.
- AMSA Asset Management and Preparedness to conserve all the fabric elements identified as significant in the heritage asset condition report.
- AMSA Asset Management and Preparedness to seek expert materials conservation advice when considering repair, restoration and reconstruction of historic fabric. The relevant local, state and federal heritage approvals must be sought prior to repair, restoration and reconstruction.
- AMSA AtoN Heritage Coordinator to conserve the distinctive character of the lightstation by collecting photographic evidence and historical documentation of the original fabric.

Uses

Policy 2 – Install and operate equipment in the lighthouse, so that it continues to function as an effective marine aid to navigation, in such a way as to impose the least possible harm to the significant fabric.

Eddystone Point Lighthouse's use as a working marine AtoN is of high priority. Carrying out maintenance, including upgrades to navigational equipment, is necessary to its function and continued marine safety along the TAS coast. In the event of the installation and/or upgrade to AtoN equipment, proper precaution will be taken to ensure the least possible harm is done to significant fabric.

Implementation strategy:

- AtoN Maintenance Contractor to monitor Eddystone Point's AtoN equipment every 12 months and propose maintenance in the instance of necessary installation or removal. Proposed maintenance is to be approved by AtoN Asset Management and Preparedness.
- AMSA to outline all possible risks to significant fabric, external and internal, associated with the installation, removal and operation of equipment.
- AMSA Asset Management and Preparedness to ensure works carried out are those that ensure the least possible harm to significant fabric.
- AMSA Asset Management and Preparedness to seek expert heritage conservation advice on best practice management of the site during installation, removal and operation of equipment.

Policy 3 – Monitor possible impacts to the site resulting from tourism, and control appropriate access to the lighthouse for contractors and visitors.

Eddystone Point's location and layout allows relatively easy public access, day or night. Although access inside the lighthouse is restricted to authorised personnel, such as contractors and AMSA employees, official tour groups also oversee admittance of tourists from sunrise to sunset.

AMSA personnel and contractors require easy access inside the lighthouse precinct and tower for periodical site visits to carry out inspections and routine maintenance.

Implementation strategy:

- AtoN Maintenance contractor to ensure control on access to all buildings within AMSA's lease area is maintained by periodically inspecting restricted access areas on the precinct during maintenance visits every 12 months.
- AtoN Maintenance contractor to inspect lighthouse for signs of wear and tear attributed to visitor intake during yearly maintenance visit, and note changes in Heritage Asset Condition Report.
- The maintenance of the light holds priority over official tours conducted inside the lighthouse. Some delays in the tour guide service may be required during inspections and routine maintenance.
- AMSA Asset Management and Preparedness to ensure access to the lightstation complies with workplace health and safety measures.
- AMSA Asset Management and Preparedness to ensure general admittance inside the lighthouse is monitored by TPWS.
- AMSA Asset Management and Preparedness to ensure contractors are made aware of the heritage values of the lighthouse.
- AMSA Asset Management and Preparedness to ensure access to site is available for Indigenous people to maintain cultural traditions.

Interpretation

Policy 4 – Accurate and relevant interpretation of the history and significance of the place should be made available to site users/visitors and for offsite external research.

AMSA will continue to make information available through the maintenance of site interpretive signage and its website.

Implementation strategy:

- All relevant information concerning the history and significance of the place will be checked for accuracy and updated appropriately.
- Information will be primarily presented in online resource files accessible to both relevant personnel and the general public. On-site interpretative signage will be utilised where appropriate.
- This information will be maintained and updated in accordance with changes to the history and significance of the place.

Management

Policy 5 – AMSA will continue to conserve the lighthouse in accordance with Commonwealth and TAS State heritage listing requirements.

For works requiring heritage approval, AMSA will obtain permission from any relevant state or federal authorities. Continuous and as needed conservation works will be undertaken as required.

Implementation strategy:

- Liaise with the relevant federal agencies when proposing work on the site.
- Approval in writing from the relevant federal and state heritage authorities must be granted for any proposals for development.

Policy 6 – The cultural significance of the lightstation will be the basis for deciding how to manage it.

The heritage values and cultural significance of the place are to be conserved. This heritage management plan includes relevant background information to support this policy (See Section 3. History).

Implementation strategy:

- Conserve the lightstation to protect its heritage values and cultural significance.
- When possible, strive to maintain the original fabric of the lightstation.
- Use the Burra Charter as the primary guide for the treatment of fabric.
- Engage appropriately qualified heritage consultants when making decisions regarding impact on heritage values.
- Assess impacts on the heritage values of the place when considering proposed alterations or adaptations.

Policy 7 – Monitor, review and report the Commonwealth heritage values of the lightstation every five years or sooner if major changes to the lightstation occur.

The Commonwealth heritage values of the lightstation are to be monitored and reported on a regular basis. This is to ensure the gain and/or loss of heritage value is identified.

Implementation strategy:

- AMSA Asset Management and Preparedness to regularly monitor the lightstation for possible impacts on the identified Commonwealth heritage values.
- AMSA Asset Management and Preparedness to review the current Commonwealth heritage values at least once every five years and assess any gain or loss of values.
- This review must be undertaken in the event of any major alterations to the lightstation.
- AMSA Asset Management and Preparedness to report any changes to the Commonwealth heritage values of the lightstation to the Department of Agriculture, Water and the Environment (Heritage Branch).
- AMSA Asset Management and Preparedness to update AMSA's heritage strategy and this plan to reflect any changes identified.

Policy 8 – Maintain historical, management and maintenance records within AMSA and make available these records.

As part of the proper process for managing change in significant places, the Burra Charter points out the importance of making records before any change. It advocates placing records in a permanent archive, and making them available where this is appropriate. AMSA's collection of records, which include documents pertaining to heritage intervention, management and maintenance, are subject to this process. Heritage asset condition reports are routinely generated every 2 years for each lighthouse and are stored in AMSA's recordkeeping system. AMSA will continue to practice such processes via their records management systems (RMS).

Implementation strategy:

- AMSA to maintain, review and update records through existing AMSA RMS as required.
- AMSA to ensure records can be made available to the relevant personnel and parties as required.

Policy 9 – Provide appropriate training and resources to all relevant staff personnel.

In order to ensure best practice management of AMSA-operated lighthouses, all staff involved in the management and maintenance of Eddystone Point Lighthouse are required to have access to the appropriate training and resources in order to provide best practice conservation of the site.

Implementation strategy:

- Provide staff personnel involved with the management and maintenance of the Eddystone Point Lighthouse access to up-to- date versions of the AMSA heritage strategy, heritage management plans and fabric registers.

- Upon employment, staff will undertake the appropriate training to ensure comprehension of the Commonwealth heritage and EPBC Act statutory requirements.
- AMSA representatives will attend Commonwealth-run heritage workshops, programs and conferences for up-to-date information on statutory requirements and best practice management of sites of national and state heritage significance.
- All current and incoming tour guides operating within AMSA lighthouses will be required to take the lighthouse tour guide safety induction e-learning module once every two years to stay informed on visitor safety and duty-of-care of the site's heritage values.

Policy 10 – Utilise contractors and service providers with appropriate experience.

AMSA should ensure parties carrying out work have appropriate knowledge and use best practice methods to ensure the conservation of the lighthouse.

Implementation strategy:

- Engage staff and contractors with the relevant experience and expertise concerning conservation of the lightstation.
- Provide the appropriate training on heritage conservation matters for AMSA staff and other relevant parties who hold responsibility for heritage management.

Policy 11 – Seek heritage advice and apply best heritage practice.

AMSA will continue to use in-house heritage expertise, external consultancy, or a combination of both as required in order to successfully apply best heritage practice. Should in-house heritage expertise be limited in responding to a requirement, external heritage expertise will be engaged to address the issue.

Implementation strategy:

- Apply in-house heritage expertise when required.
- Use tools such as the Burra Charter and Working Together: Managing Commonwealth Heritage Places (Commonwealth of Australia, 2019) in measuring the likely impact of proposals.
- Seek external heritage expertise in the event of limited in-house capability.

Policy 12 – Appropriate protocol in the event of unforeseen discoveries or disturbances of heritage within the AMSA site.

AMSA's scope of work rarely involves excavation. Should such work need be undertaken, AMSA will implement a suitable cultural heritage management plan (CHMP) and seek advice from suitably qualified personnel as required. In the event of any unforeseen discovery or disturbance of heritage- related items on the AMSA site, notification to the appropriate organisation will occur in accordance with the conditions of the CHMP. This plan will also be updated accordingly.

Note: In most cases, AMSA's leases are limited to the immediate vicinity of the lighthouse and therefore this scenario is not anticipated as a likely occurrence.

Implementation strategy:

- Seek appropriate heritage advice and apply best practice in the event of unforeseen discoveries or disturbances.

Policy 13 – Make this heritage management plan available to all persons involved in decision- making on the management of the lighthouse and its setting.

The plan will be made available to all personnel intrinsic to management of the lighthouse and its setting, for example AMSA maintenance contractors, staff and other relevant parties.

Implementation strategy:

- Provide links to this plan via the AMSA publicly accessible website.
- Provide copies to all relevant personnel and parties.

Future Developments

Policy 14 – Adaptation of the place using methods or processes that minimize impact on heritage values and significance in accordance with the Burra Charter principles.

It is likely that over time the lighthouse will house new equipment as technology changes and improves. The Burra Charter principles will be used as the basis for decision-making.

Implementation strategy:

- Assess the likely impacts of changes on the heritage values and significance of the place.
- Preserve the original fabric of the place and do only what is necessary for the continued use and care of the place.
- Engage expert heritage advice and utilise the Burra Charter in adapting the place.

Policy 15 – When required, engage with adjacent landowners to maintain an appropriate setting for the lighthouse in its visual and natural context.

Any changes to the surrounding land, or AMSA leased area, requires careful consideration. AMSA will liaise with all adjacent landowners in the event of any proposed changes that may affect the setting and attempt to influence a positive outcome.

Implementation strategy:

- Engage with adjacent landowners through consultation when changes are proposed regarding the wider visual and natural context.

Policy 16 – In the event of adaptive re-use or divestment, which would no longer place the lighthouse under AMSA control, AMSA will strive to ensure the Commonwealth and TAS State heritage values of the site are recognised and preserved.

In the event Eddystone Point Lighthouse is no longer identified as a working AtoN, AMSA will withdraw its standing as lessee and hand over all authority to the lessor. This process must be conducted in line with section 341ZE of the EPBC Act.

Implementation strategy:

- AMSA will negotiate with lessor to have site lease terminated.
- All available heritage information within AMSA's collection, including this heritage management plan, will be shared with the relevant parties to ensure the Commonwealth and TAS State heritage values of the site are recognised and preserved.

Community Involvement

Policy 17 – Consult with Indigenous and community stakeholders in the preparation of the management plan.

AMSA will give community and Indigenous groups, as well as the general public, an opportunity to review and comment on this management plan through a public consultation process.

Implementation strategy:

- Undertake community consultation when preparing the heritage management plan in accordance with EPBC Regulations.
- Seek advice from any relevant Indigenous communities and refer to Engage Early—Guidance for proponents on best practice Indigenous engagement for environmental assessments under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*[37].

Review

Policy 18 – Review this plan within five years of its adoption or sooner if major changes are needed.

This plan will be reviewed every five years. This review should:

- Assess the content of the plan.
- Determine its effectiveness in protecting the identified heritage values.
- Provide any necessary recommendations for updating or re-writing of the plan. If major changes occur at the site in the interim, this plan will be reviewed and updated earlier than the specified five years.

Implementation strategy:

- Review this heritage management plan at least five years after its adoption.
- Review and update this heritage management plan in the event of a major change to the lightstation.
- Submit revised plan for approval.

8. Policy implementation schedule

8.1 Heritage implementation plan

Key Issue	Management Action/Task	Policies	Responsibility	Priority	Timeframe
Conservation and preservation	Conserve the lightstation	1, 2, 3, 5, 6, 10, 11, 14	AMSA, Asset Management and Preparedness	High	As required
	Review the heritage management plan every five years	18	AMSA, AtoN Heritage Coordinator	Medium	2025 (5 years from registration)
	Make available this plan to all relevant personnel	8, 13	AMSA, AtoN Heritage Coordinator	High	Ongoing
Liaison dealings	If applicable, ensure communication is maintained with adjacent landowners	15	AMSA, Asset Management and Preparedness	Medium	As required
	Consult with Indigenous and community stakeholders in preparing the management plan	17	AMSA, AtoN Heritage Coordinator	Medium	As required
Heritage values	Review the Commonwealth heritage values every five years	7	AMSA, AtoN Heritage Coordinator	High	2026
	Consider heritage values when proposing new planning and/or developments	5, 6, 7, 14	AMSA, AtoN Heritage Coordinator and Project Managers	High	Ongoing
	Ensure process of re-use/divestment of the site recognises and preserves heritage value	16	AMSA, AtoN Heritage Coordinator	High	As required
Staff and community awareness	Provide relevant training and awareness for	9	AMSA, Asset Management and Preparedness	High	As required

	management personnel (contractors and site-users)				
	Ensure the availability of accurate and relevant information on the history and significance of the lightstation for site-users/visitors	4	AMSA, AtoN Heritage Coordinator	Medium	Ongoing
Record-keeping/ access	Maintain adequate record-keeping of historical, management and maintenance documents (make available these records)	8	AMSA, Asset Management and Preparedness	High	Ongoing
Expert heritage advice	Ensure knowledge and advice of heritage experts is utilised	10, 11	AMSA, Asset Management and Preparedness	Medium	As required
Lighthouse maintenance	Schedule periodic maintenance	1	AMSA, Asset Management and Preparedness	High	February 2021 (Reoccurring once every 12 months)
	The implementation of unforeseen discovery or disturbance processes in the event of an accidental discovery	12	AMSA, Asset Management and Preparedness	Medium	As required
Lightstation access	Secure appropriate access to lightstation for contractor and visitors	3	AMSA, Asset Management and Preparedness	Medium	As required

8.2 Monitoring and Reporting

As stipulated by Schedule 7A of the EPBC Regulations, the outlined implementation plan and associated policies listed above are required to be monitored and updated accordingly. This will be achieved by:

- ensuring the implementation plan and policies are readily available for all relevant personnel,
- delegating AMSA staff to periodically check the implementation plan is up-to-date and being utilised appropriately by the relevant personnel,
- ensuring the timeframes outlined within the plan are followed,
- delegating AMSA staff to review this plan and the associated policies at least every five years and determine whether its contents are relevant and effective in terms of continuing to conserve the place.

Appendix 1. Glossary of heritage conservation terms

The Burra Charter, from its first (1979) version and its (2013) version, defined a set of terms that have since been widely adopted in Australian heritage conservation practice.

Where the following terms are used in their heritage management plan, the particular meanings defined in the charter are intended. The definitions are quoted from Article 1 of The Burra Charter.

A

Adaptation means modifying a place to suit the existing use or a proposed use.

Associations mean the special connections that exist between people and a place.

C

Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.

Conservation means all the processes of looking after a place so as to retain its cultural significance.

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

F

Fabric means all the physical material of the place including components, fixtures, contents, and objects.

I

Interpretation means all the ways of presenting the cultural significance of a place.

M

Maintenance means the continuous protective care of a place, and its setting. Maintenance is to be distinguished from repair which involves restoration or reconstruction.

Meanings denote what a place signifies, indicates, evokes or expresses to.

P

Place means a geographically defined area. It may include elements, objects, spaces and view. Place may have tangible and intangible dimensions.

Preservation means maintaining a place in its existing state and retarding deterioration.

R

Reconstruction means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material.

Related object means an object that contributes to the cultural significance of a place but is not at the place.

Related place means a place that contributes to the cultural significance of another place.

Restoration means returning a place to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new material.

S

Setting means the immediate and extended environment of a place that is part of or contributes to its cultural significance and distinctive character.

U

Use means the functions of a place, including the activities and traditional and customary practices that may occur at the place or at dependant on the place.

Appendix 2. Glossary of historic lighthouse terms relevant to Eddystone Point Lighthouse

A

Apron paving - The concrete paving surrounding the base of the lighthouse tower.

Auxiliary light - Self-contained fixed beacon.

B

Balcony - A walk way around the outside of the lantern, used for maintenance and, when lighthouses were manned, for observing ships. Principal parts are the balcony floor and the balcony balustrade. (Synonym: gallery deck).

Balcony floor - Floor of the balcony. Eddystone Point Lighthouse balcony floor is constructed of stone slab.

Balcony balustrade - A handrail together with its supports. The supports are called balusters. A railing or wall on the outer perimeter of a balcony, to prevent people from falling off the balcony. Generally made of metal stanchions and rails – Eddystone Point's is made of wrought iron stanchions with four iron rod rails.

C

Chance Bros - English manufacturer of optical apparatus, lanterns, cast iron stairs, cast iron towers, and other lighthouse components. The Chance family established a glass- making business in Smethwick, England in 1824 and is often described as 'near Birmingham'. The business was absorbed into the Pilkington group of companies in 1951 and now ceases to exist.

E

External catwalk - A landing around the external face of the tower complete with hand rail.

I

Intermediate floors - Levels found mid-way up a building. Eddystone Point's intermediate floor is composed of slate floor on riveted composite iron beams built into tower walls.

Internal catwalk - An open landing inside the tower complete with handrail. Eddystone Point's internal catwalk is composed of cast iron lattice floor panels supported on solid cast iron brackets bolted to the upper section of the lantern base.

L

Lantern - The glazed enclosure at the top of a lighthouse, which surrounds and protects the optical apparatus. It contains the optical apparatus, made up of the lantern roof, lantern glazing and murette sections.

Lantern floor - The level in a lighthouse at which the lantern is installed, and by which access may be gained to the optical system and to the inside and outside of the lantern glazing. The lantern floor is generally at or near the same level as the catwalk and can be made from steel, concrete, or timber. Eddystone Point's lantern floor is composed of slate slabs supported on rolled iron I section beams built into the tower walls.

Lantern glazing - The middle section of the lantern, circular or polygonal in plan, between the lantern roof above and the lantern base below, made up of glass panes held in a framework of glazing bars. On the landward side there may be blank panels in place of glass, or other opaque construction. Types of lantern glazing include: flat and curved trapezoidal panes and curved diamond/triangular panes. Eddystone Point has trapezoidal panes.

Lantern roof - Roof of the lantern. Usually made of copper sheeting over a framework of rafters. Eddystone Point's lantern roof is composed of copper sheeting.

Lens assembly - A transparent optically refracting element of glass. The surface is usually spherical in form.

Light source - Electric lamps and LEDs now illuminate most lighthouses.

Lighthouse - The principal structure of a lightstation, generally made up of a lantern, balcony and tower.

Lightstation - A precinct containing a lighthouse structure and other related buildings, for example. Keepers' cottages, store room and signal house.

P

Pane - An individual piece of glass in the lantern glazing. Often original supply was 3/8" thick polished plate but in later years this changed to 5/16".

Pedestal - Part of the optical apparatus, consisting of a metal column or base standing on the balcony floor inside the lantern and supporting the lens assembly and light source. Some later Chance documentation (such as their tariffs 1908) also refer to the lantern base as a pedestal.

T

Tower - Structure to support the lantern at a sufficient height above the ground. The most common types are the masonry tower, timber-framed tower, cast iron tower, and lattice tower. Eddystone Point's tower is composed of locally-sourced granite.

Appendix 3. Eddystone Point light details

Eddystone Point Light (AN365-01) Temporarily replaced by VBR-25 Beacon

IALA AVAILABILITY CATEGORY:	2
POSITION:	Latitude: 40° 59.5804' S Longitude: 148° 20.8620' E Datum:WGS84
CHARTS:	Aus 767
BA LIST OF LIGHTS:	K3606
DAYMARK:	Grey round granite tower with white lantern, 35 metres high
COLOUR OF LIGHT:	White
CHARACTER:	Flashing 2 (in): 15.0 s Flash: 0.5 s Short Eclipse: 3.3 s Long Eclipse: 10.7 s
LENS:	920mm f.r. catadioptric. (Drg CN99-242)
LIGHTSOURCE:	Lamp: 120v, 1000W, T.H., 3000hr Lampchanger: UVLA 590 Daylight control Switch: CR Control Type L Lantern control SWBD: PLC Lantern Control Switchboard
PEDESTAL:	RP1 drive system: 120v, 1000W, T.H., 3000hr Gearboxes: Alger & Sons, types TMCX, 7.3 RPM Motors: Pacific Electric 240V, 0.3A type 4 EMMS
LANTERN:	Chance Bros. 12' 1.5 " diameter
LENS SPEED:	One revolution every 45 seconds (1.33 RPM)
INTENSITY:	1,200,000 cd
POWER SUPPLY:	Mains Supply: 240V AC Standby Supply: 3KW 48Vdc to 230Vac single phase inverter Inverter: Outback Power Systems VFXX3048 Battery: 550Ah Modules: 5 x (48v, 165Ah) Main optic supply: 120V
24V SYSTEM	DC/DC converter: 48v/24v Mascot 8862
REMOTE MONITORING	Auto dialler: EDAC SMS85 NextG Communication: SMS85 NextG Modem Processor: EDAC SMS85 Log Carrier: Telstra Power supply: 12V DC Parameters: Rotation; Mains Failure; Mains Restoration; Main Lamp Failure; Battery Voltage
STRUCTURE:	Round granite tower, 26 metres to base of lantern
ELEVATION:	42 metres
RANGE:	Nominal: 26 Nm Geographical: 18 Nm

Appendix 4. Table demonstrating compliance with the EPBC Regulations

Environment Protection and Biodiversity Conservation Regulations 2000 (Cth) Schedule 7A – Management Plans for Commonwealth Heritage Places

Legislation	**Satisfied within**
A management plan must:	
(a) Establish objectives for the identification, protection, conservation, presentation and transmission of the Commonwealth Heritage values of the place; and	Section 1 – Introduction
(b) Provide a management framework that includes reference to any statutory requirements and agency mechanisms for the protection of the Commonwealth heritage values of the place; and	Section 1 – Introduction
c) Provide a comprehensive description of the place, including information about its location, physical features, condition, historical context and current uses; and	Section 2 – Eddystone Point Lightstation site Section 3 – History Section 4 – Fabric
(d) Provide a description of the Commonwealth heritage values and any other heritage values of the place; and	Section 5 – Heritage significance
(e) Describe the condition of the Commonwealth heritage values of the place; and	Section 5 – Heritage significance
(f) Describe the method used to assess the Commonwealth Heritage values of the place; and	Section 5 – Heritage significance
(g) Describe the current management requirements and goals including proposals for change and any potential pressures on the Commonwealth heritage values of the place; and	Section 6 – Opportunities and constraints
(h) Have policies to manage the Commonwealth heritage values of a place, and include in those policies, guidance in relation to the following:	
i. The management and conservation processes to be used;	Section 7 – Conservation management policies (Policy 1, 2, 3, 5, 6, 10, 11, 14)
ii. The access and security arrangements, including access to the area for Indigenous people to maintain cultural traditions;	Section 7 – Conservation management policies (Policy 3)
iii. The stakeholder and community	Section 7 – Conservation management

consultation and liaison arrangements;	policies (Policy 15, 17)
iv. The policies and protocols to ensure that Indigenous people participate in the management process;	Section 7 – Conservation management policies (Policy 17)
v. The protocols for the management of sensitive information;	N/A
vi. The planning and management of works, development, adaptive reuse and property divestment proposals;	Section 7 – Conservation management policies (Policy 16)
vii. How unforeseen discoveries or disturbances of heritage are to be managed;	Section 7 – Conservation management policies (Policy 12)
viii. How, and under what circumstances, heritage advice is to be obtained;	Section 7 – Conservation management policies (Policy 10, 11)
ix. How the condition of Commonwealth heritage values is to be monitored and reported;	Section 7 – Conservation management policies (Policy 5, 6, 7, 14)
x. How records of intervention and maintenance of a heritage places register are kept;	Section 7 – Conservation management policies (Policy 8, 13)
xi. The research, training and resources needed to improve management;	Section 7 – Conservation management policies (Policy 9)
xii. How heritage values are to be interpreted and promoted; and	Section 7 – Conservation management policies (Policy 4)
(i) Include an implementation plan; and	Section 8 – Heritage implementation schedule
(j) Show how the implementation of policies will be monitored; and	Section 8 – Heritage implementation schedule
(k) Show how the management plan will be reviewed.	Section 7 – Conservation management policies (Policy 18) Section 8 – Heritage Implementation Schedule

Appendix 5. Master's and Assistants' Quarters (Blueprints)

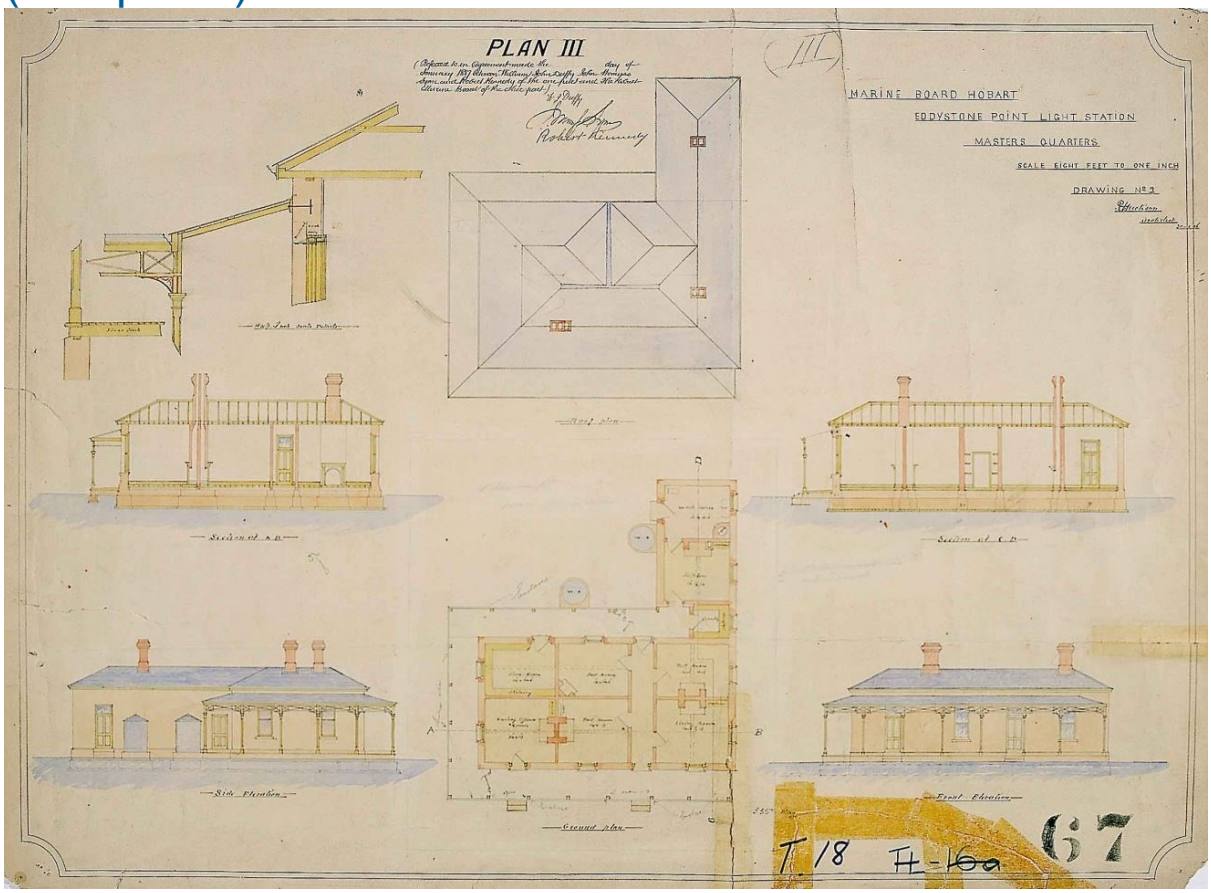


Figure 17. Blueprints for Master's Quarters (R. Huckson, 1886) Image courtesy of the National Archives of Australia. NAA: A9568, 5/2/3 (© Commonwealth of Australia, National Archives of Australia)

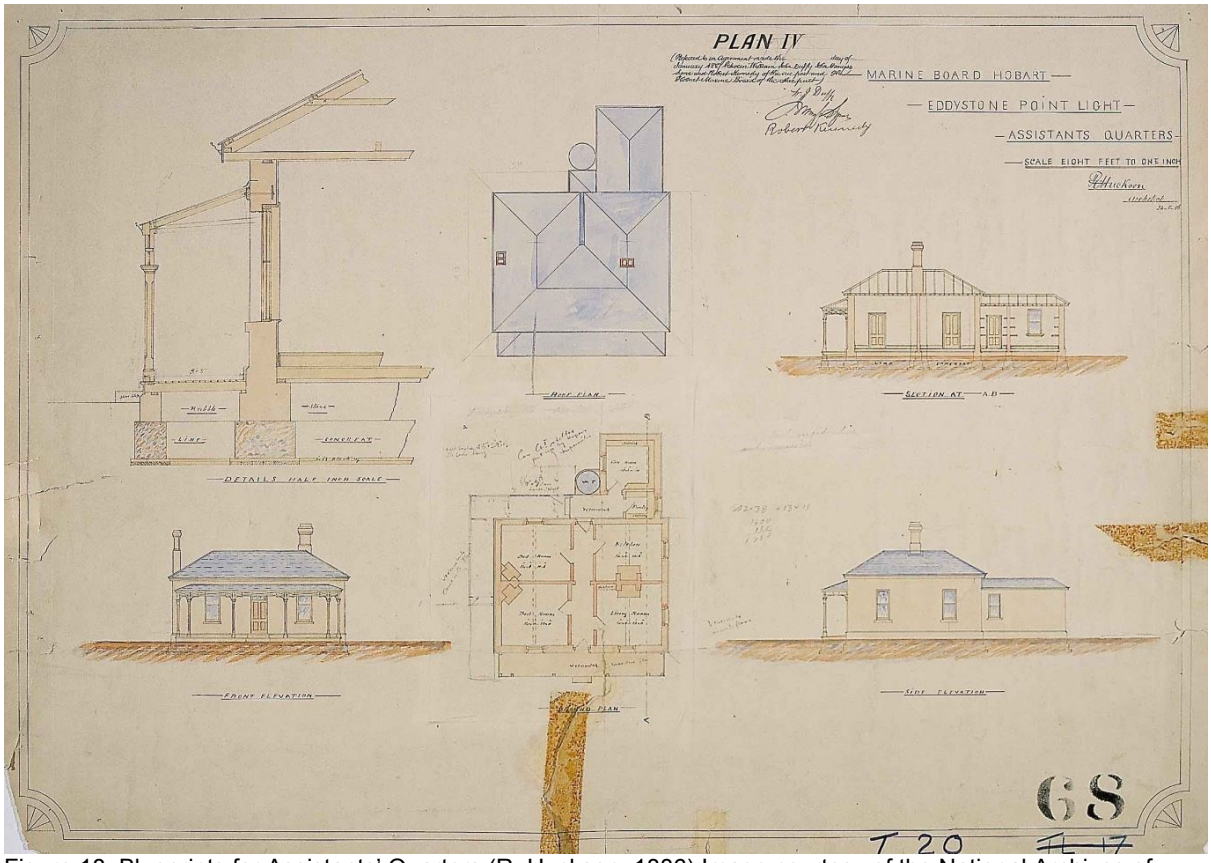


Figure 18. Blueprints for Assistants' Quarters (R. Huckson, 1886) Image courtesy of the National Archives of Australia. NAA: A9568, 5/2/4 (© Commonwealth of Australia, National Archives of Australia)

Appendix 6. Lighthouse keepers at Eddystone Point

Period at Eddystone Point	Head Keeper
1889-1896	Edward Wheaton Buckpitt
1896-1906	Robert Jackson
1907-1911	Edward Nillsen
1911-1915	N.A. Campbell
1916-1917	A.B. Robinson
1918-1919	J.S. (Fred) Lambert
1920-1924	Henry G. Jacobs
1925-1927	George G. Freeman
1927	K. King
1928-1933	Herbert Isaacs
1933	R.J. Hooper
1934-1935	L.J. Haynes
1935-1936	R.J. Hooper
1937-1939	Arthur Hickman
1939-1941	H.E. Mansfield
1941-1943	W. Buckpitt
1943-1945	W.J. Williams
1946-1947	S.M. Brown
1948	J.S. Lambert
1948-1949	W. Buckpitt
1949-1952	S.M. Brown
1953-1955	L. Haynes
1956-1963	W.G. Nichols
1964	F. Morrah
1965-1966	T. Barrett
1967-1970	W.G. Nichols
1970	John Martin
1971-1972	G.W. (Eric) Crosswell
1972-1980	Allen Levings (D. Smith relief head keeper 1974)
1981-1982	Graeme Heynes
1982-1994	John Denmen

Period at Eddystone Point	1st Assistant	Period at Eddystone Point	1st Assistant
1889-1891	H. Kendrick	1949-1950	W. Hudson
1891-1892	J. Brien	1950	Mr. Farrell
1893-1896	J. Johnstone	1951	Mr. Woodhouse Mr. Farrell
1897-1898	W. Kirkwood	1952	Mr. Crosswell R. Ranson
1899	Captain Boon	1953	Jack Wilson R. Ranson
1900-1902	A.B. Robinson	1954	W.G. Nichols Frank Morrah R. Ranson
1903	F.G. Maingay	1955	W.G. Nichols R. Woodhouse

Period at Eddystone Point	1st Assistant	Period at Eddystone Point	1st Assistant
1904-1906	Arthur L. King	1956	Mr. Crosswell J.M. Johnston
1907-1910	R. Grant	1957	Terry Isaac J.M. Johnston
1910	J. Macguire	1958	Terry Isaac
1911-1913	C. Bennett	1959-1963	F. Morrah
1914	James F. Sellers	1964	Armand Schepis
1914-1920	R.J. Hooper (Mr. Pitchford relief keeper 1915) (N.T. Tuson relief keeper 1917)	1965	Mr. Edgell
1921-1924	W. Furness	1966	Frank Armstrong
1925	Mr. King	1967	T. Barrett
1926	R.J. Hooper	1968	Maurice Lee
1927-1928	D.R. Mallinson	1969	G. (Harry) Austin L. Conley
1929-1930	Lawrence Haynes	1970	Mike Jenner David Ingram Ken Short
1930	R.J. Hooper	1971-1973	M. Jenner
1931-1932	S.M. Brown	1973	Michael Ilowski
1933	W.J. Norman S.M. Brown	1974	F. Morrah Allan Poole
1934	Orlando Joe Patterson	1975	Harry Judd
1935	S.M. Brown Terrance Isaacs	1975-1977	A. Parsey
1936	Fred Jacobs	1978	Colin Dallas
1937-1938	J. Dolan (L.T. Moore relief keeper 1938)	1979	Rod Kirk
1939	F. Jacobs J. Burton Jack Lawless	1980	Graeme Heynes
1940	W. Buckpitt	1981	Denis Smith Ray Kirkwood
1941	J. Lambert J. Andrews	1982-1983	L.K. Gerard S. Ingles
1942-1944	A.C. Mitchell	1984-1986	Ted James
1945	R. Colman	1991	D. Smith
1946-1947	L.F. Ikin	1992	A. Gregory
1948	L.J. Haynes	1993	C.Denmen

Period at Eddystone Point	2nd Assistant	Period at Eddystone Point	2nd Assistant
1889	D. McQueen	1948	W. Hudson
1890	J. Brien	1949	J. Parish George Tregenza
1891-1892	Joseph Johnstone	1950	J. Parish
1893-1894	J. Brien	1951	Mr. Crosswell Mr. Parish

Period at Eddystone Point	2nd Assistant	Period at Eddystone Point	2nd Assistant
			Alex Reid (relief keeper)
1895-1896	Mr. Hill	1952	Fred Dobber Mr. Landers Mr. Davies
1897	J. Ainslie Grantham Grace	1953	F. Dobber Denis Conway
1898	Captain Boon	1954	F. Dobber T.W. Harrison J.S. Jackson
1899-1902	F.G. Maingay	1955	F. Dobber L. Holmes
1903	Arthur L. King	1956	F. Dobber J. Dennis L. Horne
1906	Ron Grant	1957	F. Morrah Jack Jackson John Tregenza (relief keeper)
1907-1910	Charles Bennett (M. Board relief keeper 1908)	1958	Mr. Fahey
1911	J. Mach Mr. Wick Mr. King	1959	E.W. (Ted) Hornsby Frank Armstrong
1912	Mr. Davis	1960-1962	E.W. Hornsby
1913	Mr. Phillips Mr. Johnson	1963	K.J. Hay
1914	Mr. O'Brien	1964	George Gough
1915	Arthur B. Robinson Mr. Haigh Mr. Chisholm (relief keeper)	1965	Mr. Rushton J. Kaden
1916	James F. Sellers Mr. Green	1967	Terry Isaacs
1917	Mr. King Mr. Pitchford	1968	Mr. Thompson
1918	W. Furness J. Boden	1969	J. Cook J. Davis
1919	W. Furness N.T. Tuson	1970 B.C. Dillon	Neville Lambert John Davis P.C. Wall
1920	W. Furness Ron Grant	1971	P. Wall K. Short
1921-1923	J. Livingstone	1972-1973	John Davis
1923	Jack Boden	1973	Peter Weldon
1924	J. Livingstone Dudley Rhodes Mallinson McKay (relief keeper)	1974	P. Garner John Davis (relief keeper) Harper (relief keeper)
1925	D.R. Mallison	1975	P. Weldon (relief

Period at Eddystone Point	2nd Assistant	Period at Eddystone Point	2nd Assistant
	J. Boden		keeper) David Witt (relief keeper)
1926	D.R. Mallinson	1976	Colin Dallas A. Poole (relief keeper)
1927	E. Owen J. Boden	1977	John Sinclair (relief keeper)
1928	R.J. Hooper Rod Johnstone	1978	B. Moore
1929	R. Johnstone Owen Paterson Bill Norman	1980	Owen Barrett
1930	R. Johnstone Ernest John Boyd (relief keeper)	1981	Mr. Sutton Peter Christie (relief keeper)
1931-1932	William J. Norman	1982	P. Christie (relief keeper)
1933	Leslie Thomas Moore	1983	Ted James
1934	S.M. Patterson L.T. Moore (relief keeper)	1985	R. Kirkwood (relief keeper)
1935	G.Dolan L.T. Moore (relief keeper)	1986	J. Blake
1936	J. Burton L.T. Moore (relief keeper)		
1937	Frederick Jacobs L.T. Moore (relief keeper)		
1938	F. Jacobs G. H. Mansfield		
1939	J.S. Lambert William Buckpitt L.T. Moore (relief keeper)		
1940	J.S. Lambert J. Andrews (relief keeper)		
1941	A.C. Mitchell L.T. Moore (relief keeper)		
1942	Mr. Floyd D.R. Wilcox (relief keeper)		
1943	Richard MacDonald G.Dolan (relief keeper)		
1944	R. Colman		

Period at Eddystone Point	2nd Assistant	Period at Eddystone Point	2nd Assistant
	S.M. Brown		
1945	E. Fitzallen (relief keeper) G. Dolan (relief keeper)		

Endnotes

[1] AMSA, *AMSA Interactive Heritage Lighthouse Map,* Google Maps, (2019) https://www.operations.amsa.gov.au/lighthouses/

[2] Lucas, C., et al., *Eddystone Point Lightstation Conservation Management Plan*, Clive Lucas, Stapleton and Partners Pty. Ltd., (1995).

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[6] Commonwealth heritage list, *Eddystone Lighthouse*, Eddystone Rd, Gladstone, TAS, Australia, Australian Heritage Database, https://www.environment.gov.au.

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[9] Written by heritage architect Peter Marquis-Kyle for AMSA.

[10] Written by heritage architect Peter Marquis-Kyle for AMSA.

[11] Searle. G, *First Order: Australia's Highway of Lighthouses*, Glenelg: SA (2013), pg. 34.

[12] Written by heritage architect Peter Marquis-Kyle for AMSA.

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