

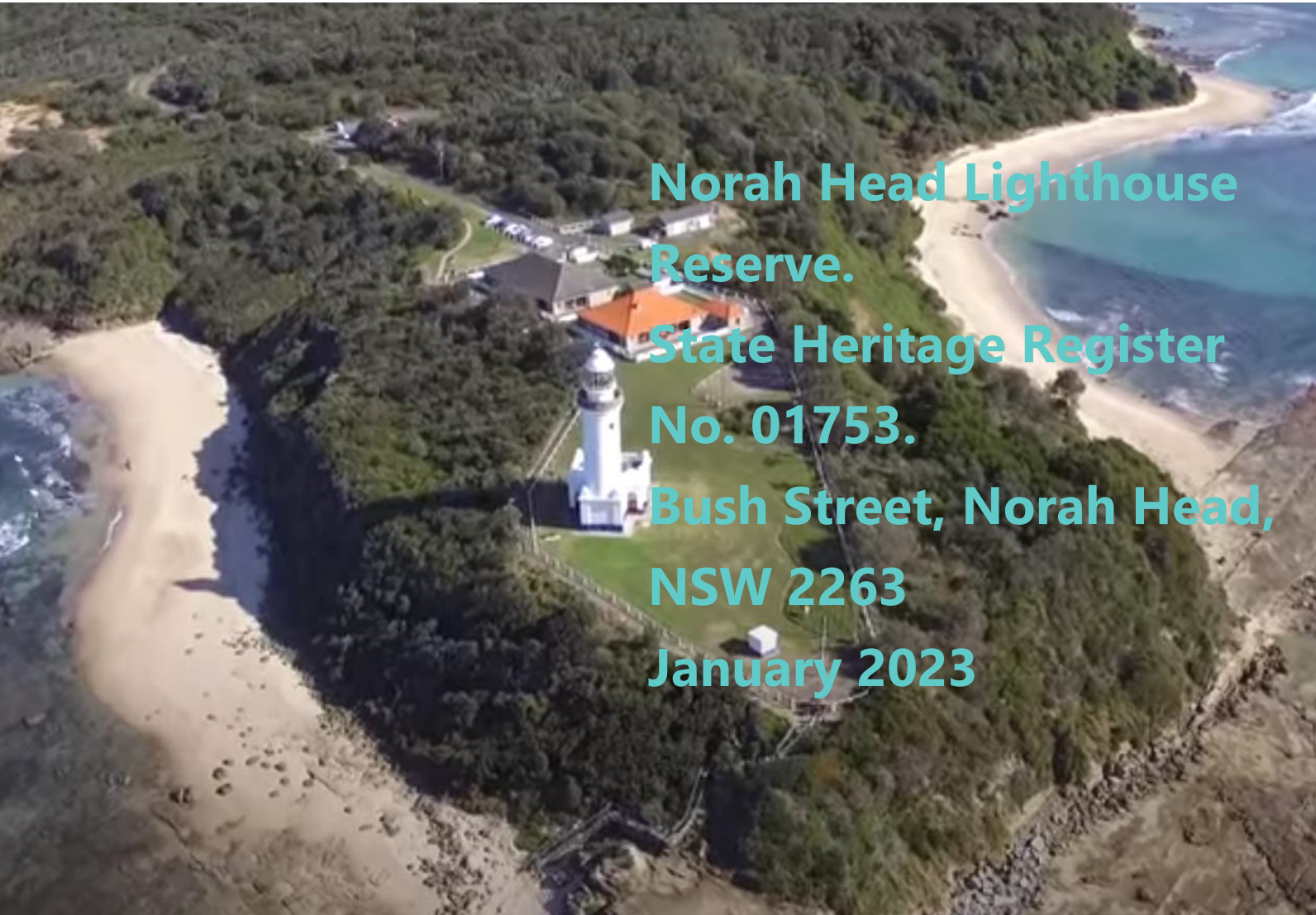


## Norah Head Lighthouse Reserve Land Manager Board

P.O. Box 4 Toukley, NSW 2263 Australia



Crown Lands



**Norah Head Lighthouse  
Reserve.**

**State Heritage Register  
No. 01753.**

**Bush Street, Norah Head,  
NSW 2263**

**January 2023**

# MANAGEMENT PLAN 2023



# Acknowledgement of country

The Department of Planning, Industry and Environment acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

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## Find out more:

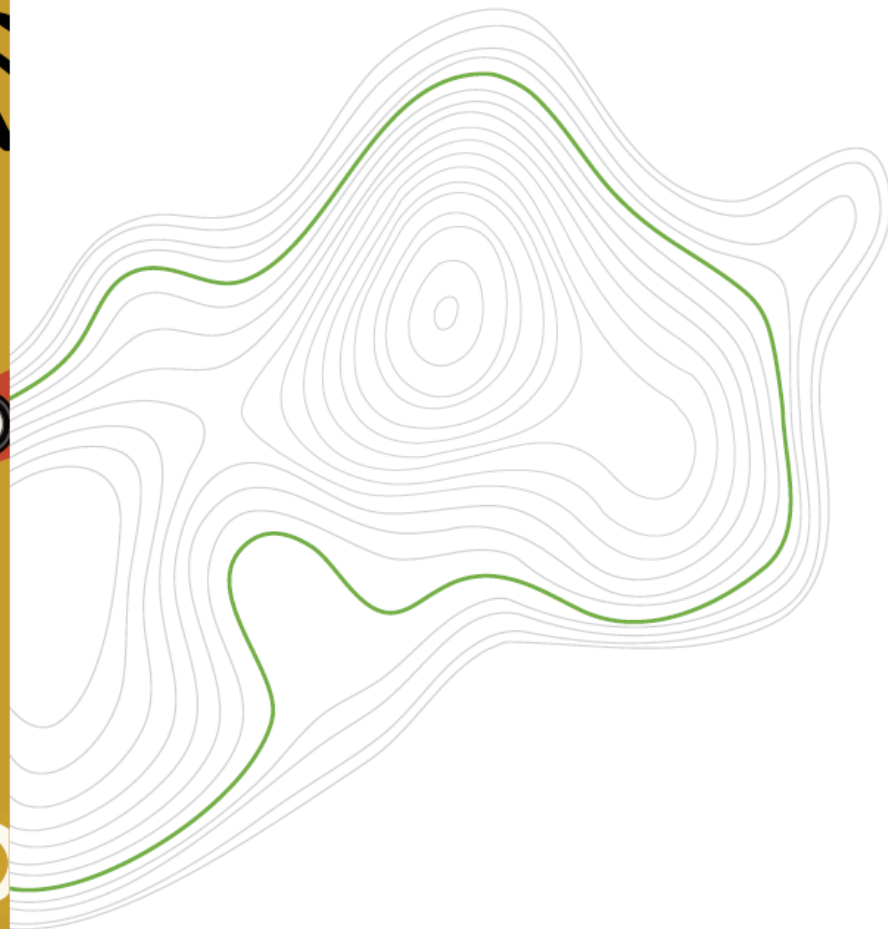
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Norah Head Lighthouse Reserve Land Manage Board 2021 Management Plan

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Pathways artwork by Nikita Ridgeway

Cover image: Kayaking on the Pittwater – Destination NSW

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Norah Head Lightstation Precinct, 13 April 1939



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## **Appendix A**     The policies guiding the conservation, vision, and its application from section 6 of the 2020 Endorsed Conservation Management Plan

### **Reserve Maintenance Schedule**

The existing Maintenance Schedule is to be reviewed and updated and is a separate sub plan to this document.

# 1: Executive Summary

## A Management Plan for the Norah Head Lighthouse Reserve

This document sets the vision, priorities, and overarching strategy for the management of the Reserve in accordance with the principles of environmental protection, conservation and ecological sustainability, public use and enjoyment as well as encouraging multiple use of the Reserve.

The focus is delivering balanced sustainability within a framework of good corporate governance.

This is a planning document that focuses on how the Norah Head Lighthouse Reserve Land Manager Board intends to meet its charter in protecting and enhancing the environmental and heritage value of the Reserve.

It is based on the policies set out in the Reserve's endorsed Conservation Management Plan (2020) and discusses the Natural, Human, Physical and Financial resources available the Land Management Board to achieve the objective to develop the Reserve's recreational and tourism facilities for community use and enjoyment. It aims to support business opportunities that in turn support regional economies and promote the Reserve's greater financial sustainability.

### Mission Statement

Dedicated to the preservation, conservation and management of the Norah Head Lighthouse Reserve.

### Aims and Objectives

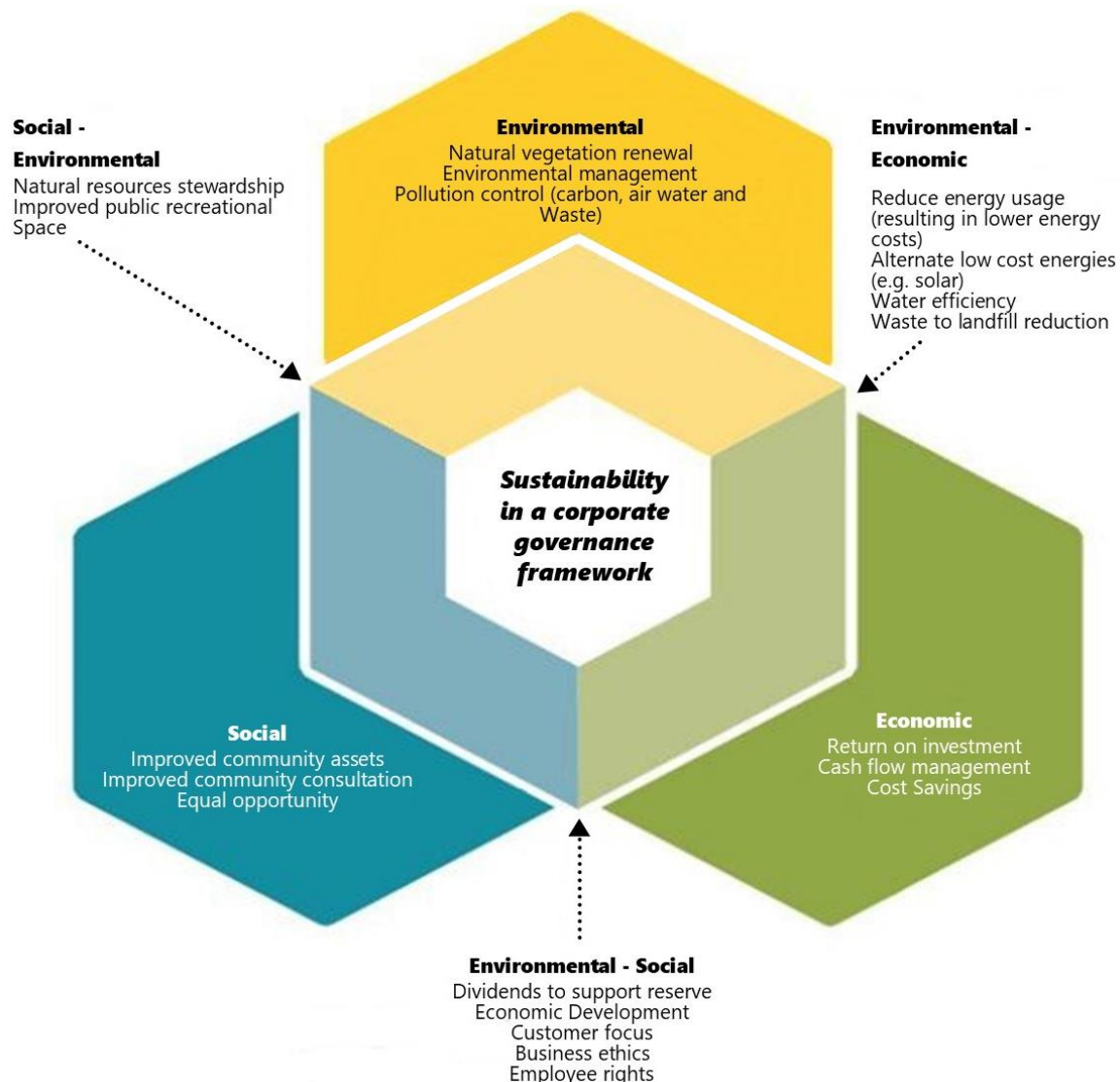
1. Conserve and manage the cultural significance of the place and in doing so enhance that significance;
2. Conserve the setting and landscape of the place;
3. Conserve and enhance the ecology of the place;
4. Conserve the archaeological and Aboriginal value of the place;
5. Conserve the significant built fabric of the place;
6. Conserve the significant interior fabric of the place;
7. Conserve the movable heritage of the place;
8. As a place of significant environmental and cultural heritage, retain the site in public ownership;
9. Optimise public access and land use consistent with the conservation of the place;
10. Encourage tourism, cultural and recreational uses of the site having due regard to the conservation of the place.

**Strengthen Community connection with Crown Lands**

## 2: Introduction

The Norah Head Lighthouse Reserve Trust was established on 6<sup>th</sup> September 2002 pursuant to section 92(1) of the Crown Lands Act 1989 for Reserve 1003869 for Heritage Purposes, Public Recreation and Coastal Environmental Protection. This document sets the vision, priorities, and overarching strategy for the management of the Reserve in accordance with the principles of environmental protection, conservation and ecological sustainability, public use and enjoyment as well as encouraging multiple use of the Reserve.

The diagram below sets out the Triple Bottom Line (social, environmental, economic) context which the land manager applies from its Corporate Strategic Plan. The focus is delivering balanced sustainability within a framework of good corporate governance.



Triple Bottom Line Strategic Approach applied by the Crown land manager.



### 3: Strengthen Community Ties

The success of the 2021 Management Plan or the Norah Head Lighthouse Reserve will only be possible with the continued support and participation of communities and Crown Land Managers – and through the strength of partnerships with other NSW Government agencies.

Volunteers who provide their time and skills in order to benefit their local communities remain critical to the management of Crown land. The benefits to communities from using Crown Land could not be realised without the dedication and service of these volunteers.

The objective of strengthening community ties is a key element of this Management Plan. Community connections are important, and the Reserve plays a critical role in the social fabric and life of our community, focused on improving its health and wellbeing.

Aboriginal communities are to be supported to realise their rights on the Reserve. The Land Manager Board plans to partner with the Darkinjung Local Aboriginal Land Council (DLALC) and its community to unlock economic and social benefits of the Norah Head Lighthouse Reserve.

Aboriginal Land Agreements (ALAs) are voluntary, legally binding agreements that provide a practical mechanism to negotiate opportunities and outcomes on land where there are coexisting rights, entitlements, and interests. One of the objectives of this Management Plan is to explore if ALAs are a practical method of strengthening the community's tie with the Reserve



No Copyright infringement intended





## 4: The Endorsed 2020 Conservation Management Plan

The endorsed Conservation Management Plan (2020) provides detailed information about the Reserve including location details, usage, history and the actions required to conserve its heritage. This is a planning document that focuses on how the Norah Head Lighthouse Reserve Land Manager Board intends to meet its charter in protecting and enhancing the environmental and heritage value of the Reserve. Both documents need to be reviewed in order to get a full appreciation of what is required.

The document contains the sixty-seven policies adopted by the Norah Head Lighthouse Land Manager Board to guide the Board in managing the Reserve. A copy of the policies is contained in **Appendix 1** of this document.



## 5: Resources

### 5.1 Natural Resources

The Norah Head Lighthouse Reserve is rich in coastal native fauna and flora. It is the responsibility of the Norah Head Lighthouse Reserve Land Manager Board, with the assistance of our Coastcare Volunteers, to maintain and protect these Natural Resources. Any future activity proposed for the Reserve must consider the impact on the Reserve's Natural Resources that includes minimizing loss of vegetation/habitat and all vegetation loss must be offset elsewhere on the Reserve or another location within proximity to the Lighthouse Reserve.

#### Native Flora

Over 240 different native species have been recorded around the Lighthouse Reserve. Some of these plant varieties are rare, many are endangered, all are protected. All the of the native plants found on the Reserve have evolved to grow in hostile coastal conditions. The Reserve's cliff tops with their salt laden winds and poor soil have resulted in plants variations specific to the area. Some well-known examples are:

**Kangaroo Grass (*Themeda australis*).** This is a normally tall grass but at Norah Head Lighthouse Reserve it grows flat to the ground and stays flat to the ground if replanted at a different location.

**Coastal Banksia (*Banksia integrifolia*).** Again, this tree has adapted to the coastal conditions being wind shaped to make them more resistant to the prevailing winds. These trees are also an important bird food source during Winter when other food sources are scarce.

**Tuckeroo (*Cupaniopsis anacardioides*).** The Tuckeroo is found in Littoral Rainforests, grow to approximately 10 metres in height. Their fruit and seeds are an important food source for birds and animals. Norah Head Lighthouse Reserve has a large stand of these trees.

**Flannel Flower (*Aotus ericoides*).** Flannel Flowers are native to this area making them the perfect plant to use for the re-establishment of native vegetation on the Reserve. They were the flora emblem of the former Wyong Shire Council but they have been severely impacted by the urbanization of the Central Coast of NSW.



## Native Fauna

### Birds

Almost 150 species have been recorded on the Norah Head Lighthouse Reserve. This is a surprising variety for such a small area. Two of the best know birds on the Reserve are:

**Brush Turkey (*alectura lathamii*).** These birds are usually seen wandering around the Reserve. They grow to 75cm in length and have a wing span to 90cm. The male builds a mound of twigs, bark and leaf matter that measures approximately 4 diameter by 1 metre high where the hen lays 16 or more eggs. The male monitors the mound to maintain the optimum temperature for the eggs to hatch.

**White Faced Heron (*Egretta novaehollandiae*).** These tall slender birds are often seen wading along the foreshore of the Reserve looking for food within the many pools of water found on the Reserves rock shelves.



Norah Head 1951

## 5.2 Human Resources

People present themselves as Volunteers because:

- a. They have a Centrelink requirement of 30 hours/fortnight volunteering, or
- b. They volunteer to help the Reserve as a community service.

The Reserve is supported by volunteers with different roles as follows: Board Members, Tour Guides, Coastcare Volunteers and Maintenance Volunteers.

- Board Members are appointed by Crown Lands for a five-year term
- Other volunteers are sourced from:
  - Volunteering Central Coast
  - Facebook advertising
  - Web site advertising
  - Word of mouth from existing volunteers
- Volunteers have personal accident insurance provided by Crown Lands.
- Volunteers are provided with uniforms that enables visitors to the Reserve to recognise them.
- A dedicated Board Member instructs the volunteers on what each groups projects are.
- Each Volunteer Group is encouraged to appoint a Team leader as a direct link to the Land Manager Board.
- The Board must provide the following for volunteers.
  - Access to the Reserve Trust Handbook, NSW Crown Land. The 2020 Conservation Management Plan (CMP) and the 2021 Management Plan.
  - A safe work environment by providing implementing the Boards safety system including
    - Site induction, including the heritage vale of the Reserve and how it must be protected.
    - Safe work procedures,
    - Appropriate tools and equipment,
    - Personal Protective equipment,
    - Safety training as required ( e.g. First Aid Training )
  - Workshop and storage areas.
  - Morning tea and wash room amenities.
  - Information to assist the volunteers in undertaking appropriate duties s needed.
    - Agreed Maintenance Plan for Maintenance Volunteers (VMT)
    - Coastcare Projects Plan for Coastcare Volunteers
    - Reference material about the Reserve for Tour Guides.
- Volunteers are supported by the engagement of contractors where it is considered the tasks are beyond what is acceptable for the volunteers to undertake. In addition contractors are engaged where works are required to be undertaken by qualified trades persons.

## 5.3 Physical Resources

- The Lightkeepers Quarters 1 and 3 are utilized to provide accommodation for tourists.
- Quarters 2 is used to house the Site Manager.
- The Stables provide accommodation for a shop (selling souvenirs, drinks and ice-creams to visitors), radio equipment used by Surf Lifesaving NSW and a workshop area for Maintenance and Coastcare.
- When tours are in operation the Lighthouse itself is accessed by tour volunteers and members of the public apart from the area immediately surrounding the lens which is only accessible to RMS personnel and their authorized contractors.
- The Reserve has a large, turfed area that is regularly used by visitors for picnics and special events.
- There is a nature trail bush walk from the Public Car Park to the adjoining Council Bush Street Reserve.
- Steps to the Beach
- Public Toilet
- Public Lookout
- Merchant Mariner's Memorial



## 5.4 Financial Resources

The vision embodied in this plan is for the Norah Head Lighthouse Reserve be resilient and sustainable. This means enabling and evolving a wide range of activities that generate sufficient funds to make the Reserve self sufficient in meeting the expectations and needs of the community

The Board prepares an annual financial plan detailing estimated income and expenditure for the coming year. The sources of income are as follows:

- Revenue from government (including grants):
- Donations and bequests:
- Revenue from providing goods or services:
  - Accommodation
  - Weddings
  - Tours
  - Sale of souvenirs and refreshments
  - Revenue from events and commercial photography.
- Revenue from investments

The areas of expenditure are as follows:

- Annual Operational Expenses including:
  - Site Manager Fees
  - Utilities
  - Equipment
  - Maintenance costs
- Additional Capital Works:
  - Grant funded
  - Board Funded

The Board carries out initiatives to maintain and boost income as detailed in the Marketing section below.

The Board minimises expenditure by analysing and prioritising the work to ensure value for money.





Photo @euphoria\_films



## 6: Marketing

Identified initiatives to maintain and boost income:

- Maintain 4 star accommodation rating
- Accommodation rental rate are set at competitive market rates.
- Expand Lighthouse Tower tour operations e.g. Night Tours.
- Establish a permanent shop to increase the income being derived from the current temporary "Pop Up Shop"

### 6.1 Internet & Social Media

The Reserve has a website [norahheadlighthouse.com.au](http://norahheadlighthouse.com.au) which can be accessed by members of the public to source information about the Reserve and to make accommodation bookings. In addition, social media such as Facebook is utilised to promote the Reserve.

### 6.2 Print Media

We conduct limited print media advertising due to the success of our social media promotions. However, printed brochures for accommodation and weddings are produced and are handed out to interested visitors.

### 6.3 Analysis

- The bookings are reviewed and offers are developed to maximise the patronage.
- The Marketing Committee meets on a regular basis.



Photo 📷 @hubjack70

## 7: Planning Influences

**The vision of the Draft State Strategic Plan for Crown Land has been influenced by the following items:**

This item lists and explains the limitations facing the Board in achieving the Draft State Strategic Plan's vision for Crown Land.

The State Strategic Plan's vision for Crown Land lists priorities to be achieved over the next ten years.

- Enable jobs growth, commercial opportunities and sustainable economic in regional and rural NSW.
- Expand green space, sustainable quality of life and climate change resilience
- Strengthen and support evolving community connections.
- Work with Aboriginal communities to realise the potential of their land rights.

The priorities of the plan are jobs growth, commercial opportunities and sustainable economic progress. The outcomes the plan wants to achieve is to support innovative and sustainable regional industries, expand regional tourism, assist new infrastructure projects, and facilitate investment in Crown Lands.

The Reserve's Conservation Management Plan advises that the Lightstation Precinct offers the only revenue stream (an opportunity). Topographically, any new uses in that area will be constrained to the headland by cliffs, beaches and the rock platform. This area of the headland that is usable is also the location of exceptional and highly significant elements, surrounded and constrained by culturally and environmentally sensitive bushland.

Increasing visitation can improve the experience and viability of the place however increasing the intensity of use can harm the values and significance that must be protected and conserved. The level of use will be constrained by this consideration. There will be limits to the site's capacity. In time, car and bus parking will also become a limiting constraint. Effective and timely communication between all stakeholders can at times be difficult to achieve and could be considered to be a constraint to the overall success of the Reserve.

Any future new uses for the Norah Head Lightstation Precinct or the Norah Head Lightstation Reserve must be appropriate to the significance and values of the place, be a 'good fit' and have no or minimal impact on the original fabric and the setting of the place. The history and value of the place should always be presented and be easily understood.

Although the Reserve needs to be financially self-sufficient, ongoing capital expenditure should not necessarily be required to yield a return on the investment. The priority for Management must be the physical conservation and interpretation of the lightstation precinct and the Reserve for tomorrow and for future generations.

The following items are not in any priority orders.





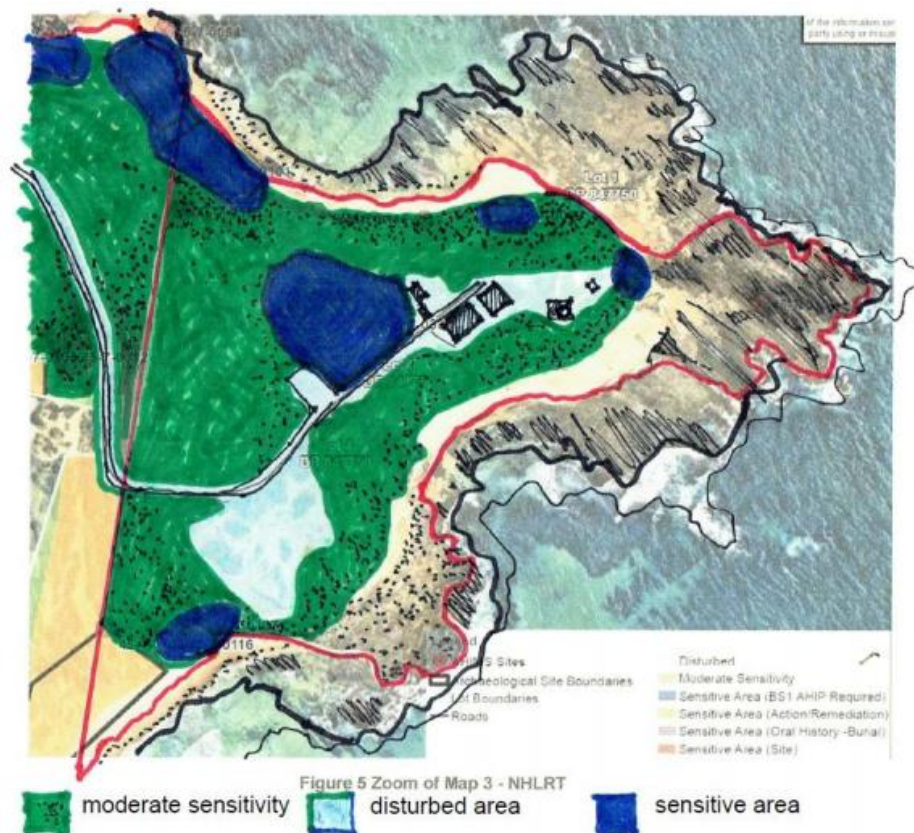
**Aerial of Norah Head Lighthouse Reserve**  
Reserve Boundary shown in by red line.

## 7.1 Heritage

### 7.1.1 Aboriginal Cultural Significance.

An Aboriginal Cultural Heritage Management Plan was prepared by Insite Heritage, May 2016. The report puts forward a management plan for Aboriginal sites located within the Norah Head Lighthouse Reserve and adjacent Reserves. It concludes that the Norah Head area is of very high cultural significance to the local Aboriginal community.

The Image 16 from the CMP provides a guide to areas where and new development would be constrained.

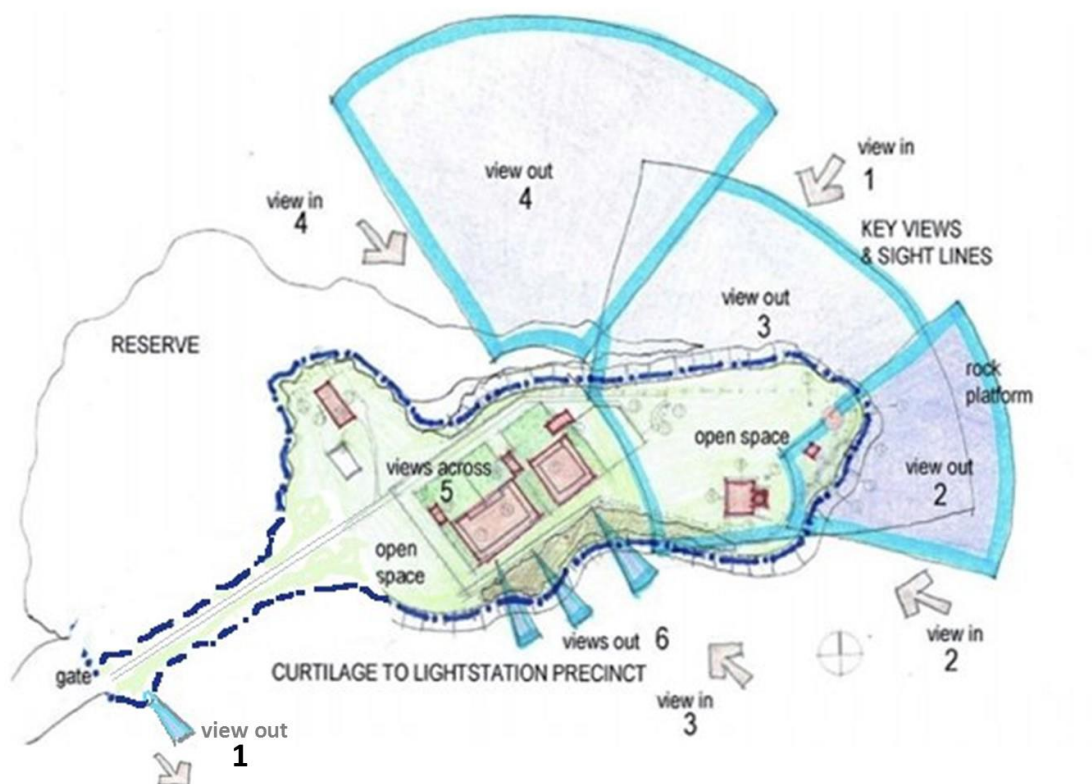


**Key To Map, Image 14 (ACHMP Map 3)**

Colour ID	Sensitivity	Programme
Green	Moderately sensitive	Take care. Define a plan
Pale Blue	Disturbed	Includes Lightstation
Dark Blue	Sensitive area	Archaeological sites
Pale Orange	Sensitive area	Action Remediation

### 7.1.2 Heritage Curtilage & The Lightstation Setting

The State Heritage listing is for the 'Norah Head Lightstation Precinct', a Reserve of



approximately 15 hectares. The Lightstation Precinct has its own curtilage that sits within the boundaries of the whole Precinct Reserve. The constraints placed on developments in the Lightstation precinct are addressed in detail in the CMP.

Because of these constraints the provision of a café with a sheltered seating are not possible withing this Heritage Curtilage.

## 7.2 Parking

Parking of motor vehicles on site is limited and enlarging the existing public car park is impractical because of the adjacent environmental constraints. Providing safe parking bays along Bush Street and a shared path will help to accommodate the existing visitors in peak times. Any new traffic generating development would need to have a traffic study and address how it would handle any increase in motor vehicles it generated.



### 7.3 Pedestrian Access

Implementation of Norah Head Village Centre Masterplan - Shared pathways are needed to increase safe pedestrian access to the Reserve. This is a constraint that impacts on any plans to expand regional tourism within the Reserve.

### 7.4 Coastal Erosion Hazard Line

The former Wyong Council's Draft 2018 Coastal Zone Management Plan (CZMP) failed to achieve Ministerial Certification. It provided practical actions to address current and future risks to the coast from coastal processes. It determines appropriate hazard estimates in zones affected by both beach and cliff (geotechnical) processes.

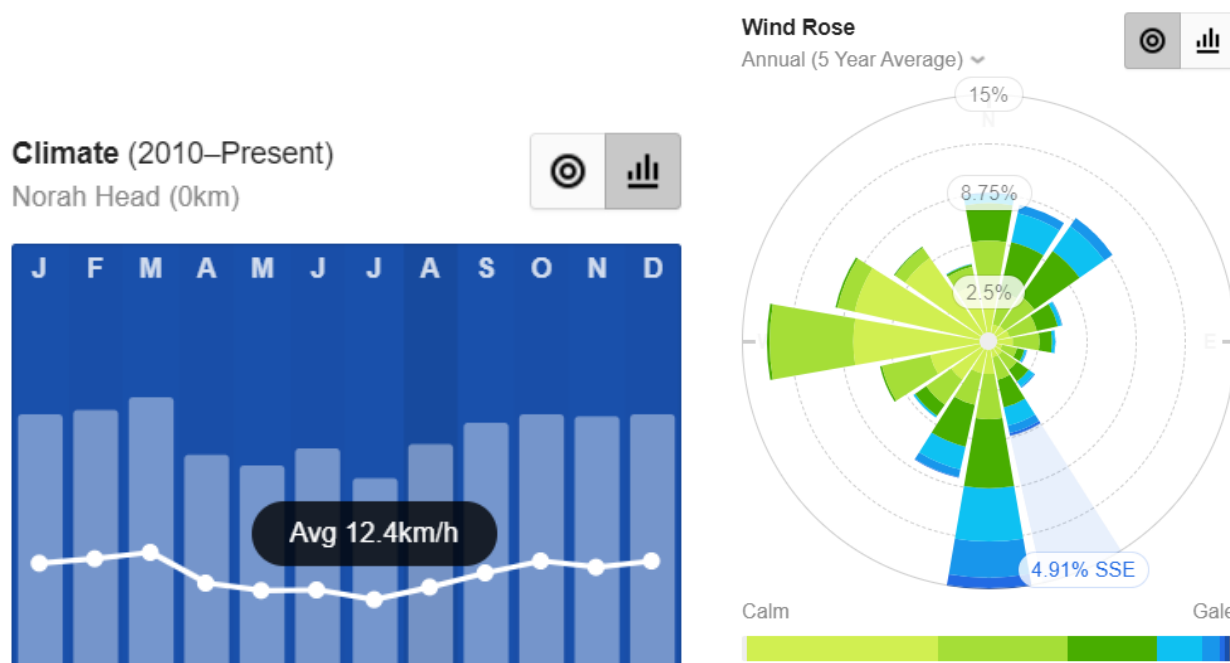
The cliff recession hazard lines shown in the Draft 2018 CZMP indicate the boundaries that require any development, disregarding other constraints, need to be on the landward side of the high risk hazard lines to achieve Council DA approval. The approved volunteers Storage/Workshop adjacent to the Stables is on the edge of the hazard line.





## 7.5 Norah Head Lighthouse Reserve Weather

Norah Head Lighthouse is situated on an exposed headland with extensive view lines of the sea and coastal areas. As such it is subject to constant coastal winds. The wind averages 12 to 15km/h and gusts to between 35 to 50km/hr. The strongest wind recorded was 5 January 2019 at 98.3km/h from the north east. However, most of the Gale force winds come from the south.



Outdoor activity is constrained by the strong winds that buffet the headland. Any development on the Reserve needs to demonstrate consideration of high wind Impacts.

## 7.6 Securing Funding to realise Reserve potential.

To undertake the items in the NHLRLM Board's Action Plan set out in Section 8 below would require the injection of over \$2million to address WH&S issues and infrastructure replacements to assist the Reserve reaching its full potential as a tourist destination. This amount is in addition to the 2020 and 2021 NSW Government Funding received the Reserve.







## 8: Master Planning for the Reserve

**“This is the Action Plan for the Reserve.”**

The purpose of a Master Plan is to explore opportunities to protect and conserve the heritage and cultural significance of the reserve. As well as including conservation projects, the plan maintains and develops the Reserve’s recreational and tourism facilities for community use and enjoyment. It aims to support business opportunities that support regional economies and promote the Reserve’s greater financial sustainability.

### **Identified projects**

In accordance with the triple bottom line approach the identified projects have been grouped into 3 categories:

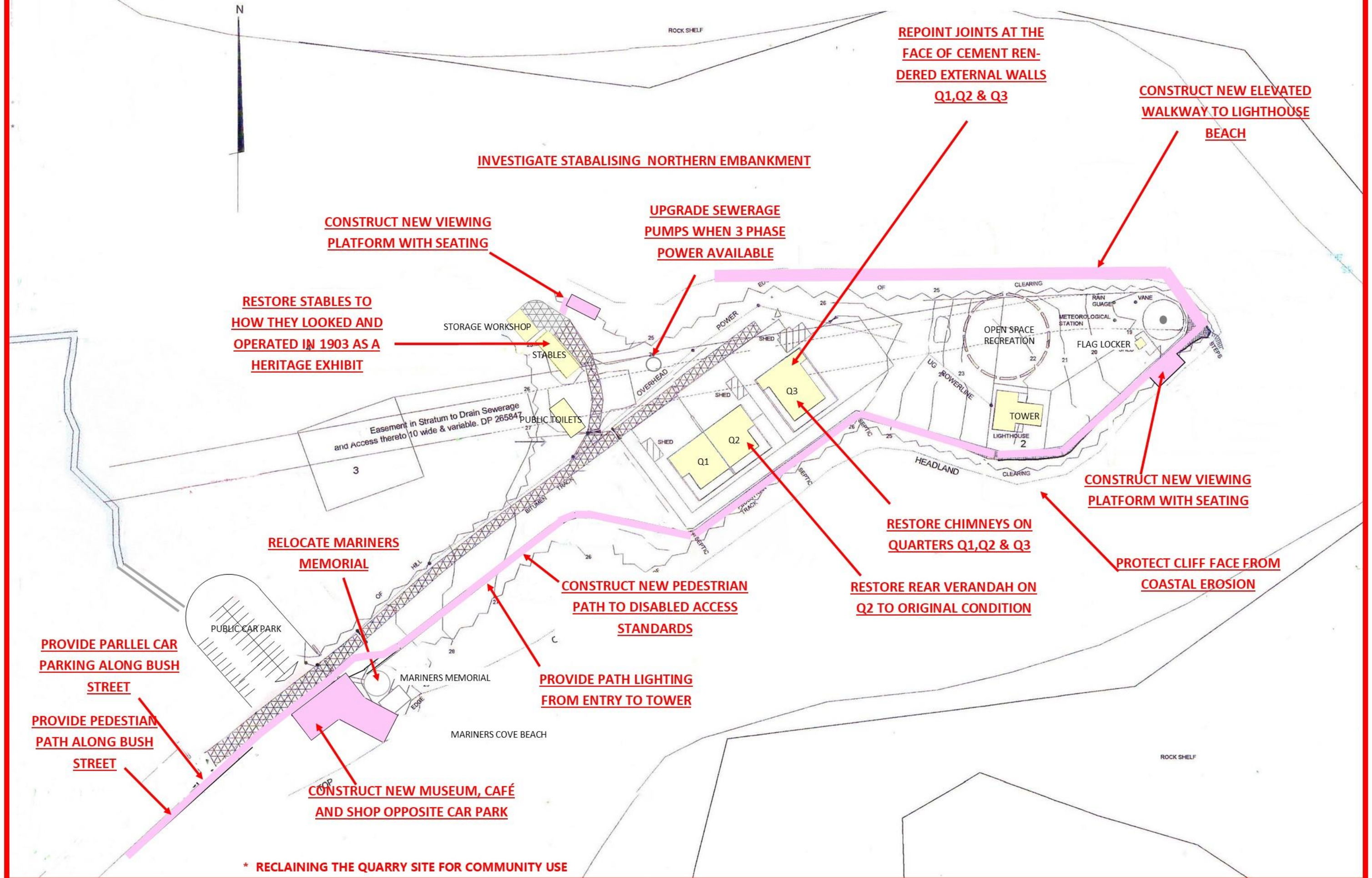
1. Social – improving the community’s use of the Reserve.
2. Environmental – protecting and enhancing the natural environment and the heritage value of the Reserve.
3. Economic – carrying out activities that establish and maintain reliable sources of income.

In the following list projects may meet one or more of the above objectives. The projects have been divided into the three categories but are not in priority order.





# 2023 MASTER PLAN FOR NORAH HEAD LIGHTHOUSE RESERVE



# Group 1 Social Projects

## 8.1 Turf Maintenance

The turf on the reserve is of paramount importance to the community's enjoyment of the reserve. The Board engages professionals on a contract basis to maintain the turf in an excellent condition. Keeping this grass weed free and in first class condition is a large expense item in the Boards annual budget. Our contract for turf maintenance runs to more than \$30,000 per annum. On top of this is the mowing costs. The Board has invested \$10,500 in 2019 on a new John Deer ride on mower. The grass is mowed every week.

The annual program for managing the turf is in the schedule below.

Item No:	Turf Management Activity
1	Allowance for up to 20m <sup>2</sup> of turf replacement annually with top dress.
2	Annual Dethatch Prior to initial fertilisation (either scarify or low mowing and removal from Reserve)
3	Annual hollow tine of all turf areas Spring/Summer (rub in of cores required)
4	Annual top dress of turf areas (allowing for 5mm to 8mm of cover)
5	3 x applications of wetting agent through summer months October, December, March
6	Soil testing annually with allowances for the correction of identified nutrient deficiencies and PH
7	3 x applications of controlled release fertiliser through summer months October, December, March to achieve Annual NPK target of actual Nitrogen 238, Phosphorus 25, Potassium 150 kg/Ha
8	Herbicide applications (spot spraying) for all usual flat weeds plus Bindī, clover, Pig weed, Spurge weeds, Richardia ( Richardia stellaris), and blue heliotrope (Heliotropium amplexicaule)
9	3 x applications of growth retardant at low rate following fertiliser applications
10	2 x applications of an anthranilic diamide insecticide and half rate for control of insects (Black beetle, Bill Bug & Army worm) November and February





## 8.2 Relocation of the Mariners Memorial.

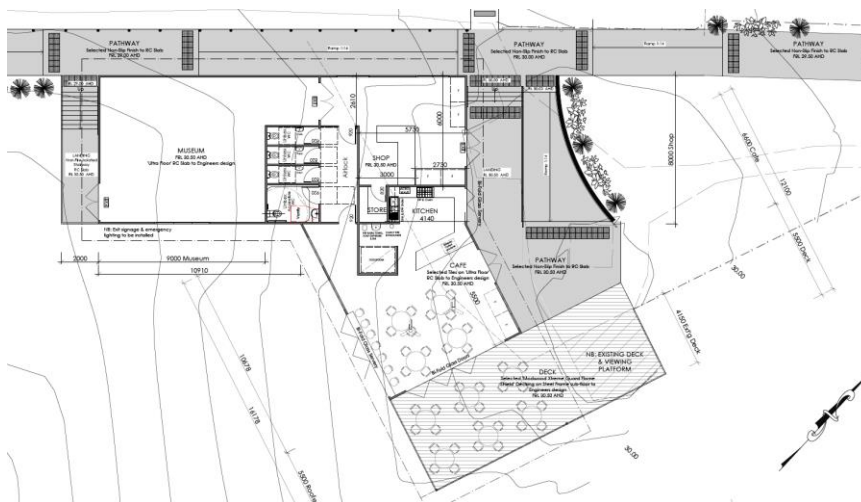
Two issues have contributed to a proposal to move the current Mariners Memorial from its current location.

Firstly an annual memorial service for merchant mariners killed during World War II is held in the grounds of Norah Head Lighthouse Reserve every December at the site of the Memorial. The site is unsuited for the number of people attending the Memorial service. It has been proposed that a location where seating could be provided would be more appropriate.

Secondly the path leading to the to the existing site of the Memorial has grades that do not meet the maximum 1 in 14 grade for disabled access. There are proposals to improve the Reserve's accessibility. The proposed Shop, Café and Museum access will require regrading of its entry and a proposed new path with flatter grades is required.

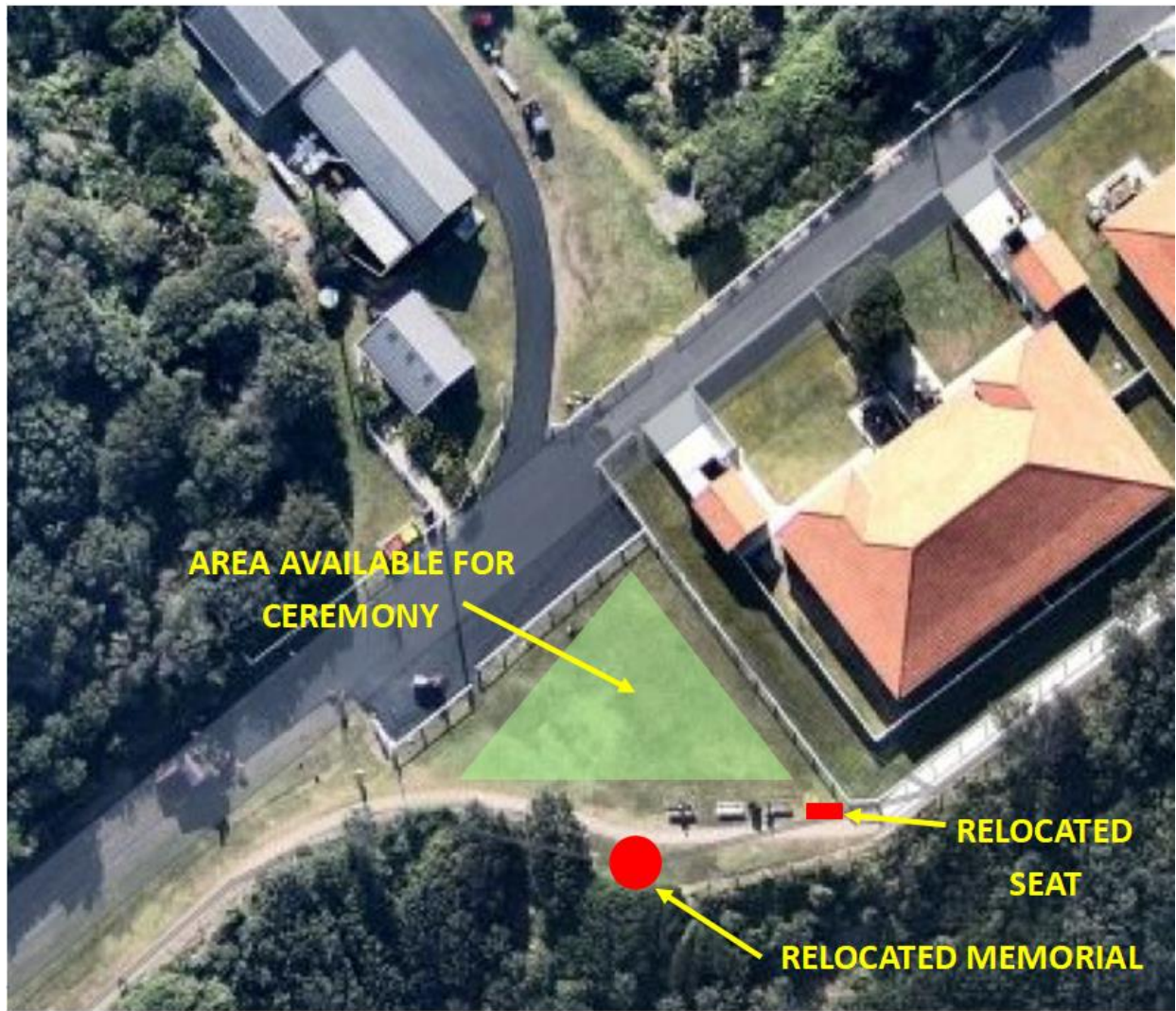


Existing site



Proposed Shop Café and Museum Access





Aerial view showing proposed new location.



Proposed new site for Memorial



## 8.3 Disability Inclusion

### 1. Improving ambulant access

A public pathway runs from the Mariners Memorial down to Quarters Q1. It has been identified as being too narrow for wheelchair access and in addition the section from the Mariners Memorial to the Information Structure has a grade of 1 in 9. The maximum grade recommended for disabled access is 1 in 14.

This path is the public access to the reserve. It is the primary access the lighthouse and the grassed hillside to picnic and whale watching. It is a very busy pathway accommodating hundreds of pedestrians on weekends and public holidays. It is important that it is made more accessible for those community members who have mobility needs.

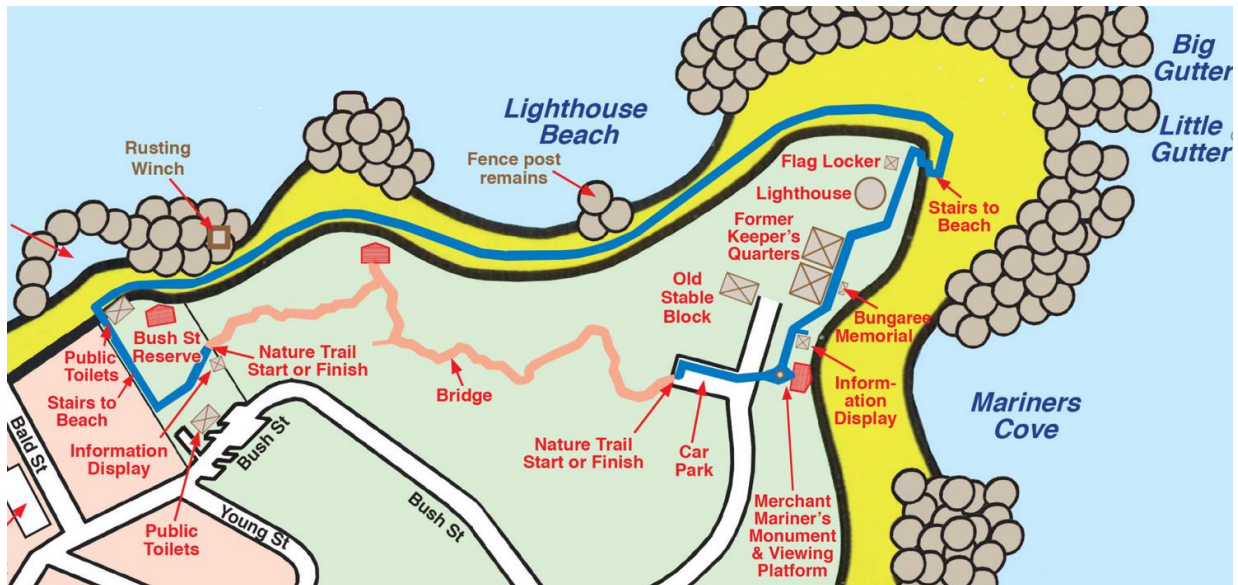


This community pathway requires reconstructing with an accessible shared path to replace the current narrow steep one.



## 2. Construct a new elevated walk from stairs to Lighthouse Beach.

One of the main attractions of Norah Head Lighthouse Reserve is the Nature Trail and Lighthouse Beach loop walk. It is about 800m long and takes approximately one hour to do the loop.



At hightides the walk from the stairs to lighthouse beach is difficult due to the high seas washing right up to the cliff face. The NHLRLM Board has commenced investigations into the possibility of a raised boardwalk that would follow land contours from the top of the current beach access stairs down to Lighthouse Beach. It is intended that if constructed it would cater for disability access. It is considered that this would be a boon to tourism by providing a spectacular walk



## 8.5 Provide tables and chairs in the reserve

Visitors to the Reserve come for a range of experiences. Two popular activities include natural heritage appreciation and whale watching. Those visitors who can't wait to get to the rock shelf and the beach and those that come to enjoy the ambience of the location plus the vistas and sea breezes that the headland has to offer. The second group of visitors increases dramatically when the whales are migrating.

It is proposed to establish more seating on the reserve as well as tables that are wheelchair accessible. The location of these items will need to be carefully consider so as not to conflict with the Conservation Management Plan (CMP) Heritage Policies (see Appendix 1) of the Reserve, while providing views out to the ocean.







## 8.6 Construct a new viewing platforms with seating.

One of the immediate priority items for the year 2000 Plan of Management was the construction of a lookout adjacent to the Lighthouse Tower. This has not been implemented and is now being reconsidered to cater for the soon to be improved disability access to the Reserve.



Providing additional seating in the Reserve is one of the objectives of the plan.





## AT THE STABLES



It is proposed to establish an elevated viewing platform that avoids the vegetation blocking the view. This would need to be located in the bush with a short path for access. The bushland on the right-hand side of the view is very dense and it is not practical to establish a platform there.

This opens up a panoramic view of Lighthouse Beach.





## AT THE QUARRY

The view from the Quarry provides one of the most iconic visions of the lighthouse. It is proposed to establish an elevated viewing platform that avoids the vegetation blocking the view



View from the Quarry





Annual Memorial Service for our Merchant Mariners



## 8.7 Increase the amount of public car parking



Traffic management is a continuing problem on the reserve, caused by the lack of space in the Reserve's public car park with overflows on a regular basis.

New "No Stopping" zones have been installed to ease the traffic problems caused by parked cars at the entrance and exit to the public car park. It is considered, while not the whole answer to the Reserve's traffic problems, increasing the number of parking spaces will help.

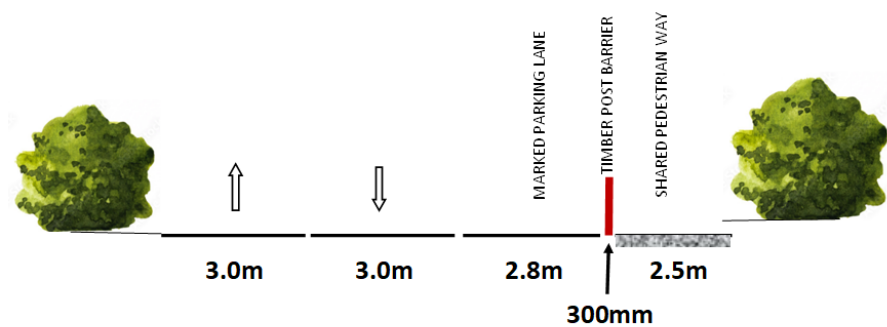
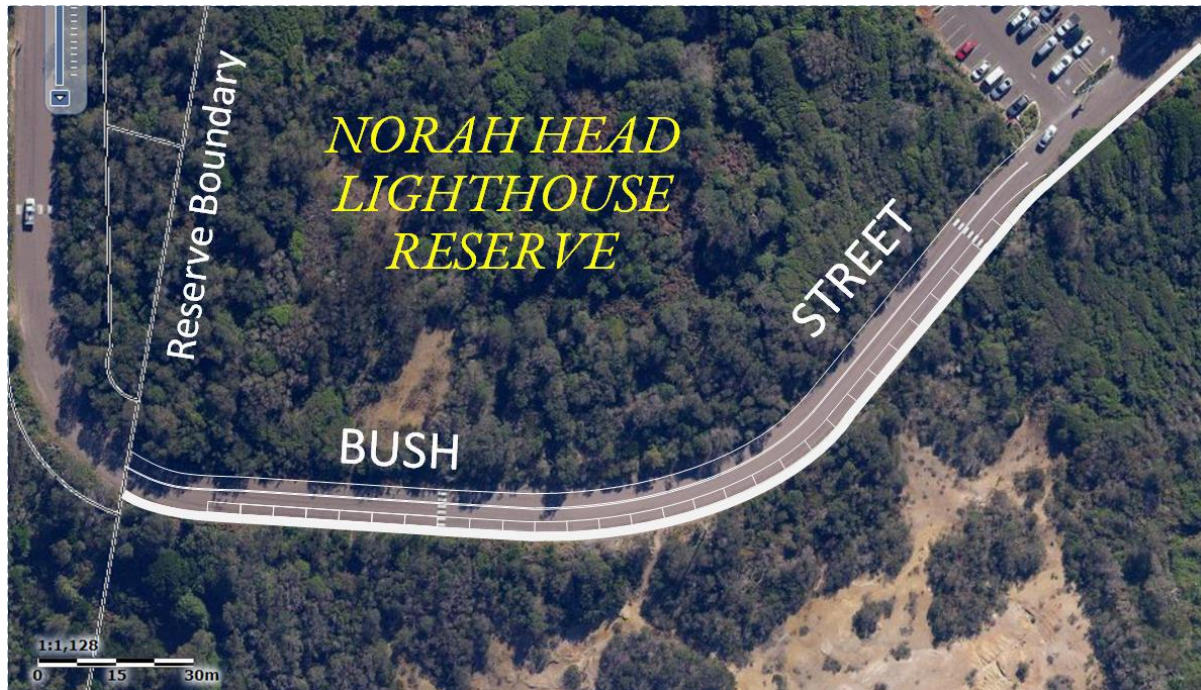


The option of extending the existing car park to the south was investigated. The 2020 Conservation Management Plan identifies the Aboriginal Heritage classification of this land as having moderate sensitivity, however a detailed car park layout revealed that the desired doubling of the number of spaces was not achievable without almost doubling the paved area.



It was considered that formalising the parking spaces along Bush Street with parallel parking bays was a better option and has no impact on the vegetation. However a 2.5m wide shared path as proposed in Item 8.8 below will require some impact on the vegetation.

The proposal is to providing parallel parking along the southern side of Bush Street.

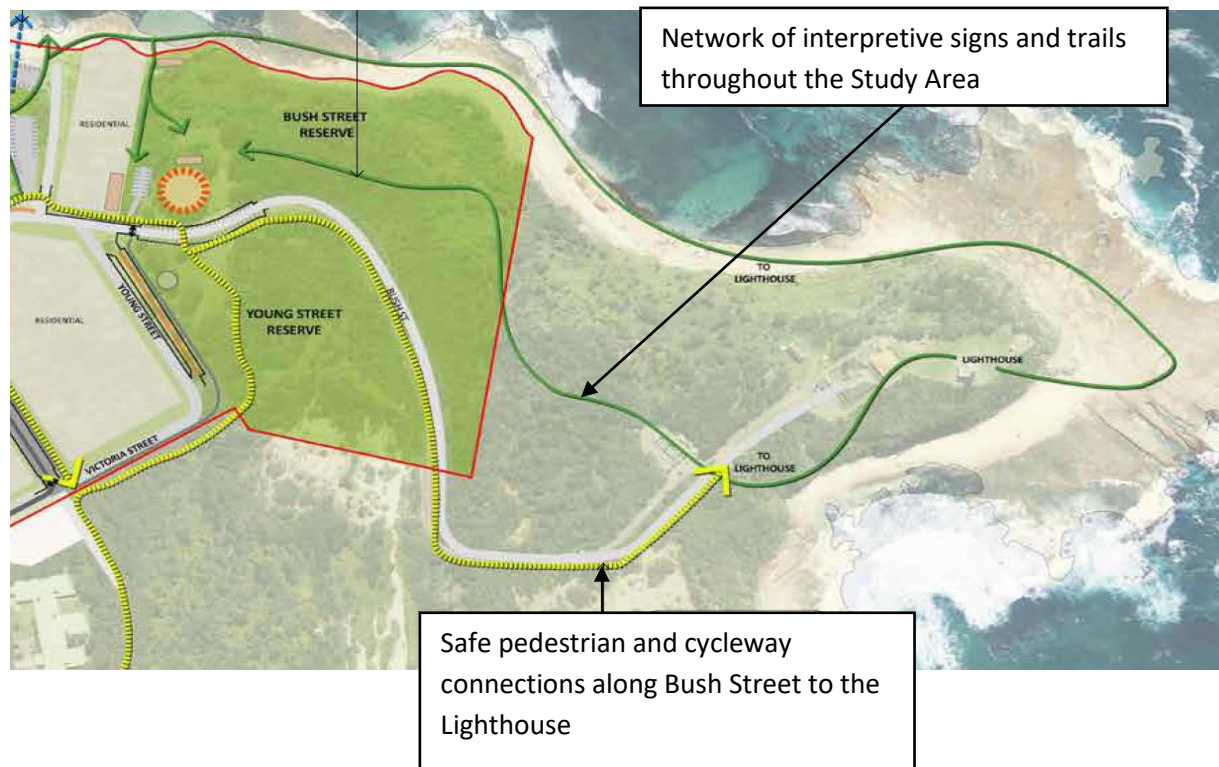


**PROPOSED BUSH STREET SECTION**

- Bush Street is approximately 9m wide and variable.
- Between the Reserve boundary and the Public Car Park it would be possible to provide 28 x 6m long car spaces.
- It provides the pedestrian safety the NHLRLM Board is looking for.
- The proposal requires some sealing of the southern shoulder of Bush Street to provide sealed parking bays.
- The impact on the vegetation along Bush Street is minimal

## 8.8 Provide pedestrian path along Bush Street

The number of people walking on Bush Street is continuing to increase as is the number of vehicles using the Bush Street. The Board's concern is that present pedestrian access is unsafe. It has requested that Council give a higher priority to the proposal in the Norah Head Village Master Plan to provide a 2.5m wide off road shared pathway along Bush Street from Bungary Road to the Lighthouse



Central Coast Council's Norah Head Village Master Plan is a long-term plan intended to be implemented over the next 10-15 years. The plan proposes to provide an enhanced footpath from Bush Street Carpark to Norah Head Nature Trail and Lookout. It will create a clear and safe pedestrian entry to Norah Head Nature Trail/Lighthouse.

### 8E. Bush Street - Streetscape Improvements





## 8.9 Revise and provide new signage across the Reserve

The extreme weather conditions and time has taken its toll on the signage across the Reserve. Most signs need replacing. It is proposed to have a new signage plan prepared that will identify what signs need replacing, with new artwork that will allow new signs to be produced. The signage plan will include enhancing the information signage along the Nature Trail. There are over sixty signs that need replacing.

A signage plan would include both regulatory and interpretive messaging that aligns with the Conservation Management Plan (CMP).







. Photo 📷 @andrewdoyle19



## Group 2 Environmental Projects

### 8.10 Investigate Stabilizing Northern Embankment

The severe weather event from 14<sup>th</sup> to 24<sup>th</sup> March 2021, has caused a landslide in the area shown below. The NHLRLM Board has requested Crown Lands assess the damage and make recommendations to stabilise the slope.



In August 2022 Crown Land's officers inspected the site. It was revealed that the continuous heavy rain in 2021/22 has caused significant slippage of the northern embankment.



Ground water is running out of the embankment and slippage cracks have been observed adjacent to the roadway outside Quarters No Q3.

## 8.11 Bush Restoration and Rehabilitation including Weed Eradication

The Board commissioned studies into the Flora and Fauna on the Reserve in 2014. It is proposed to commission a new study in 2023 to document the success of the 2020 and 2021 weed eradication programs.

The Reserve sits on a rocky outcrop.

- Vegetation on the rock is Closed Heathland whilst the perched sand dunes support an Open Shrubland.
- Threatened species are relying on remnant, small areas of specific vegetation.
- The eastern slope and northern slope have also been eroded at two locations. A landslip has occurred on the north face, and at the stairs, erosion caused by wave action has occurred and this section is in bad need of repair.
- From the survey conducted and the information available on the wildlife atlas records several threatened species listed on the Threatened Species Conservation Act, 1995 occur in the area of interest.
- The Norah Head headland and the landscape is seen as a continuum and any management must address the area in terms of a total ecosystem.
- Removal of weeds alone without replacing vegetation will result in [further] wind and water erosion.
- Some management of the landslip area should be attempted. Constant removal of weeds, diversion of drainage and planting young seedlings are recommended management options.

The Aboriginal Cultural Heritage Management Plan 2016 also stresses the need for weed removal and erosion control measures are to be carefully undertaken and without disturbing the soil, all with regard to cultural considerations

### **40 years of Bitou Bush being burnt by Coastcare Volunteers**





The Reserve has been divided into zones for a systematic attack on weed control in the reserve. 2020 has seen our Coastcare Volunteers concentrating on Zone 7. Zones 1, 2 and 7 are funded for weed eradication in 2021.



**Norah Head**  
*Lighthouse*  
Central Coast, New South Wales

Norah Head Lighthouse Land Manager Board

## **COAST CARE VOLUNTEERS RESERVE BUSH LAND ZONES**



**Zone 1 & 2** The area has steep slopes with dense Bitou infestations which have in part been treated in previous years. It will require a combination of Hand preparation and Splatter gun treatment to control the Bitou Bush, Asparagus Fern and Lantana here.

**Zone 3** contains slopes supporting heavy Bitou Bush infestations. Works would concentrate on control of this weed adjoining areas in which works have previously been carried out with great success. The bushland here contains native species indicative of high regeneration resilience.

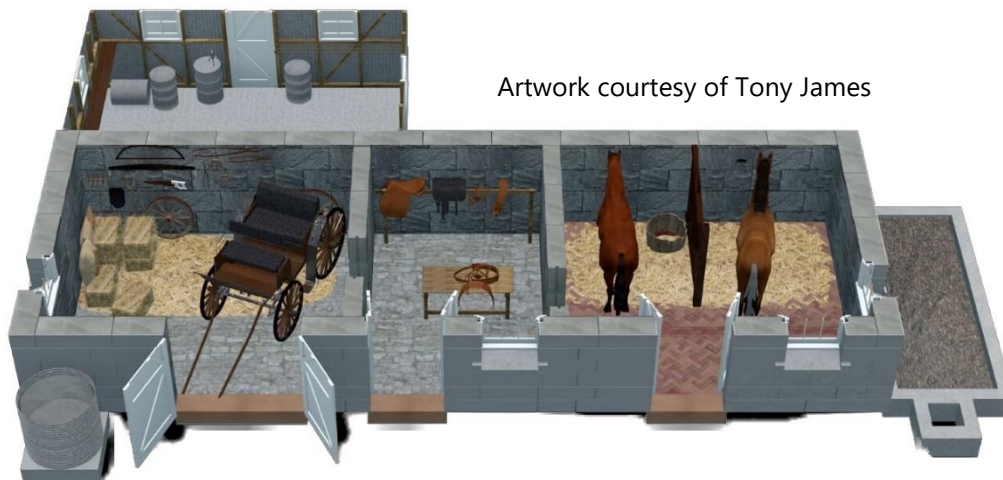
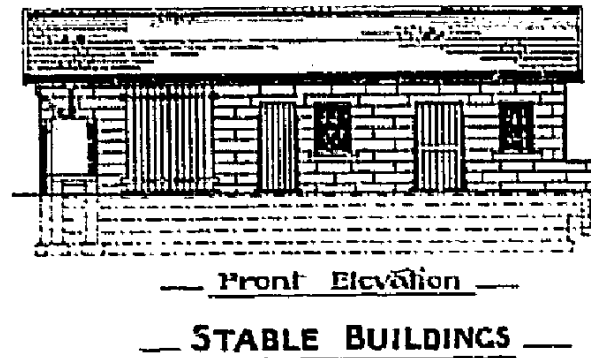
**Zone 6 & 7** The east this area has steep slopes with dense Bitou infestations which have in part been treated in previous years, it will require a combination of Hand preparation and Splatter gun treatment to further control the Bitou Bush, Asparagus Fern and Lantana. We intend to provide support to the Coastcare group further to the West in this zone where a host of other environmental weeds including Asparagus Fern, Lantana, Bitou Bush, Bidens pilosa, Senna Pendula, Crofton weed form significant infestations.







## 8.12 Restore Stables to how they looked and operated in 1903 as a Heritage Exhibit.



Artwork courtesy of Tony James

It is proposed to restore the Stables to provide visitors to the reserve with a historical exhibit of how the Stables looked and operated in 1903.

The restoration would involve removal of the new garage doors and new blocks being cast and laid to replace the section between the stable door and the window. A new wooden window would be made identical to the existing window.

The following usage for the stables three rooms is proposed:

- **Stable**

With the volunteer's workshop removed to their new quarters then this room could be restored, with new horse stalls constructed where the original ones were at the northern end of the room. Eventually a full-size fibre glass horse could be purchased to add to the realism of the stalls.

- **Tack room**

The middle room contains the electronic equipment for the communications mast adjacent to the stables. It is proposed that the existing shelving be removed, and a false wall constructed on the western wall to hide the electronic equipment. The room would display saddles and bridles and fodder hay bales for the horses.

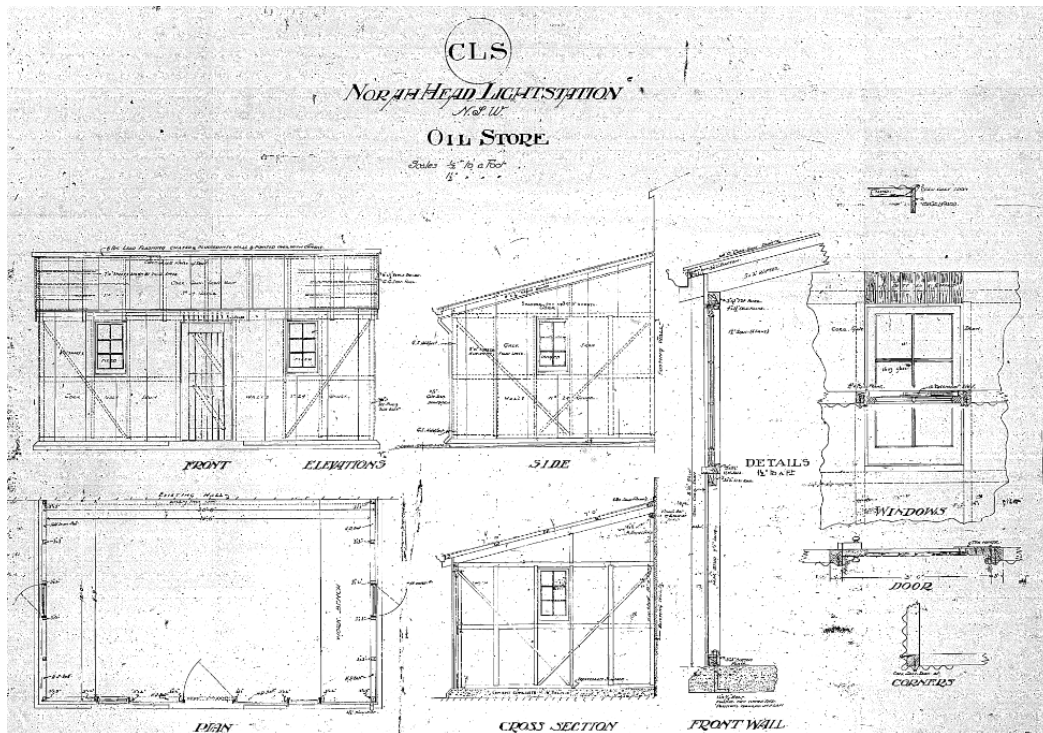
- **Carriage Room**

It is proposed that an old buggy and horse cart be obtained for display in this room. This provides an additional tour on the reserve. Lighthouse Tours be divided into two sections - a tour of the lighthouse and a tour of the stables. As an educational tool the value of the exhibit would be immense.



- **Fuel Store**

The fuel store structure was 3.7m wide and 6.0m long. It was a timber framed building on a concrete slab located behind the stables as shown in the rendered drawing above showing of how the stables was used in 1903.



It is proposed to reconstruct the oil Storage/Workshop and repurpose it as a lunch and meeting room for the Board and volunteers.

### Timetable

At present the stable itself is used a workshop/lunch room. The Tack Room is used for storage and a Surf Life Savings tower data cabinet. The Carriage Room is used for storing items used in setting up weddings and with a fridge and freezer for the Board's "Pop Up Shop" which operated in front of the Carriage Room. Behind the stables ther is a shipping container used for storage.

Before the Stables can be restored to how they looked and operated in 1903 as a Heritage Exhibit two things need to happen.

1. The proposed storage/workshop building is completed to allow the removal of storage from the stables, including removing the shipping container located behind the stables.
2. A new shop will need to be constructed as part of the Café and Museum complex opposite the public car park.

In the short term it is proposed that the "Pop Up Shop" will continue to make use of the Carriage room and the Stables will continue to be used as a lunch/meeting room.

Once the new volunteer's Storage/Workshop is constructed the Tack Room will be utilised in the short to mid-term as a storage facility for the Site Manager to free up additional space for the Reserve's pop-up shop.

### 8.13 Repoint Joints at the face of cement rendered external walls of Q1, Q2 & Q3.

The Norah Head Lighthouse and Lighthouse House Keepers Quarters are constructed of concrete blocks cast on site and rendered to give the appearance of sawn stone. The render is approximately 25mm thick. Where the mortar between the blocks has worn away by the extreme weather exposure experienced at Norah Head it needs repointing.



The photo above shows gives an example of the condition of the external fabric of the buildings.

In addition, the salt encrustation on the walls is also damaging the render. The only acceptable treatment to the NSW Heritage Office is a soft hand wash with a sponge.

Repairs to the pointing will only be allowed by hand to remove current mortar to a depth of approx. 25-30mm deep allowing the installation of new mortar to satisfactory depth. Extreme care would be needed to ensure the sharp edge of the rendered concrete blocks are not damaged. Hand repairs to all the pointing would take months to accomplish. As this is not possible it is proposed to only undertake minor repairs where the pointing has come away. The process as advised by the Department of Environment and Heritage needs to be reviewed to enable the best possible protection of these coastal heritage buildings.

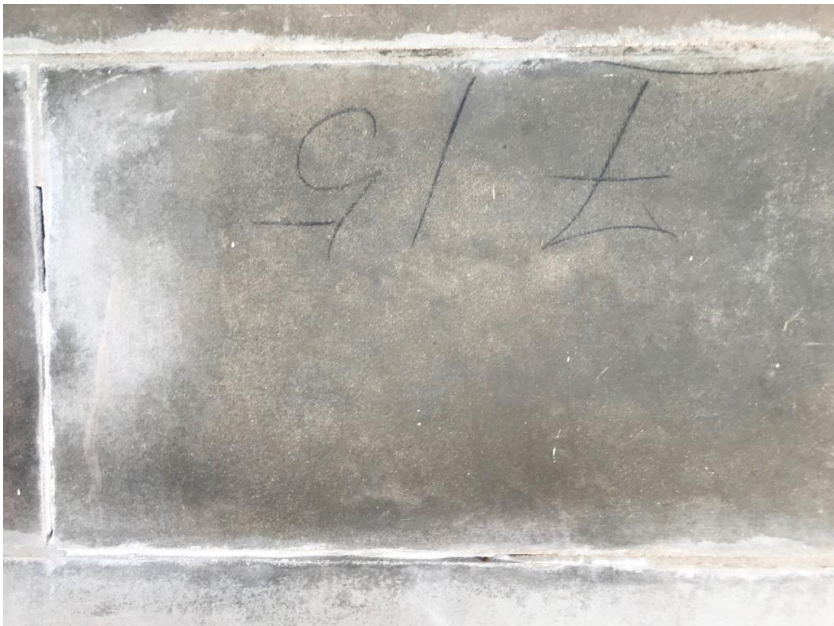


To repair cracked and broken render it is proposed to remove any damaged render and re coat with new render to best match existing.

A photographic survey of all the rendered walls of the three quarters, their associated fuel stores as well as the stables was undertaken. A separate indexed photographic survey of all the walls that have wall markings was also produced.

There are a number of graphite markings on some blocks that could have been made by the 1903 builders. The NHLRLM Board has been unable to determine the provenance or heritage value of these markings. All markings have been identified in this way and care will be taken to protect them during any cleaning.

The example below is of render block number 62 on wall 12 of quarters Q1.



Q1 Wall No 12





### 8.14 Protect cliff face from coastal erosion.

Recession of the rocky cliff faces along the coast is considered to occur primarily due to preferential weathering of sedimentary layers occurring at the cliff toe slopes, which causes the overlying sandstone to topple. Taller cliffs comprised of Tuggerah Formation or Munmorah Conglomerate Rocks overlain by thick sandy profiles, such as across Norah Head were most exposed to recession impacts.



A claystone band was noted at the base of the blocks and had been eroded to form undercuts (see photo above). Numerous cobble and boulder sized angular blocks of conglomerate were evident along the base of the cliff, presumably derived from collapse of previously detached and undercut blocks of conglomerate.

These embankments are at imminent risk from erosion. The Board is continuing to work with Crown Lands and Central Coast Council to implement a feasible and financially viable erosion management plan, to be implemented prior to irreversible damage from erosion. A expert geological report has been commissioned by Crown Lands. It is hoped that this will form part of Council's new Coastal Management Plan and that funding will become available to implement recommendations.

The Board's position is that a planned retreat that would see the stability of the Lighthouse Tower endangered by embankment erosion is not an option. Central Coast Council is currently preparing a new Coastal Management Program (CMP) for the open coast with new mapping. The new CMP is scheduled to be completed by the end of 2023. It is imperative that the new CMP addresses the need to protect the Lighthouse Tower from the dangers of coastal erosion.

### 8.15 Restore chimneys on Q1, Q2 and Q3.

The Quarters were re roofed in the 1970's with grey concrete tiles. (Check) At this time the existing ten chimneys were demolished to just below the new roof.



The following needs to be undertaken to plan for restoration:



- Examine the remains of each of the chimneys and document the size and construction of the concrete blocks that were used to construct the chimneys.
- A revised design is required for each of the ten chimneys that enables a schedule of how many concrete blocks would be required to be constructed.
- This is a complex project and Board should engage a professional to design the ten chimneys.
- The project needs NSW Heritage Office approval.
- Volunteers could be considered to make the concrete blocks on site using samples from the roof space.







## 8.16 Restore verandah on Q2 to original condition.

This is a heritage restoration project for Quarters Q2's closed in north facing verandah. It involves remove aluminium windows and adjacent masonry wall and column plus the manufacturing of a replacement replica column and curved beam to reinstate original design of front porch



Existing Q2 Front Porch



Existing Q1 Front Porch photo flipped



PHOTO ANN LAVIS PHOTOGRAPHY



## Group 3 Economic Projects

### 8.17 Construct new shop, café and museum.



Locality Sketch showing location of the Proposed Shop, Café and Museum outside the Heritage Curtilage

#### Background

##### Proposed Shop

For many years the Report Room in the Lighthouse Tower has been used to sell souvenirs, drinks and sweets to visitors undertaking tours of the Lighthouse Tower. With the Covid19 closedown it was suggested that a "Pop Up Shop" be established. In the past only a small percentage of visitors to the Reserve visited the Tower. Being exposed to the passing parade of visitors to the Reserve resulted in the "Pop Up Shop" being an immediate success.

The "Pop Up Shop" is considered as a short-term solution until a permanent structure can be constructed. The site for a permanent shop opposite the public car park ticked all the boxes as the best site for a new location when accessed against the 2020 CMP policy criteria.



### Café.

It was always recognised that a café would be a welcome addition to the appeal of the Reserve. Until the site opposite the public car park was adopted as the preferred location it was always at odds with the management policies of the 2020 CMP. The final footprint of the proposed building will require further investigation by all relevant organisations plus input from stakeholders

### Museum.

The Lighthouse Tower has been the repository of the many and varied historical maritime objects in the Board's possession. A dedicated museum is seen as an opportunity to repurpose the visitors experience to the Tower by removing all the displays articles and presenting it as how it was when manned by lighthouse keepers.

### Location

The site opposite the public car park is considered the best location for a long-term, permanent Shop, Information Centre, Café and Museum as it best meets the Board's 2020 Conservation Management Plan's policy criteria by:

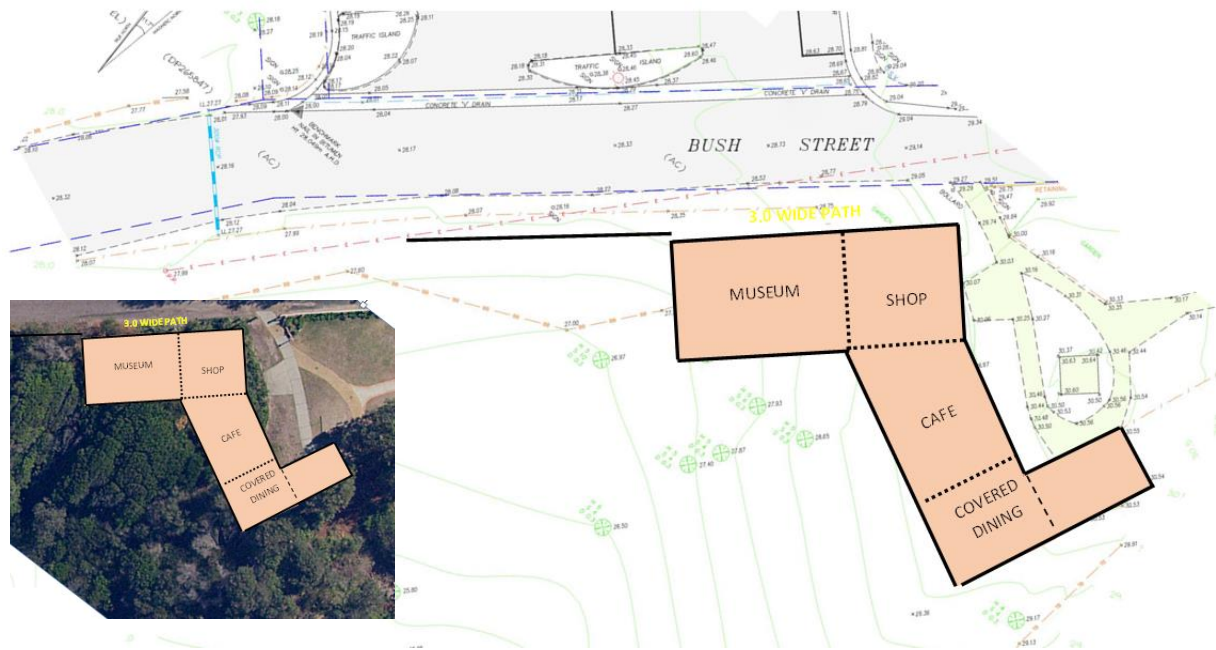
1. **Not adversely visually impact on key sightlines of view corridors.** The siting of the new structure opposite the Public Car park satisfies this criteria.
2. **The new structures must be designed and detailed in a manner subservient to the original group of buildings.** Locating the structure outside the defined "Lightstation Precinct" this location meets this criteria.
3. **They do not adversely impact on the cultural values of the place.** The proposal has a possible minor impact on an area identified in the Aboriginal Cultural Heritage Management Plan (ACHMP) prepared by Insite Heritage, May 2016 and subsequently endorsed by the Heritage Division, NSW Office Environment & Heritage.

The proposed site has only moderate sensitivity and will require an impact study to determine if the activity as proposed below has any impact on this cultural heritage site as it will involve minimal ground disturbance.

The Council's Draft Coastal Zone Management Plan set the coastal erosion hazard lines. It shows that the site between the Public Car Park and the Mariners Memorial is well clear of the Beach erosion Hazards.







Sketch of layout on site survey

The proposal shown above shows a Shop, Museum and Café. It is considered that locating the buildings here minimised the impact on the vegetation and maximise the opportunities for magnificent ocean views. The existing viewing platform would be reconstructed and incorporated into the covered outdoor dining area of the café.

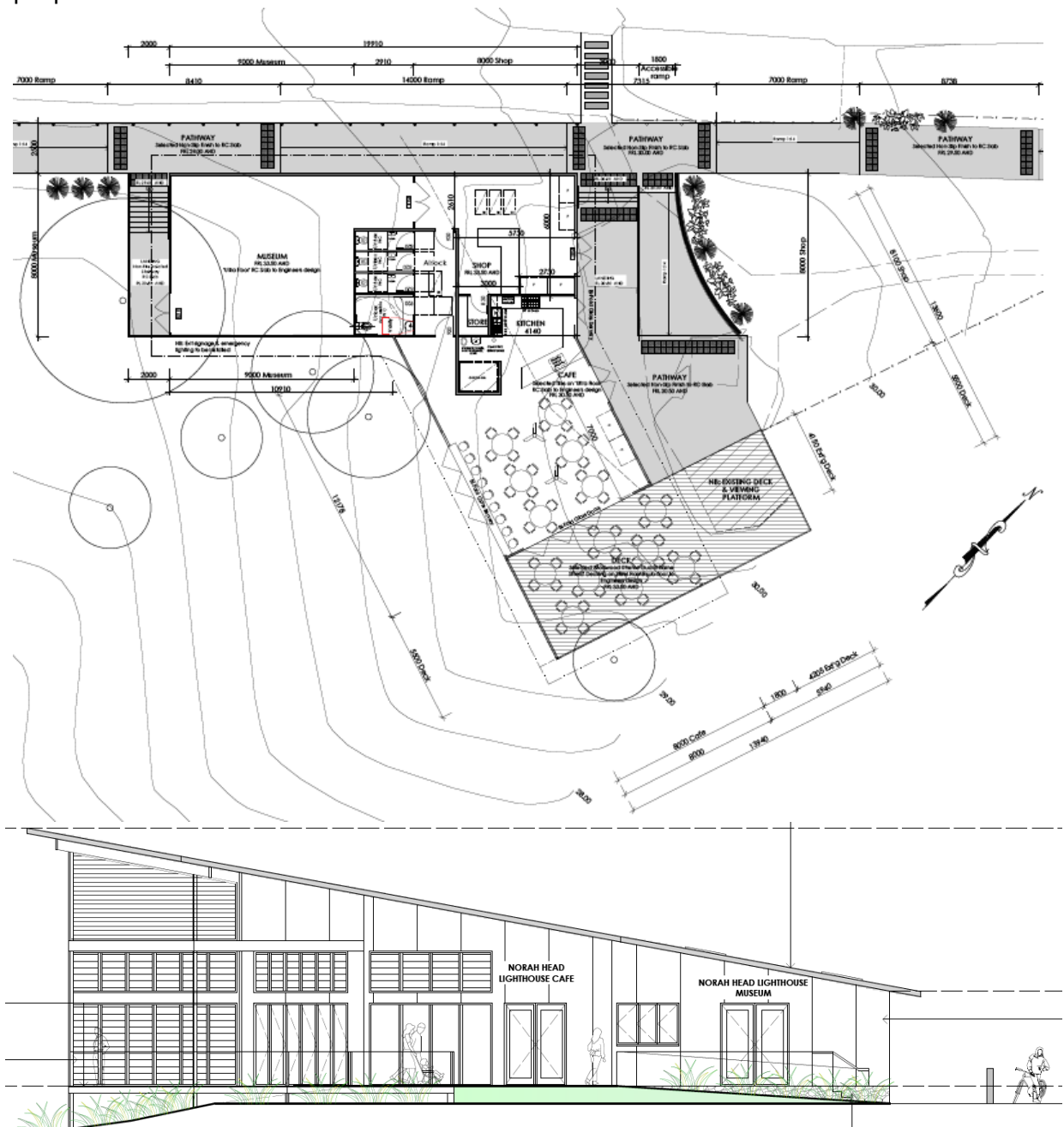
The steepness of the site lends itself to a timber deck suspended on piers and a steel sub structure. A timber framed structure with a flat roof to minimise the visual impact from the sea is envisaged.

- There will be some loss of vegetation under the deck
- The heritage impacts, both European and Aboriginal are low.
- The steel poles would probably require deep reinforced concrete footings. This will need to be established with particular attention being paid to the possible disturbance of Aboriginal heritage.
- The structure would include shade for tables with ocean views from the deck.
- The construction could be staged so that the Café and Shop could be built first and then the Museum extension added.
- The café would need to include amenities for patrons.
- A 2.5m shared path along Bush Street will need to be constructed to provide safe pedestrian access to the café and the Reserve.
- Access to the Reserve could be via the shop during business hours.

## UTILITIES

- The plumbing for water supply could be extended from the tap adjacent to the Mariner's Memorial.
- 3 Phase power is available.
- The Reserve's sewer pipe runs past the site along Bush Street. A small new pump station connecting the café to the sewer main will be necessary if the café is constructed.

Crown Lands has provided funding for the necessary documentation needed to submit a Development Application (DA) to Central Coast Council. Coastline Building Design has been engaged to obtain the DA and preliminary architectural drawings prepared.



ELEVATION LOOKING SOUTH FROM MARINERS MEMORIAL



### 8.18 Investigate roundabout and security gate at Bush Street Reserve boundary.

The need for improved security on the Reserve has increased in recent years with assault on the Board's Site Manager and increase vandalism. Late night anti-social behaviour on the Reserve has increased over recent times.

Providing new gates and fencing would make after hours access to the Reserve more difficult and increase security.



## 8.19 Provide pathway lighting for entry to tower.

Night tours of the Lighthouse Tower raised the WH&S issue of providing a lighted path to the lighthouse. The proposal shown below arose from meeting heritage considerations that any new path lighting should not be too intrusive. It was because of this that providing overhead lighting was considered not a good idea and that low path lights were a better solution.

The project has been broken into two sections:

1. Public Car Park to Quarters Q1.
2. Quarters Q1 to Lighthouse.

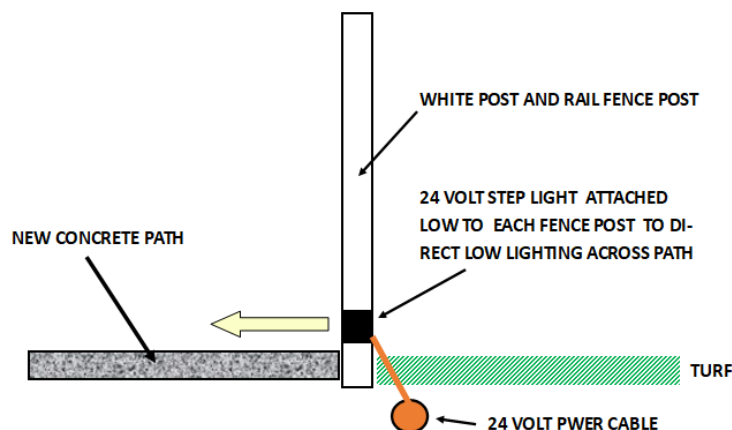
### 1. Public Car Park to Quarters Q1.

The existing path from the Public Car Park to quarters Q1 has been identified as being too steep and too narrow to meet Australian design standards for access and mobility. Reconstruction of the section of path is proposed when funding becomes available. It is proposed that when this section of path is reconstructed that it be well-lit by a series of solar powered bollard lights.



### 2 Quarters Q1 to Lighthouse

A low 24 volt system that involves step lights to be attached low on each of the 40 posts of the post and rail fence along the new concrete path as shown below is being considered as a non-intrusive option.





## 8.20 Reclaiming the Quarry Site for Community use.



Rather than restoring the quarry site this proposal proposes to reclaim the site. Restoration is a term used as "the act of restoring to a former state or position or to an unimpaired or perfect condition". To restore means *"to bring back to the original state or to a healthy or vigorous state"*. To reclaim is defined as *"to bring back to a proper state"*. This definition does not imply returning to an original state but rather to a useful one.

It is proposed is to reclaim the site to expand the green and urban spaces on the Reserve that are available for the community to enjoy. This initiative is in line with the State Strategic Plan's vision for Crown Land to support and restore environmental values and to repurpose Crown Land to expand green and urban spaces.

## Background

The Reserve's Conservation Management Plan (CMP) states:

- *A portion of the southern project zone is comprised of an old quarry site surrounded by regenerating heathland. The beach track is eroding from an increase in use, planks have been placed over the water course as a crossing point damaging fragile vegetation with Aboriginal heritage items becoming exposed at the surface through human activity.*



IMAGE 20. REGENERATING TALL BANKSIA-LEPTOSPERMUM HEATH OVER PREVIOUS QUARRY SITE. ROBERT PAYNE, E. S. & M., CATE INWOOD COASTCARE VOLUNTEERS, "NORAH HEAD BASELINE FLORA SURVEY", 2014, P.63.

- *As further support to the ongoing rehabilitation of the old quarry (subject to erosion), the [Norah Head Lighthouse Land Manager Board] should close the formal access points along Bush Street together with cordoning off sections that require surface erosion control and revegetation. Management of this particularly sensitive zone should comprise track closure, additional public access barriers and directional signage with ecological management. The overall plan should also incorporate ongoing weeding, brush matting and direct seeding.*

The CMP calls for restoration not reclamation. It is believed that the proposal to use brush matting and direct seeding is not a workable solution. The site is denuded of topsoil that is continually subject to erosion during heavy rainfall that occurs on the reserve



Restoration of a landscape disturbed by opencast mining operations is mostly viewed in technical or economic perspectives only. The public focus is only on restoration, however, there has been a recent interest in nature conservation and recreation. In order to restore ecological, hydrological, aesthetic, production, recreational and other functions of this post-mining area, a sustainable land use development plan could be prepared through a holistic approach.

### **Reclaiming the Quarry Site**



It is proposed is to import approximate 2,000 tonnes of soil fill to rehabilitate quarry and to turf the area and open it to the community for recreation. It includes providing access to a new viewing platform.

This would require the development of a Landscape Plan to ensure the area can be maintained so that it requires minimal maintenance. The area would be landscaped to control runoff and avoid erosion with the possibility of wind break planting to the south.

# APPENDIX 1

The policies listed in section 6 of the CMP are reproduced here as follows:

## 6.1 GUIDING CONSERVATION VISION AND ITS APPLICATION

**Policy 1:** The Norah Head Lighthouse Reserve, its Headland and the Norah Head Lightstation Precinct, within the Reserve are a place of Exceptional cultural value and significance. This must be protected and conserved through the application of sound, well-considered conservation practices of the Burra Charter to ensure these values can be understood and appreciated by the current and future generations.

**Policy 2:** This Plan must be adopted by the NHLLMB, as the site managers on behalf of The Department of Industry – Lands & Forestry. Upon endorsement, the listing for SHR item 01753 should be updated using the adjusted Statement of Significance.

**Policy 3:** The significance and values of the place before and after the establishment of a Lighthouse must be presented and explained to visitors and the wider community, including the place's significance to Aboriginal people.

A copy of this CMP could be made available on the [www.crownland.nsw.gov.au](http://www.crownland.nsw.gov.au) website and the Central Coast Council's public libraries and website. Refer also to <https://www.centralcoast.nsw.gov.au/libraries> and

<https://www.centralcoast.nsw.gov.au/history/local-history>

**Policy 4:** Long term planning and everyday decision-making regarding maintenance, new works or new uses or activities must refer to this Plan or go against policies. An action must not proceed if it is possible that it might have a detrimental impact on the significance of the place. This must be guided by the philosophy, principles and practices provided in the Burra Charter and associated Practice Notes, for a best practice standard managing cultural heritage places in Australia.

**Policy 5:** This plan must be reviewed every five years, not more than eight years and be amended to reflect new policy for any proposed or unexpected changes to the setting, the major uses, the built fabric, changes in management structure or in response to research findings or other new information.

**Policy 6:** The management of the place must involve a regular, continuing and informative engagement with the local Aboriginal groups, the CoastCare organisations, community volunteer groups, the local community, mariners, and specific cultural and interest groups that may arise. Interpretation strategies must involve input from these interest groups.

**Policy 7:** The managers and carers of the place must implement, monitor and record compliance with a formal process of site heritage induction for any workers on the Reserve/Lightstation Precinct that clearly explains the cultural significance of the place and the principles of conservation best practice. Verification of understanding and acceptance must be



required from the worker. This could be an audio-visual site induction, undertaken by all workers at least every three months by a suitably qualified heritage professional.

**Policy 8:** The principles and philosophy of the *Aboriginal Cultural Heritage Management Plan Norah Head Lighthouse Reserve and Bush Street, Young Street and Gravelly Beach Reserves*, prepared by Insite Heritage May 2016 must be adopted in conjunction with this CMP.

**Policy 9:** The managers of the place and of its heritage and cultural significance, with the value and benefit to the community and future generations in mind, must seek the advice of experienced specialists. They must research the options, assess the likelihood of detrimental impact on significance before each decision is made, if it could adversely change the place.

**Policy 10:** There should be a one professional graphic and materials design approach adopted for all signs across the whole Reserve.

## 6.2 THE RESERVE AND THE SETTING

**Policy 11:** The weed management, erosion control measures, rehabilitation, clean water and overall environmental strategy for the management of the Reserve's ecology must be reviewed and updated every five years to guide project planning and implementation.

**Policy 12:** The 17 specific areas within the Reserve (and adjacent Reserves) identified by the Conservation Management Plan, Insite Heritage May 2016, as having significant spiritual and / or cultural value to Aboriginal people must be respected and cared for with appropriate protection and managed access.

**Policy 13:** The local and visitor experience of the walking trails, natural resources, flora and fauna of the Reserve must be

maintained, enhanced and managed for the enjoyment and education of current and future generations, to promote an understanding of the values and significance of the Reserve.

**Policy 14:** The Board must continue to liaise with and encourage the ongoing involvement of key stakeholders and interest groups regarding the management and use of the Reserve, including the local community, the CoastCare organisations, the Local Aboriginal Land Council, Reconciliation Action Plan groups, Darkinjung and Guringai people of the Central Coast, local schools, mariners and the Council.

**Policy 15:** Key views and sight lines into, through and out of the Reserve must be protected and enhanced. A tree planting policy must be established.

**Policy 16:** New structures must not be located where they will diminish the integrity of the place, the open space characteristics of the lightstation or the existing relationships between the buildings of the original group of buildings, including when viewed from a distance.

**Policy 17:** The introduction and/or use of new brightly polished metal elements or other similar materials or finishes with high reflectivity for structures, signage and interpretation must be avoided for navigational regulations.

**Policy 18:** Care must be applied to the design and commissioning of one integrated, compatible information and wayfinding signage system and style to avoid visual clutter. Signs should be reviewed for effectiveness and compatibility with the wayfinding system, relevant information and graphics. Redundant signs should be removed. Fixing or mounting signs must not damage original fabric. Heritage professionals must be engaged with this process.

### **6.3 NORAH HEAD LIGHTSTATION PRECINCT AND RESERVE**

**Policy 19:** Key views and sight lines into, through and out of the Reserve must be protected and enhanced. New structures or planting must not impinge on views to or from the Lightstation group, viewed from the land or sea. The lighthouse and keepers' residences must remain the dominant features and character on the headland, in an open landscape in keeping with its functional and utilitarian history. Spaces between buildings must not be closed. Sightlines into, out of and through the precinct must be maintained and compatible with the original planning and design of the precinct. A tree planting policy must be established.

**Policy 20:** A caretaker/site manager supported by income from visitation, rentals and functions should continue to reside within or in very close proximity to the Lightstation Precinct to provide day-to-day management, a site presence in case of an emergency and to deter vandalism of the place.

**Policy 21:** After 2020, intrusive elements, limiting the exhibition and interpretation of the original design intent or fabric, detracting from or detrimental to the heritage significance of the place, must be carefully recorded when removed.

**Policy 22:** Missing elements should be reinstated including the original entry gates, the flagstaff and the interior of the Signal House. If elements cannot be reinstated then effectively interpreted. Consideration must be given to completing the remaining chimney to original detail and progressively reinstating some, if not all fireplace chimneys to the roofscapes of Q1, Q2, Q3.

**Policy 23:** Following approval of required permits, the original stormwater collection and storage system and its technical design and components must be explored by archaeologists, documented, conserved, maintained and interpreted to allow a visitor to understand its original design and use.

**Policy 24:** Any adaptive re-uses or modifications to enable ongoing or appropriate new uses must respect the integrity of the original planning, design and detail, including materials, colours, textures and finishes. The original use was of a place of work with workers' quarters. Any new structures, adaptive re-use, or modifications must be visually subservient to the original Norah Head lightstation group of buildings.

**Policy 25:** The original planning, layout and materials for the roadways, paths, gates or fences of the precinct must be preserved in their original locations and if this is not proven possible, interpreted to allow the visitor to understand the original 'working arrangement' when the precinct was fully occupied. Removing redundant or intrusive screens, fences or rails must be undertaken. Constructing additional screens, fences or rails must be avoided. New paths where



appropriate must observe the Burra Charter guidelines to use materials and techniques distinguishable from the original.

**Policy 26:** If the precinct requires additional illumination for safety and security, lighting must be planned by a suitably qualified heritage professional to be discretely located and in keeping with the original character of the place. Lamp colour temperature must be carefully considered and be consistent throughout. Light within the precinct must not be directed towards the lighthouse tower or other structures. The Lighthouse lantern must remain the single dominant light source when viewed from the sea or coastline.

**Policy 27:** Future works must not incrementally increase the extent of hard paved areas in the precinct, avoiding the long term loss of soft landscape and grassed areas more consistent with the original character of the precinct.

**Policy 28:** To protect and maintain the setting of the 1903 lightstation group of buildings and site, car parking must be limited and managed to maintain the visual character of the place. The first impressions when entering the precinct must not be one of a carpark.

**Policy 29:** The precinct must be authentically presented. Specific planning and design must endeavour to place or enclose contemporary elements such as aerials, satellite dishes, domestic garbage bins or gas bottles so that they are not visual distractions within key view corridors.

**Policy 30:** No new landscape elements must be introduced into the precinct as there is no historic precedent or interpretative relevance. Inappropriate plants/plantings must be removed.

## **6.4 CONSERVATION OF BUILT FABRIC**

**Policy 31:** Original fabric must be preserved, not removed. If necessary for operational requirements, only replaced with Burra Charter-informed and carefully considered sympathetic alternatives under relevant approvals under the Heritage Act 1977. New fasteners, pins, clips or fixtures must not be fixed to fragile original fabric and must not easily corrode in the marine environment. Avoid fixing into original fabric at all times.

**Policy 32:** Any work that would alter the condition of the existing fabric must consider the Level of Significance assessed and attributed to that element, prior to any work. Appropriate research and skills must be applied to the work (combinations of Burra Charter-informed preservation, restoration or authentic reconstruction, depending on the assessed Level of Significance of the element). Contemporary materials and methods might not be suitable or appropriate to protecting and conserving the built heritage of the place. Reconstruction based on conjecture, not research must not be undertaken (including paint colours).

**Policy 33:** Conservation works, maintenance or new work or compliance works must not detrimentally impact on existing significant fabric or the architectural style or character of the original buildings. Existing significant detail must be conserved and no new openings cut-in or existing openings filled. Detail includes original ceilings, cornices, vents, architraves, skirtings, doors, door hardware, thresholds, windows, glazing, window sills, mouldings, trim, joinery, tiles and the like.

**Policy 34:** The roof flashings, ceilings, roof spaces and window sills must be regularly, visually inspected to ensure that there is no ingress of water. Where water is found to be entering the building remedial measures are to be undertaken as a high priority, to prevent damage to the building fabric.

**Policy 35:** Ferrous materials fixed to, embedded in or incorporated into the existing structures must be regularly inspected and monitored for changing extents of corrosion. Where found to be causing damage, or likely to cause failure or damage to adjacent materials, remedial measures are to be undertaken to limit corrosion, treat or carefully remove / replace or remove redundant items, to prevent damage to the building fabric. Regular rinsing must be undertaken to limit salt build-up. Regular repainting of originally painted metal elements must be undertaken to extend longevity.

## **6.5 MAINTENANCE & CONSERVATION**

**Policy 36:** The Schedule of Conservation Works is included in this CMP. The maintenance plan and the Schedule of Conservation Works to manage and coordinate maintenance and conservation work must be followed. This plan is divided into regular cyclic proactive maintenance tasks for varying repeated intervals; long term maintenance; allowances for emergency (failure) repairs and maintenance and stand-alone maintenance projects. It must be coordinated with a site Master Plan describing proposed new uses or future projects, in order to benefit from any efficiencies and cost savings that might be gained through careful planning and programming.

**Policy 37:** Before commencing the planning for any maintenance projects the managers must refer to the Heritage Information Series [www.environment.nsw.gov.au/resources/heritagebranch/heritage/StandardExemptions.pdf](http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/StandardExemptions.pdf) and confirm that the work is either exempt from Heritage Council Approval or requires prior approval. If the proposed works is not covered by the Standard Exemptions Type listed on the reverse of a Section 57(2) Exemption Notification Form, a Section 60 (s.60) approval to make changes is required to carry out work. This includes any action that disturbs or excavates the land and/or landforms.

**Policy 38:** Maintenance must be undertaken separately from projects that are conservation, restoration, reconstruction, new work or adaptation-based. Maintenance must be considered to be a preventative measure that protects the place and promotes its longevity.

## **6.6 NEW WORKS**

**Policy 39:** When new infrastructure or building services installations are required these must, wherever possible be installed underground, preferably following existing lines. The contemporary 'shortest distance' approach might not be appropriate. Saw-cutting concrete or masonry must be avoided. The route must avoid disturbing deposits or features that are of significance or likely to have archaeological research potential and archaeological permits/investigations (Aboriginal or Historical-related) may be required prior to



excavations.. Where an underground installation is not possible the design and location of items and the route adopted, the installation must have no visual impact or low adverse visual impact. This might mean not taking the shortest route.

**Policy 40:** New structures or buildings must be located (sited) where they will not adversely visually impact on key sightlines of view corridors. The new structures must be designed and detailed in a manner subservient to the original group of buildings. New works that would enhance the understanding and interpretation of the place or the visitors' experience must be permitted, providing they do not adversely impact on the cultural values of the place.

**Policy 41:** The siting of new structures or buildings must consider the original sites of structures or buildings including those previously removed.

**Policy 42:** In accordance with the Burra Charter principles, new structures or buildings must not be copies of original elements that might create interpretative ambiguity for visitors or impact on their understanding of the place and its former uses. Sympathetic and respectful designs must be used. Material selections, finishes and colours must be considered to assist in distinguishing new from original.

## **6.7 ARCHAEOLOGY**

**Policy 43:** The Board must note and observe the Archaeological Zoning Plan of the CMP before any excavation. Advice from the Aboriginal Cultural Heritage Team is also available. Necessary permits are required to insure no disturbance of known or potential archaeological resources. When archaeological elements are encountered unexpectedly on the Reserve, works must immediately stop and Heritage NSW, Department of Premier and Cabinet must be immediately notified. Due diligence investigations and reporting must be undertaken prior to carrying out any works.

## **6.8 MOVEABLE HERITAGE**

**Policy 44:** A Collections Policy must be prepared by the Board, for all items of moveable heritage on the site or remotely stored. This must guide all actions and decisions regarding these items, the collection and museum displays

**Policy 45:** Movable items stored on or displayed on site and stored elsewhere must be catalogued describing their historical nature, provenance (where known), relation to the site and condition. This catalogue must record the donor details, source, the items' status, either as an original, facsimile, importance to site and this lighthouse's operation and history, or more generally related to maritime themes. Items not provenanced to the site but useful for interpretation can be catalogued as "props".

**Policy 46:** Moveable items must be displayed or stored in spaces that are dry, secure and suited to extending the object's longevity. The catalogue must be safeguarded at all times in electronic and/or printed form.

**Policy 47:** Any interpretative display of moveable items, intended to interpret and explain the heritage and cultural significance of the Reserve must include indigenous culture and light house culture.

## **6.9 INTERPRETATION**

**Policy 48:** An audit of all signs, information panels, pamphlets and booklets available in the Reserve and associated websites that discuss the Reserve and the Lighthouse must be regularly undertaken to identify and remove hearsay, mis-quotes, contradictions in order to improve accuracy. Alternative names (Bungaree Norah and variations must be researched and clarified. "Press releases" must be prepared by a single authorised source and distributed to promote accuracy in the content.

**Policy 49:** In parallel with the signage audit, the audience for any interpretative strategy must be considered, defined and identified for the whole Reserve. This will range from primary school to tertiary students, tourists to researchers, readers to the graphically inclined, blind visitors, deaf visitors, short and tall.

A single coordinated interpretation strategy involving information, stories, Aboriginal culture, technical data, histories, flora and fauna and shipwrecks must be implemented in defined stages. The more random collection that now exists can be refined and integrated into an overall strategy. Redundant interpretative material must be removed.

The development of digital web based material accessed by tablet, or smart phone must be implemented. Presenting an audio version (FM loop) for blind visitors and others, must be incorporated.

**Policy 50:** The Interpretation Strategy must consider training Guides using a "buddy system" where a volunteer high school student is paired with an experienced Lightstation Precinct Guide to learn how to present the story of the place. All guides must engage in a quarterly update refresher workshop to ensure everyone is 'reading from the same sheet'.

**Policy 51:** At present there exist a number of Interpretive styles and installations on site. These must be unified and work together, be coordinated and present the range of values, the diverse significance for historic, cultural and environmental attributes of the Reserve.

## **6.10 ACCESS**

**Policy 52:** Wherever possible, dignified and equitable access for visitors, employees and volunteers with disabilities should be planned and implemented with future projects. Given the original 19th century design, original uses, the High Significance heritage values of the place and the existing terrain this may not be fully achievable.

**Policy 53:** Access must include considerations for emergency vehicles.

**Policy 54:** Vehicular access to the Lightstation Precinct must be restricted and limited.

**Policy 55:** Access on foot and by bicycle must be actively facilitated and encouraged on site, in brochures and by other media.



## **6.11 DAY VISITORS**

**Policy 56:** Day visitors must be informed of the Heritage Significance of the place and the need to protect it, on arrival. Encourage behaviour that does not damage the fabric or impact on its significance or degrade the experience others might enjoy or gain by visiting the Norah Head Lighthouse Reserve.

**Policy 57:** Statistics and feedback should be gathered from day visitors to inform future management and planning decisions. The impact of visitation should be monitored and recorded.

## **6.12 OVERNIGHT GUESTS**

**Policy 58:** Overnight guests must be informed of the Heritage Significance of the place and the need to protect it, on arrival. Encourage behaviour that does not damage the fabric or impact on its significance or degrade the experience others might enjoy or gain by visiting the Norah Head Lighthouse Reserve.

**Policy 59:** Statistics and feedback should be gathered from overnight guests to inform future management and planning decisions. The impact of visitation should be monitored and recorded.

**Policy 60:** The former Keepers' Quarters must continue to be let for overnight and short term accommodation. This encourages their ongoing maintenance and provides an income stream to the Board that is invested into conservation and maintenance projects at Norah Head Lighthouse Reserve.

**Policy 61:** The former Head Keeper's Quarters (Q3) and Assistant Keepers' Quarters (Q1 west, Q2 east) must be known by their names (not Cottage 1, 2 and 3) as part of a consistent approach to interpreting the Lightstation Precinct and its former uses for all visitors.

## **6.13 FUTURE USES**

**Policy 62:** Future uses must be consistent with the Reserve's heritage and cultural values.

**Policy 63:** Special events should capitalise on the place's beauty and the different values it has many people, while not impacting detrimentally on its significance. Special events should take advantage of each opportunity to promote the place and raise awareness of its values and significance.

**Policy 64:** Future uses must include an interpretive centre, a booking/information facility and a retail facility for visitor refreshments, to enhance a visitor's experience of the place.

## **6.14 STATUTORY, NON-STATUTORY & REGULATORY COMPLIANCE**

**Policy 65:** In managing and planning future change and for the day-to-day use of the Norah Head Lighthouse Reserve, Management must ensure that all actions that are to be taken have been confirmed as complying with current Commonwealth, State and Local Government Area regulations, codes and standards. Where this is not possible due to contradictions arising from those requirements, adjudication and clarification must be sought from the appropriate authority before proceeding. Approval under the Heritage Act 1977 may be required prior to undertaking any works, activities or changes of use. It is the responsibility of the Management to obtain all relevant approvals.

**Policy 66:** The NSW Heritage Act requires approvals to carry out work for items listed on the State Heritage Register (SHR). Some works may be exempt from approvals if they meet specific criteria listed in a Section 57(2) Exemption Notification Form. The Submission Requirements depend on the Standard Exemption Type that are described on the reverse of the s.57(2) Exemption Notification Form. If the proposed development is not covered by the Standard Exemptions Type listed on the reverse of a Section 57(2) Exemption Notification Form, a Section 60 (s.60) approval to make changes is required to carry out work to an item listed on the SHR. Approval must be gained from the Heritage Council when making changes to these State Heritage Register items.

## **6.15 FIRE PLAN**

**Policy 67:** A fire prevention plan must be established for the Reserve and Precinct to include a list of all the site's major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard. Contractors must provide a fire prevention plan when "hot works" (welding, grinding, wet-proofing, et cetera) are required including extended monitoring of the work site.