



Snapper Island, Sydney Harbour

Draft Conservation Management Plan

16 November 2020

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16 November 2020

Snapper Island, Sydney Harbour

Draft Conservation Management Plan



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Acronyms and Abbreviations

Name	Description
AHIMS	Aboriginal Heritage Information Management System
AR	Archival Recording
BRSP	Broadspectrum Property
The Burra Charter	<i>The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance</i>

Name	Description
CHL	Commonwealth Heritage List
CMP	Conservation Management Plan
DoAWE	Department of Agriculture, Water and Energy
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
ERM	Environmental Resources Management Australia Pty Ltd
Finance	Department of Finance
HA	Heritage Assessment
Harbour Trust	Sydney Harbour Federation Trust
HIA	Heritage Impact Assessment
HMP	Heritage Management Plan
HVA	Heritage Validation Assessment
LEP	Local Environmental Plan
MNES	Matters of National Environmental Significance
OEH	Office of Environment and Heritage
PSP	Property Service Provider
RAN	Royal Australian Navy
REP	Regional Environmental Plan
SHI	State Heritage Inventory
SHR	State Heritage Register

Definitions

Adaptation	modifying a place to suit proposed compatible uses
Conservation	the processes of looking after a place to retain its cultural significance and includes maintenance and may, according to circumstance, include restoration, preservation, reconstruction and adaptation, and will commonly be a combination of more than one of these
Interpretation	all the ways of presenting the cultural significance of a place and may include exhibitions, events, publications, art works and other forms of expressions, and is not confined to the place
Maintenance	the continuous protective care of the fabric, contents and setting of the place, distinct from repair
Preservation	returning the fabric to a known earlier state through the removal of accretions by re-assembling or refixing components without the introduction of new materials
Reconstruction	returning the place as nearly as possible to a known earlier state or the introduction of material (new or old) into the fabric; does not necessarily mean going back to the earliest stage of construction or even to one date for the entire place. Reconstruction is associated with recapturing the expression of the place at points in history which are either important or at which the place demonstrated a great functional clarity or design expression. This is not to be confused with either re-creation or conjectural reconstruction, which are outside the scope of the <i>Burra Charter</i> .
Restoration	returning the existing fabric of a place to a known earlier state by removing accretions or reassembling existing components without the introduction of new material
Setting	conservation requires the retention of an appropriate visual setting and other relationships that contribute to the cultural significance of the place
Tolerance for Change	used to identify the extent to which heritage values are able to tolerate change (modification/alteration) without adversely affecting their nature or degree of significance

EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) was commissioned in October 2020 by the Sydney Harbour Federation Trust (Harbour Trust) to prepare a Draft Conservation Management Plan (CMP) for Snapper Island, NSW. Harbour Trust has commissioned this CMP to inform the potential transfer of the site from the Department of Finance to Harbour Trust. This CMP has been prepared to assist Harbour Trust with understanding and meeting its specific Commonwealth heritage obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999) should the site be transferred, and will be used to inform the preparation of further statutory documentation under the EPBC Act.

This CMP contains practical policies and guidelines for the ongoing heritage management of the Site.

Snapper Island is located approximately 300 metres north-east of Drummoyne Sailing Club in Sydney Harbour. The island is the southernmost island in a small group of three, comprising Cockatoo Island, Spectacle Island and Snapper Island – all of which have been utilised for military purposes throughout their history.

The Site is located on Commonwealth land, managed by a Commonwealth agency, and is therefore required to be managed in accordance with the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999).

Snapper Island is listed on the Commonwealth Heritage List (CHL) (Place ID 105477) for its historical, social and aesthetic values. The CHL citation notes the historical, social and associative value of Snapper Island as it related to Len Forsythe and the Navy League Cadets, the unique development of the island for use by the Navy League Cadets, and its contribution to the landscape of Sydney Harbour.

This CMP reaffirmed that the Site meets the threshold for inclusion on the Commonwealth Heritage List for its historic heritage values. The Site however, does not contain any known tangible Indigenous or natural heritage values.

Policies and guidelines have been included within this document to provide management advice to the responsible site stakeholders and support implementation of this CMP. Maintenance plans also provide schedules for catch-up maintenance, cyclical preventative maintenance and planned works.

A practical handbook and “Do’s and Don’ts” guidelines for the heritage values of the study area has been prepared and is presented as *Appendix J* of this CMP. This handbook provides further guidance for tradespeople, maintenance supervisors and tenants and provides technical advice consistent with retaining the Site’s heritage values.

1. INTRODUCTION

Environmental Resources Management (ERM) was commissioned in October 2020 by the Sydney Harbour Federation Trust (Harbour Trust) to prepare a Conservation Management Plan (CMP) for Snapper Island, NSW. This CMP has been prepared to inform the Harbour Trust in meeting its Commonwealth heritage obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999).

1.1 Site Identification

Snapper Island (the Site) is located approximately 300 m north-east of Drummoyne Sailing Club in Sydney Harbour (*Figure 1.1*). The Site is the southern-most island in a small group of three, comprising Cockatoo Island, Spectacle Island and Snapper Island – all of which have been utilised for military purposes throughout their post settlement history. Snapper Island is listed on the Commonwealth Heritage List (CHL) (Place ID 105477) for its historical, social and aesthetic values. Further detail of the Site can be found in *Section 3* of this report.

1.2 Objectives

This CMP has been prepared to assist Harbour Trust with understanding and meeting its specific Commonwealth heritage obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999) should the site be transferred, and will be used to inform the preparation of further statutory documentation under the EPBC Act and the Sydney Harbour Federation Trust Act. This CMP responds to and reflects changes that have occurred at the Site in the past two years. The document also contains revised condition and significance assessments. This CMP contains practical policies and guidelines for the ongoing heritage management of the Site. It should be noted that this document does not represent a full refresh of the HMP prepared for the Department of Finance.

1.3 Methodology

The preparation of this CMP has involved the review of background documents (including previous CMPs), archival research, and site assessment. This CMP has been prepared in accordance with the following legislative instruments, assessment frameworks, and best practice guidelines:

- EPBC Act 1999 and Regulations;
- The Australia International Council on Monuments and Sites (ICOMOS) Charter for Places of Cultural Significance (2013) (the Burra Charter);
- *Ask First: A Guide to Respecting Indigenous Heritage Places and Values*;
- *Engage Early: guidance for proponents on best practice Indigenous engagement for environmental assessments under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*;
- *Natural Heritage Charter for the Conservation of Places of Natural Heritage Significance*; and
- *Working together Managing Commonwealth Heritage Places: A guide for Commonwealth Agencies, Commonwealth of Australia 2019*.

This CMP assesses Indigenous, non-Indigenous (Historic) and Natural heritage values. The assessment of Indigenous heritage values has been incorporated into the overall assessment, due to the identification that there was very low likelihood of encountering Aboriginal cultural remains or intangible values at the Site.

No site inspection was undertaken for the preparation of this report, as it was considered that ERM's most recent work at Snapper Island in 2018 and 2019 provided sufficient material to inform the heritage assessment and development of management policies. Site works undertaken in November

2020 for the Department of Finance, in parallel to the preparation of this report, have been utilised to provide supplementary photographs for several structures, where condition had changed significantly since the 2018 inspection. Where no significant change in condition was observed, new images were not substituted. Where used, new images have been cited as 'ERM 2020'.

Background Review

Background research for the preparation of this CMP has been based on existing information presented in the *Snapper Island Conservation Management Plan* (Clive Lucas Stapleton, 2007), as reproduced in the CMP prepared by ERM (2018). Supplementary archival research undertaken by ERM in 2020 for the preparation of an Archival Recording of Snapper Island has also been used to complement this base information. Sources utilised in the archival research included:

- National Library of Australia "Trove" Database;
- State Library of New South Wales; and
- National Archives of Australia.

1.4 Consultation

No external consultation was undertaken during the preparation of this CMP; however, consultation has been undertaken during ERM's involvement with Snapper Island over the past two years with the following people and organisations:

- Department of Finance;
- Broadspectrum Property (BRSP);
- Commander Peter Cole, Royal Australian Navy, Navy Heritage Collection;
- David Glasson, Former Director of Sydney Training Depot Snapper Island Ltd; and
- Metropolitan Local Aboriginal Land Council.

1.5 Assumptions and Limitations

CMPs, through their inventories of assets and precinct descriptions, enable Commonwealth agencies as land managers to identify and manage heritage values in its property portfolio. CMPs should be the first port of call to assist in decision-making. However, the CMP will not necessarily cover all activities that could potentially impact upon heritage values on-site. Additional advice may need to be sourced from heritage professionals, either internally or externally, to determine whether a proposed action may cause a significant impact on the heritage values.

Whilst the CMP presents a robust framework for effective management, the implementation of management actions is subject to resource availability. It should be acknowledged that the heritage requirements of the EPBC Act and the *EPBC Regulations 2000* at times may require significant investment of resources by the Harbour Trust. Therefore, a balance must be identified between the Harbour Trust's objectives to manage and maintain its property portfolio to support the ongoing use and function of these properties, and the ongoing protection of heritage values.

No site inspection was undertaken during the preparation of this report, although parallel works at Snapper Island have occurred in 2020. It is noted that any images or plans replicated here are from prior or alternative work undertaken by ERM at Snapper Island between 2014 and 2020. These images and plans are identified and dated accordingly. It should be noted that prior site inspections have been limited by various factors, including infestation of Silver Gulls during roosting season and access to structures. Throughout ERM's inspections of Snapper Island, several structures have always been locked or otherwise inaccessible due to fall hazards, asbestos exposure or other work place health and safety concerns. It is acknowledged that additional inspections may need to be undertaken to support the recommendations presented in the policies and procedures.

1.6 Authorship

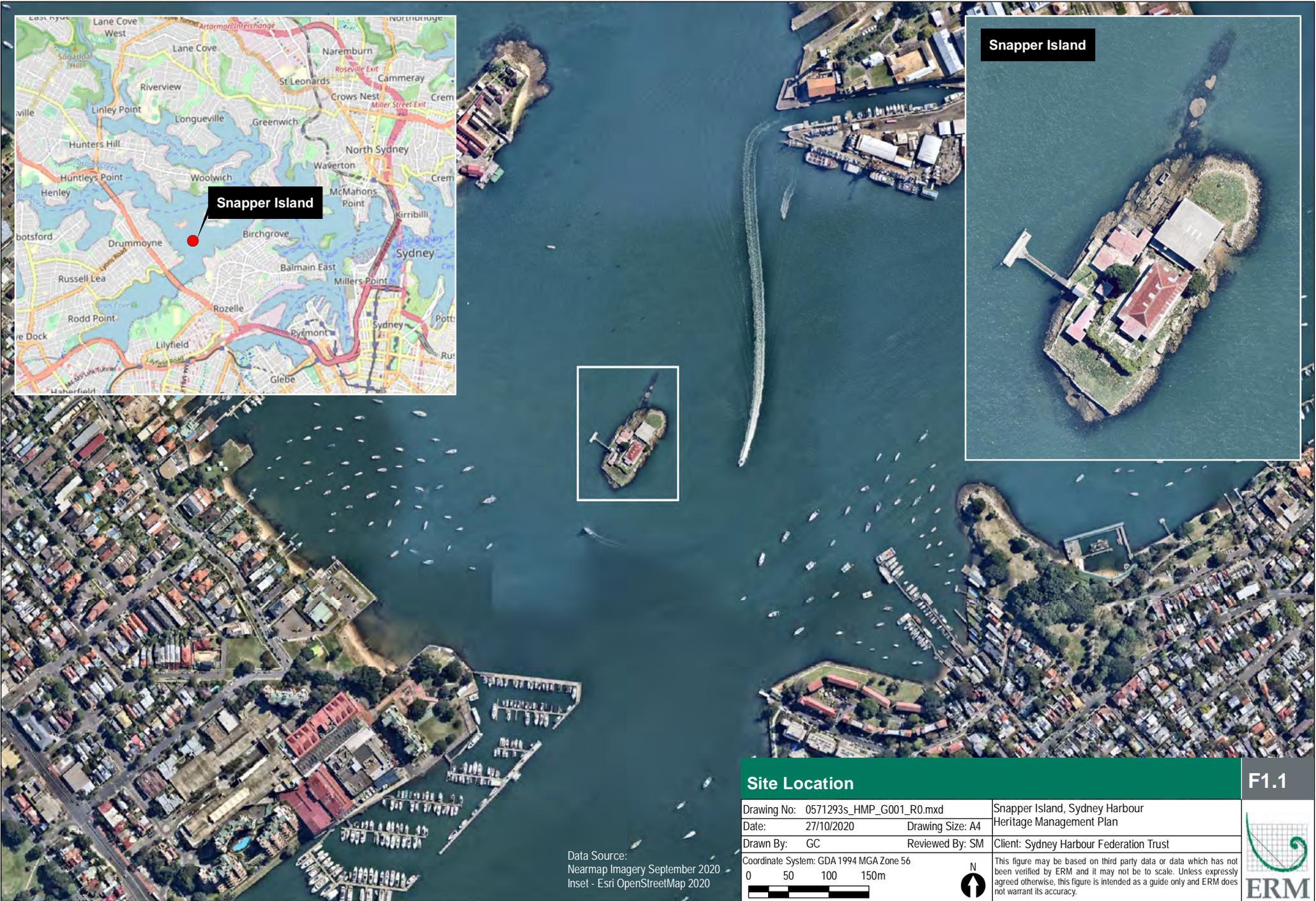
The following personnel were involved in the preparation of this CMP:

- Stephanie Moore, ERM Heritage Consultant – primary author
- Toyah Morath, ERM Heritage Consultant – supporting author
- Grazia Chiavegato, ERM GIS Consultant – graphic preparation
- John Hoysted, ERM Principal Heritage Architect – technical review
- Peter Lavelle, ERM Partner – quality control review.

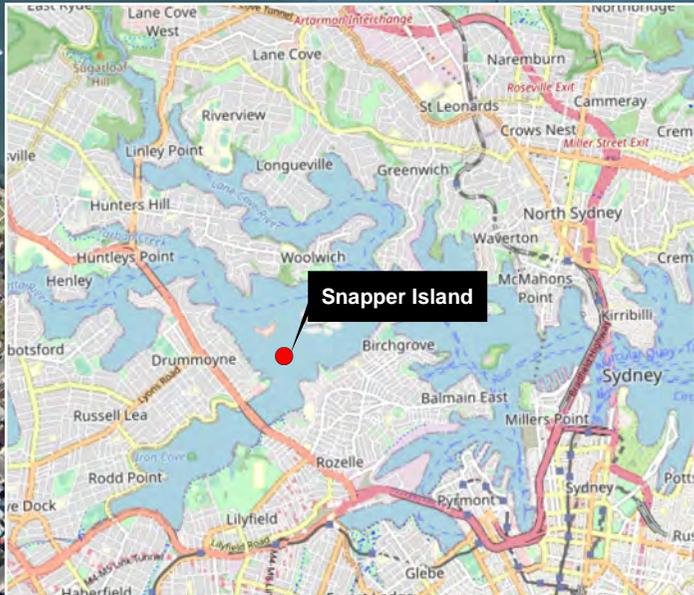
1.7 Acknowledgements

ERM gratefully acknowledges the assistance provided by:

- Department of Finance; and
- Sydney Harbour Federation Trust.



Snapper Island



Snapper Island

Site Location

F1.1

Drawing No: 0571293s_HMP_G001_R0.mxd	Date: 27/10/2020	Drawing Size: A4
Drawn By: GC	Reviewed By: SM	

Snapper Island, Sydney Harbour
Heritage Management Plan
Client: Sydney Harbour Federation Trust

Coordinate System: GDA 1994 MGA Zone 56



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Data Source:
Nearmap Imagery September 2020
Inset - Esri OpenStreetMap 2020

2. LEGISLATION

As a Commonwealth owned site, Snapper Island is subject to Commonwealth legislation. The primary environmental and heritage legislation to be addressed in the management of the heritage values of Snapper Island is therefore the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

2.1 Summary

This section provides an outline of heritage and environment legislation, state and local government planning provisions and non-statutory considerations that are of relevance to the Site.

Commonwealth legislation includes:

- EPBC Act
- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*
- *Native Title Act 1993*
- *Disability Discrimination Act 1992*
- *Copyright Amendment (Moral Rights) Act 2000*
- *Sydney Harbour Federation Trust Act 2001*
- *Cockatoo and Schnapper Islands Act 1949*

New South Wales legislation includes:

- *Environmental Planning and Assessment Act 1979*
- *Biodiversity Conservation Act 2016 No 63*
- *National Parks and Wildlife Act 1974*
- *Heritage Act 1977*

Local government heritage and planning provisions include:

- *Regional Environmental Plan (Sydney Harbour Catchment Area) 2005*

Non-statutory considerations relevant to the Range include:

- *Engage Early*
- *Ask First*
- *Australia ICOMOS Burra Charter 2013*
- *Australian Natural Heritage Charter*
- Register of the National Estate
- National Trust NSW
- Building Code of Australia

2.2 Overview of Relevant Legislation

This section provides a contextual overview of the statutory and non-statutory controls and provisions listed above in *Section 2.1*.

2.2.1 Commonwealth Legislation

2.2.1.1 Environment Protection and Biodiversity Conservation Act 1999

The primary objective of the EPBC Act is to provide for the protection of the environment, particularly those aspects that are Matters of National Environmental Significance (MNES).

Matters of National Environmental Significance (MNES)

Part 3, Division 1 of the EPBC Act requires that actions that have, will have or are likely to have a significant impact on MNES require approval from the Australian Government Minister for the Environment. Under this Section of the Act, any action that will or is likely to have a significant impact on MNES are to be referred to the Minister for a determination under the EPBC Act.

This aspect of the legislation would be triggered when MNES, including World Heritage Properties, National Heritage Places, Ramsar wetlands, listed threatened species and endangered communities, or listed migratory species are identified on, or within the vicinity of Snapper Island.

Other MNES may include a water resource (in relation to coal seam gas development and large coal mining development), nuclear actions and Commonwealth marine environments.

Sections 26 and 28

Section 26 relates to actions undertaken on Commonwealth land that will, or are likely to significantly impact the environment, and Section 28 relates to actions undertaken by a Commonwealth agency that will, or are likely to significantly impact the environment. The term 'environment' has a broader coverage than MNES and relates to environmental matters that are not necessarily formally listed.

Any actions that will, or are likely to significantly impact the environment need to be assessed. If potentially significant impacts are identified, opportunities for their avoidance, reduction or management must be sought. A referral under the EPBC Act may also need to be considered.

Section 341ZC

This section of the EPBC Act requires the minimisation of adverse impacts to the heritage values of a National or Commonwealth Heritage Place. This includes direct impacts from physical disturbance or secondary impacts that may affect visual aspects, cultural importance, landscaping or curtilage of an adjacent property.

Section 341ZE

This section of the EPBC Act applies if the Harbour Trust (as a Commonwealth Agency) sells or leases a Commonwealth area that is or includes part of a Commonwealth Heritage place. Harbour Trust must notify the Minister of such intent, and include in the sale or lease contract a covenant to protect the Commonwealth Heritage values of the place during the sale process and after the property has left Commonwealth control.

2.2.1.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSI Heritage Protection Act) protects areas and/or objects which are of significance to Aboriginal people and which are under threat of destruction. The ATSI Heritage Protection Act can, in certain circumstances, override state and territory provisions, or it can be implemented in circumstances where state or territory provisions are lacking or are not enforced. A significant area or object is defined as one that is of particular importance to Aboriginal people according to Aboriginal tradition.

2.2.1.3 Native Title Act 1993

Section 211 of the Native Title Act 1993 provides that holders of native title rights covering certain activities do not need authorisation required by other laws to engage in those activities. At present, there are no native title holders over Snapper Island; however, should a determination of native title be awarded in the future, native title rights may apply.

2.2.1.4 Disability Discrimination Act 1992

Section 23 of the Disability Discrimination Act 1992 states that it is unlawful for a person to discriminate against another person on the grounds of the other person's disability. This may be in relation to the provision of means of access to premises. Should changes be proposed to heritage structures or places at Snapper Island, equitable access must be considered in any future development.

2.2.1.5 Copyright Amendment (Moral Rights) Act 2000

Moral rights for creators, including architects, were introduced in Australia in December 2000 through the Copyright Amendment (Moral Rights) Act 2000. This legislation provides creators with three rights:

- the right of attribution of authorship;
- the right not to have authorship of their work falsely attributed; and
- the right of integrity of authorship. This protects creators' work from being used in a derogatory way that may negatively impact on their character or reputation.

Moral rights last for the same time as copyright in a work, the term of which is usually the creator's life plus 70 years.

2.2.1.6 Sydney Harbour Federation Trust Act 2001

The Sydney Harbour Federation Trust (SHFT) was established on 20 September 2001 by section five of the *Sydney Harbour Federation Trust Act 2001*.

The objectives of the Harbour Trust are:

- to ensure that management of Trust land contributes to enhancing the amenity of the Sydney Harbour region.
- to protect, conserve and interpret the environmental and heritage values of Trust land.
- to maximise public access to Trust land.
- to establish and manage suitable Trust land as a park on behalf of the Commonwealth as the national government.
- to co-operate with other Commonwealth bodies that have a connection with any Harbour land in managing that land.
- to co-operate with New South Wales, affected councils and the community in furthering the above objectives.

The intent of the Act is to conserve and preserve land in the Sydney Harbour region for the benefit of present and future generations of Australians. Suitable land with significant environmental and heritage values will be returned to the people of Australia.

The Act establishes the Sydney Harbour Federation Trust (Harbour Trust) to manage the land and facilitate return of land in good order. Under the Harbour Trust Act, the Harbour Trust may transfer suitable land to New South Wales for inclusion in the national parks and reserves system.

The Act provides for the preparation of Plans for Trust land. In 2003, the Harbour Trust prepared the Comprehensive Plan for its sites, including Snapper Island, which was envisaged to be transferred to the Harbour Trust. The Harbour Trust proposed the repair, maintenance and enhancement of Snapper Island.

Snapper Island is currently within the area of responsibility of the Department of Finance.

2.2.2 State Legislation

Under Section 71 of the Harbour Trust Act, the Harbour Trust is exempt from certain state laws, including those relating to town planning and heritage. However, the Harbour Trust has regard for NSW legislation to ensure consistency and best practice in the management of Harbour Trust land.

2.2.2.1 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) requires that environmental impacts are considered in land use planning, including Indigenous and non-Indigenous heritage. Various planning instruments prepared under the Act identify permissible land use and development constraints. The NSW Office of Environment and Heritage (OEH) provide numerous guidelines and codes of practice for Aboriginal heritage assessments including those conducted under the EP&A Act.

2.2.2.2 Biodiversity Conservation Act 2016

The Biodiversity Conservation Act 2016, along with the Local Land Services Amendment Act (LLSA), and the supporting Regulations and products, establish an integrated legislative framework for land management and biodiversity conservation. Biodiversity elements include major improvements to offsetting and private land conservation, as well as improvements to threatened species conservation and how we manage human-wildlife interactions.

The provisions of this Act will only apply in the event of a sale or divestment of the property.

2.2.2.3 National Parks and Wildlife Act 1974

Aboriginal cultural heritage in New South Wales is protected under Part 6, and particularly Section 90, of the National Parks and Wildlife Act 1974 (NPW Act).

Under Section 5 of the Act, "Aboriginal Object" means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Indigenous habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Sites of traditional significance that do not necessarily contain archaeological materials may be gazetted as 'Aboriginal places' and are protected under Section 84 of the NPW Act. This protection applies to all sites, regardless of their significance or land tenure. Under section 90, a person who, without first obtaining the consent of the Director-General, knowingly destroys, defaces or damages, or knowingly causes or permits the destruction or defacement of or damage to, an Aboriginal object or Aboriginal place is guilty of an offence.

It is required that an Aboriginal Heritage Impact Permit (AHIP) be obtained for any impact to an Aboriginal object or place. The OEH is the responsible authority, with the Director General of that department the consent authority.

The provisions of the NPW Act apply to Snapper Island in the event of sale or divestment of the property out of Commonwealth control.

2.2.2.4 Heritage Act 1977

The Heritage Act 1977 establishes the NSW Heritage Council and the State Heritage Register (SHR). The aim of the Act is to conserve the heritage of New South Wales. The aim of heritage management

is not to prevent change and development, but to ensure that the heritage significance of recognised heritage items is not harmed by changes.

The SHR is a separate listing to the State Heritage Inventory and includes items that are accorded SHR listing through gazettal in the NSW Government Gazette. Nominated items are considered by the NSW Heritage Council, which then makes a recommendation to the Minister for Heritage.

The provisions of the Heritage Act 1977 apply to Snapper Island in the event of sale or divestment of the property out of Commonwealth control.

2.2.2.5 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The Sydney Regional Environmental Plan (REP) (Sydney Harbour Catchment) was implemented in 2005 to "ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected. Enhanced and maintained...". The Sydney REP (Sydney Harbour Catchment) includes development control planning, identification of matters for consideration, advice for master planning, heritage protections, and a range of other materials relevant to the maintenance of the harbour and foreshore areas.

Snapper Island is a listed heritage item under Schedule 5 of the Sydney REP (Sydney Harbour Catchment), identified as being of local significance.

2.2.3 Local Government Frameworks

As Snapper Island is located within the waters of Sydney Harbour, it is not managed under Local Government legislation, and is managed under Commonwealth legislation.

2.2.4 Non-Statutory Considerations

2.2.4.1 Engage Early

The guideline *Engage Early: Guidance for proponents on best practice Indigenous engagement for environmental assessments under the EPBC Act* was prepared by the former Department of Environment in 2016. The guideline aims to improve how proponents engage and consult with Aboriginal peoples during the environmental assessment process under the EPBC Act. The Department of Agriculture, Water and Environment's (DoAWE) expectations on how engagement with Aboriginal people should occur are stepped out in the guideline. This guideline should be read in conjunction with the Ask First guidelines.

2.2.4.2 Ask First

The Australian Heritage Commission (AHC) document *Ask First: a Guide to Respecting Indigenous Heritage Places and Values* provides a practical guide to consultation and negotiation with Indigenous stakeholders regarding addressing Indigenous heritage issues and maintaining heritage values and places.

2.2.4.3 The Burra Charter 2013

The *Australian International Council on Monuments and Sites (ICOMOS) Charter for the conservation of places of cultural significance* (the Burra Charter) sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance including owners, managers and custodians. The Charter provides specific guidance for physical and procedural actions that should occur in relation to significant places. A copy of the charter can be accessed online at <http://icomos.org/australia>.

2.2.4.4 Australian Natural Heritage Charter

The *Australian Natural Heritage Charter* is a distillation of best practice conservation principles for Australia, based on the consensus of a broad range of experts. It aims to assist everyone with an interest in natural places to establish their natural heritage values and manage them. It can be applied to a wide range of places whether terrestrial, marine or freshwater. It offers a framework for making sound decisions for managing and restoring natural heritage places based on the ecological processes that occur in natural systems. The *Natural Heritage Charter* also provides a process that can be used to support and implement local, state and territory, national and international policies, agreements, strategies and plans. It does not replace statutory obligations.

2.2.4.5 Register of the National Estate

The Register of the National Estate (RNE) is now an archive of information about more than 13,000 places throughout Australia including many places of local or state significance. The RNE was closed in 2007 and is no longer a statutory list. The closure of the RNE does not diminish protection of Commonwealth heritage places.

The RNE is maintained on a non-statutory basis as a publicly available archive and educational resource. RNE places can be protected under the EPBC Act if they are also included in another Commonwealth statutory heritage list, or are owned or leased by the Commonwealth. In addition, places in the RNE may be protected under appropriate state, territory or local government heritage legislation.

Snapper Island is acknowledged on the RNE as both a Registered Place (ID 102559) and a Listed Place (ID 105477).

2.2.4.6 National Trust (New South Wales)

The National Trust has been gathering information about heritage places in Australia for more than three decades, and has a list of heritage places including individual buildings, precincts, natural environment places or culturally significant artefacts. These listings do not attract any legal protection for a place, nor do they put the owner of a listed place under any legal obligation.

The National Trust NSW list is no longer publically available, and it is unknown if Snapper Island is listed.

2.2.4.7 Building Code of Australia

The Building Code of Australia (BCA) is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia. The BCA is produced and maintained by the Australian Building Codes Board, and given legal effect through the Building Act 1975. While changes are often made to comply with modern safety standards, the BCA and other building regulations are not generally applicable retrospectively to existing structures, including those that are heritage listed (NSW Heritage Branch nd: 1).

3. SITE BACKGROUND

3.1 Location

Snapper Island (the Site) is located approximately 300 metres north-east of Drummoyne Sailing Club in Sydney Harbour. The Site is the southernmost island in a small group of three, comprising Cockatoo Island, Spectacle Island and Snapper Island – all of which have been utilised for military purposes throughout their post settlement history.

The location of Snapper Island is shown in *Figure 1.1*.

3.2 Site Description

3.2.1 Landform and Topography

The Site is a low profile, lozenge-shaped island approximately 100 metres (m) long and 40m wide. The distinctive shape of the Site, as observed in aerial imagery, is a result of modification and land reclamation during its usage by the Naval League Cadets from the 1930s onwards. The purpose of the modification was to create the shape of a ship, simulating a working naval vessel on which the Cadets could train. The stern of the ship faces Drummoyne, the bow Cockatoo Island. In addition to reclamations, modifications to the raised rock formation at the centre of the island have allowed for the creation of two distinct levels (identified as ‘decks’), further reinforcing the ‘ship’ aesthetic.

3.2.2 Description of Built Environment

Generally, the ‘upper deck’ of the island contains the Main Deck, Quarterdeck and Port Waist, while the ‘lower deck’ contains the Forecastle Deck and Aft End (Clive Lucas Stapleton, 2007). A modern steel wharf has been constructed on the western (Port) side of the island, providing the only access point. The eastern (Starboard) side wharf has been removed.

There are a total of 9 buildings remaining on Snapper Island (see *Figure 3.1*), consisting of:

- Guard House (Building 2)
- Officer’s Wardroom Mess (Building 3)
- Generator Room (Building 4)
- Women’s Toilet Block (Building 5)
- Boatshed, Workshop & Store (Building 6)
- Gymnasium (Building 8)
- J Payne Memorial Building (Building 9)
- Main Deck (former Museum) (Building 10)
- Officer’s Cottage (Building 14)

Building 1 (Flammable Store), Building 7 (Ablutions Block), Building 11 (Starboard Classroom) and Building 12 (Signal Station) have been demolished. Building 1, the Flammable Store, has previously also been designated Building 16. There is no evidence of a Building 13 or Building 15 ever having been constructed on Snapper Island, despite the numbering of Buildings 14 and 16.

The buildings on Snapper Island are largely utilitarian in their style, having been constructed from timber, recycled brick and corrugated iron. A number of the structures also contain recycled materials from the HMAS Sydney, including a number of internal doors. There is minimal decoration and many of the structures are in various states of disrepair – having been disused for more than ten years.

A full description of the structures on Snapper Island, both extant and previously removed, is provided in *Appendix C*.

3.3 Site Management Responsibilities

Snapper Island is Commonwealth property and is currently part of Finance's non-Defence Property Portfolio.

In the 1980's, Snapper Island was transferred as a surplus Navy property to Finance's predecessor, the Department of Administrative Services, for disposal. In 1999, the Finance Minister approved the transfer of the site to the Harbour Trust. The transfer was delayed pending resolution of a range of issues including the safekeeping of historically significant private property; the poor physical condition of the buildings and other infrastructure; and the remediation of the site contamination while conserving the Commonwealth heritage values. Finance has also been unable to reach agreement on the funding for the repairs to buildings and infrastructure and contamination remediation with the Harbour Trust. Negotiations between the agencies are ongoing, and Finance and the Harbour Trust are working together to come to a solution.

The previous tenant, Sydney Training Depot Snapper Island Ltd vacated the island in early 2006 when the heritage collection was moved to Spectacle Island and the Navy Museum at Garden Island.

Broadspectrum Property (BRSP) is the Property Service Provider (PSP) for Finance and is currently responsible for the ongoing management and maintenance of the island. If transferred to the Harbour Trust portfolio, the Harbour Trust would assume responsibility for management and maintenance of Snapper Island.

3.4 Heritage Status

3.4.1 Commonwealth Heritage List

Snapper Island is listed on the CHL (Place ID 105477) for its historical, social and aesthetic values. The CHL citation notes the historical, social and associative value of Snapper Island as it related to Len Forsythe and the Navy League Cadets, the unique development of the island for use by the Navy League Cadets, and its contribution to the landscape of Sydney Harbour. The CHL listing sheet for Snapper Island is included in *Appendix A*.

3.4.2 State Heritage Inventory

Snapper Island also has an entry in the SHI (Database ID 14247), although this entry contains no information about the site or the values of which it has been listed. The SHI listing stems from its recognition in Sydney REP (Sydney Harbour Catchment) (2005). The SHI listing sheet for Snapper Island is also included in *Appendix A*.

Site Features	
1	Flammable Store (Demolished)
2	Guard House
3	Officers Wardroom Mess
4	Storage Room
5	Women's Toilet Room
6	Boatshed, Workshop & Store
7	Men's Toilet & Shower Block
8	Gymnasium
9	J. Payne Memorial Building
10	Main Deck, Museum
11	Mess Deck, Standard Classroom (Demolished)
12	Signal Station (Demolished)
14	Officers Cottage



Legend	
	Site Features
	Building - Demolished
	Retaining Wall
	Retaining Wall Under

Data Source:
Nearmap Imagery September 2020

Site Layout

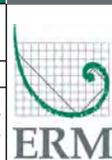
Drawing No: 0571293s_HMP_G002_R0.mxd	Date: 27/10/2020	Drawn By: GC	Reviewed By: SM
Coordinate System: GDA 1994 MGA Zone 56			

Snapper Island, Sydney Harbour
Heritage Management Plan
Client: Sydney Harbour Federation Trust

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.



F3.1



4. HISTORICAL CONTEXT

Further detail regarding past usage of the site is provided in a complete illustrated contextual history of Snapper Island (*Appendix B* of this report). The full contextual history also includes all relevant references and the application of the Australian Historic Themes Framework (AHT Framework). A chronology for the site is provided in *Table 4.1* below for ease of reference.

Nineteenth century images show Snapper Island to be a small island with rocky shores, sparse vegetation and low shrubs. It is likely that Snapper Island was utilised by local Aboriginal communities for spear fishing and collecting shellfish and molluscs (Clark and Clark 2000:5). However, evidence of Aboriginal occupation of Snapper Island is unlikely to have survived the levelling and infilling works that occurred from the 1930s.

Snapper Island is one of a historical group of Sydney Harbour islands (consisting of Cockatoo, Spectacle and Snapper) which, in the early 1800s, were known as the 'Hen & Chickens' respectively (Joseph Cross 1820s map of NSW). Cockatoo and Spectacle Islands were already in use by this time, although Snapper Island remained empty. In 1878, the Legislative Assembly resolved that some harbour land needed to be designated as public reserves, as large portions of foreshore land were being acquired by wealthy private individuals. In 1879, Snapper Island, Clark Island and Rodd Island were declared public reserves and made available as parkland (Clark and Clark, 2000 via Notes on General Survey 1881).

By the early 20th Century, there was a small patch of beach that was attractive for the occasional picnicker; however, the island was used most frequently by fishermen, adventurous children, lovers and two-up schools. On February 1 1913, the Commonwealth Government took over control of the Harbour islands from the NSW government. Cockatoo Island, Spectacle Island and Snapper Island were all ceded to Federal authorities as well as all rights to the use of all the waters embraced by the three islands (The Argus 10 Jan 1913 p.6). At the time, Spectacle Island was used as a depot for explosives, and Snapper was used a temporary store for timber in connection with the Cockatoo Dock (The Argus 10 Jan 1913 p.6). The Island was leased to the Cockatoo Island Dockyard as a storage place for piles of old boilers, and 'other odds and ends', and it was during this time that Island was known to be infested by rats. It was not until the mid-20th century that the Island was put to another use.

Leonard Forsythe (1894-1981) was a returned Australian Infantry Forces (AIF) man who became one of the Navy League's most successful, and vocal, unit commanders and state office bearers (Laat 2013). By 1923, Forsythe had formed the Parramatta River Navy League Sea Cadet Company (Drummoyne Company) and was credited for establishing the first depot for sea cadets in Australasia (The Daily Telegraph 28 May 1923:6). However, with the onset of the Depression, the annual £100 rent of Drummoyne depot presented financial difficulties for the company and Snapper Island was suggested as an alternate location. A lease of Snapper Island was granted by the Commonwealth Government to Len Forsythe for fifteen years at fifteen pounds per year for the purpose of establishing a depot. Forsythe fronted £1700 of his own money towards the "Sydney" Depot at Snapper Island, a long-term loan for the Sea Cadets that made the construction of a new Depot possible.

By July 7, 1931 efforts had begun to prepare the island for occupation, and thirty to fifty cadets were co-opted to clear the island. The dense scrub and lantana bushes were cleared away to make possible a survey of the actual surface of the island. The ideal depot and future home of the Sea Cadets was mapped out two weeks later, and it was found that it was necessary to lower the whole surface of the island by nine feet six inches to gain a flat surface on which to construct buildings. A thousand tonnes of rock was blasted and the island was levelled with the excess rock used for reclamation, as the island was found to be too small for the required structures. A seawall was also constructed from the rubble with additional rock from around the harbour also being sourced by Forsythe. All of this work was done by the small company of sea cadets, unaided by outside labour and almost without financial assistance, between August 1931 and January 1932.

The Depot was named “Sydney Training Depot” after the recently decommissioned *HMAS Sydney* and was officially opened in November 1931. Many relics of the wartime ship were salvaged by Forsythe; the Island itself was also designed along the lines of a warship. A number of buildings were relocated from the Drummoyne Depot including the Guardhouse (Building 2), main building which was transformed to become the Main Deck (Building 10) and the Signal Station (Building 12).

By 1937, the strength of the Company at Snapper Island was 110, with 75 young boys and men on the enrolment waiting list. By 1945, girls from the Women’s Volunteer Naval Reserve were also admitted into the Sydney Naval Training Corps. In the lead up to World War II (WWII) Snapper Island was used by the Royal Australian Navy (RAN) as accommodation for naval guards, with cadets ferrying the men to and from their posts around the harbour. Snapper Island was also occupied by Companies of the Great Britain Maritime Royal Artillery.

The Snapper Island Unit later became known as the TS (Training Ship) Sydney Unit, and by 1960, Forsythe formed Sydney Training Depot Snapper Island Ltd., so that the activities of the group would continue after his death. It was in the same year that Forsythe opened a museum of artefacts and curiosities from Australia’s naval history on Snapper Island. In the 1980s, Snapper Island was transferred as a surplus Navy property to Finance’s predecessor, the Department of Administrative Services, for disposal. In 1999, the Finance Minister approved the transfer of the Site to Sydney Harbour Federation Trust (SHFT).

By 2000, there were no cadets being trained at Snapper Island and general public access had ceased unless by appointment. Up to 2006, Sydney Training Depot Snapper Island Ltd operated the museum on the island and looked after the Len Forsythe collection. The museum collection was subsequently removed to Spectacle Island and the Navy Museum at Garden Island c2006 and the island has remained unoccupied since. The company was evicted by the Commonwealth due to the poor condition of the buildings and the inability to procure adequate insurance cover.

Table 4.1 Chronology of Site History

Date	Event
Pre-1780s	Local Aboriginal people likely to have utilised the island for fishing and resource gathering.
Early 1800s	Cockatoo, Spectacle and Snapper Islands become known as ‘The Hen and Chickens’.
1879	Snapper Island declared a public reserve, along with Clark Island and Rodd Island.
1913	Snapper Island placed under control of Royal Australian Navy, as part of the naval waters surrounding Cockatoo and Spectacles Islands.
1918	Navy League UK (NSW Branch) formed.
1920	Balmain branch of the Navy League UK (NSW Branch) formed.
1921	North Sydney and Drummoyne branches of the Navy League UK (NSW Branch) formed.
1923	Parramatta River Navy League Sea Cadet company opened at Drummoyne.
1928	Len Forsythe founds a Navy League Cadet company at Iron Cove named ‘Sydney’, in commemoration of HMAS Sydney.
1929	Drummoyne company taken over by ‘Sydney’ company, new Depot opened in April.
1931	Land clearance and construction of buildings at Snapper Island for ‘Sydney’ company
1938	110 cadets enrolled at Snapper Island, Jack Payne Memorial building opened by Prime Minister Joseph Lyons in November.
1939-1945	Snapper Island utilised by Royal Australian Navy to house naval guards, ‘Sydney’ Company cadets providing ferry service to the island. Additional structures added to the island during this period.
1950	Navy League became incorporated in Australia.

Date	Event
1954	Australian Sea Cadet Corps (ASCC) was formed from the old Navy League Sea Cadet Corps and the Snapper Island Sea Cadet Unit. The Snapper Island Unit became known as the TS (Training Ship) Sydney Unit.
1960	Forsythe formed Sydney Training Depot Snapper Island Ltd., so that the activities of the group would continue after his death.
1970	Australian defence forces consider dropping their cadet corps, Commonwealth Government takes responsibility for the organisation, forming the Naval Reserve Cadets (NRC), ending the Navy League's involvement.
1976	Snapper Island Unit decided not to join the NRC and to remain independent.
1980s	Snapper Island transferred from Navy to the predecessor of the Department of Finance.
1981	Len Forsythe dies.
1987	Snapper Island Unit received an eviction notice from the Commonwealth due to the proximity of explosives storage in lighters around and on Spectacle Island. Eviction was challenged and rescinded.
1999	Approval to transfer Snapper Island to the Harbour Trust.
2001	Preparation of preliminary heritage study by Clive Lucas Stapleton for Department of Finance
2003	Commencement of the Comprehensive Plan (Harbour Trust)
2006	All activities at Snapper Island ceased.
2007	Preparation of Conservation Management Plan by Clive Lucas Stapleton for the Harbour Trust.
2008	Removal of Building 12 – Signal Station.
2014	Preparation of Heritage Assessment Report by ERM for Department of Finance.
2015	Preparation of Heritage Validation assessment and Archival Recording Report by ERM. Collapse of Building 1 – Flammable Store.
2016-2018	Collapse and removal of Building 11 – Starboard Classroom (exact date unknown).
2018	Preparation of Heritage Impact Assessment for proposed demolition of Building 7 – Ablutions Block. Submission of EPBC Referral for the action. Approval for demolition granted.
2019	Removal of Building 7 – Ablutions Block. ERM 2015 Archival Recording amended to include removal of Ablutions Block. Replacement of roofing on Building 14 – Officer's Cottage. Updated HMP finalised by ERM for Department of Finance.
2020	Preparation of Archival Recording of Snapper Island by ERM for the Department of Finance. Preparation of CMP by ERM for the Harbour Trust

5. ASSESSMENT OF HERITAGE SIGNIFICANCE

The following chapter presents an overview of the heritage significance undertaken for Snapper Island. This assessment has been drawn from the HMP prepared by ERM in 2018, with amendments to reflect any significant changes since this time.

Snapper Island was officially listed in the CHL (Place ID 105477) in June 2004 for its historical, associative, aesthetic and social values. Snapper Island is also listed on the SHI as the site is recognised on the Sydney REP (Sydney Harbour Catchment) 2005, although no statement of significance is provided by this listing.

5.1 Existing Heritage Assessment

The official Commonwealth heritage citations for the Site include:

- Citation and notice of inclusion on CHL;
- The NSW State Heritage Inventory database entry; and
- Finance Heritage Register entry.

Copies of these citations are provided in *Appendix A* of this report.

5.2 Assessment of Heritage Values

5.2.1 Comparative Analysis

A comparison with other related or similar sites and places assists in assessing the heritage values of a particular item or feature. Comparative analysis can assist with identifying the appropriate level of heritage significance of a site, and is useful in the validation process of determining whether a heritage listing remains current.

The Site poses some challenges in terms of identifying suitable heritage listed sites for comparison, due to the former purpose of the site and its unique physical form. Comparison was therefore made against two former naval islands in close proximity to Snapper Island – Cockatoo Island and Spectacle Island. This comparative analysis draws from those previously prepared by ERM (2015), for the heritage validation assessment of the Site, and ERM (2019), for the HMP.

5.2.1.1 Cockatoo Island

Cockatoo Island is listed on the World Heritage List (ID1306 Australian Convict Sites Listing), the National Heritage List (Place ID 105928) and the CHL (Place ID 105393). The place is important for its association with the administration of Governor Gipps, who was responsible for:

- the establishment on the island of an Imperially funded prison for convicts withdrawn from Norfolk Island in the 1840s;
- the establishment of maritime activities during the 1840s culminating in the construction of Fitzroy Dock (1851-57) under Gother Kerr Mann, one of Australia's foremost nineteenth century engineers; and
- the construction of twelve in-ground grain silos following a government order that provision would be made to store 10,000 bushels of grain on the island.

The subsequent development of shipbuilding and dockyard facilities has clearly been in response to Federation in 1901, when the New South Wales government took over management of the island; the formation of the Royal Australian Navy in 1911; and the Commonwealth Government's purchase of the island in 1913. The first steel warship built in Australia, HMAS Heron, was completed on the island in 1916. During World War II Cockatoo Island became the primary shipbuilding and dockyard facility in the Pacific following the fall of Singapore. Post War development of the facility reflects the importance of the island facility to the Commonwealth Government.

The industrial character of the cultural landscape of the island had developed from the interaction of maritime and prison activity, and retains clear evidence of both in a number of precincts. The cultural landscape is articulated by man-made cliffs, stone walls and steps, docks, cranes, slipways and built forms.

Extant structures within the precincts are important for their ability to demonstrate:

- the functions and architectural idiom and principal characteristics of an imperial convict public works establishment of the 1840s; and
- the functions and architectural idiom and principal characteristics of the range of structures and facilities associated with the development and processes of the dockyard and shipbuilding industry over a period of 140 years.

Cockatoo Island is the only surviving Imperial convict public works establishment in New South Wales. Individual elements of the convict Public Works Department period include rock cut grain silos, the Prisoners Barracks and Mess Hall (1839-42), the Military Guard House, the Military Officers Quarters and Biloela House (c1841).

The range of elements associated with the shipbuilding and dockyard facility date from the 1850s and include items of remnant equipment, warehouse and industrial buildings and a range of cranes, wharves, slipways and jetties which illustrate the materials, construction techniques and technical skills employed in the construction of shipbuilding and dockyard facilities over 140 years. Individual elements associated with the shipbuilding and dockyard facility include Fitzroy Dock and Caisson (1851-57), Sutherland Dock (1882-1890), the Powerhouse (1918), the Engineer's and Blacksmith's Shop (c1853) and the former pump building for Fitzroy Dock.



Photograph 5.1 Cockatoo Island, aerial image

(Source: <https://www.sydney.com/destinations/sydney/sydney-city/sydney-harbour/attractions/cockatoo-island>)

5.2.1.2 Spectacle Island

Spectacle Island is listed on the CHL (Place ID 105393) and the RNE (Place ID 15323). The Spectacle Island Explosives Complex is historically highly significant. Dating from 1865, it is the oldest naval explosives manufacturing facility and storage complex in Australia. Built originally to hold government gunpowder, it was later converted for use by the Royal Navy for storage of naval munitions. It was the location of the manufacture of projectiles and has been used by the Royal

Australian Navy since the early years of the twentieth century. The complex has direct association with Australian participation in the First and Second World Wars.

The complex is also very important in for its rarity. Naval explosives complexes with this level of integrity and completeness, situated on an impressive harbour site, are rare even in world terms. Spectacle Island reflects the process of development from gunpowder storage to the manufacture of naval projectiles. The buildings - which incorporate features such as asphalt floors, wood block floors, wooden tramway rails, roof ventilation, wall and roof insulation, special storage arrangements, vacant brick walling and blast walls - illustrate the special designs required for safe explosives handling during the period. The original and early fabric of each building, both external and internal, contribute to the significance of the place. As well as containing good examples of period explosives buildings, the complex also features good examples of Victorian, Georgian and Federation Free Style architecture. The 1865 buildings are significant for their association with NSW Colonial Architect James Barnet. Barnet played a seminal role in NSW architecture for over two decades.

Contained within several buildings at the complex is the Naval Repository, a collection of relics and artefacts of key significance to the history of the Royal Australian Navy. This repository now also contains the artefacts from the Len Forsythe collection, previously housed on Snapper Island.

The island has strong aesthetic values. The sandstone and slate 1865 group on the eastern end of the island has an axial orientation and a near symmetrical presentation to the waterfront and is distinctive for its materials and Georgian styling. The Federation buildings elsewhere are also visually pleasing, exhibiting uniformity in form, scale, materials, colour and texture. Roof forms, the layout and spacing of buildings, and the scale of structures add to this visual harmony. Added to this is the encircling sandstone seawall. Spectacle Island, a cultural landscape, is a significant feature of this western end of Sydney Harbour.



Photograph 5.2 Spectacle Island, aerial image

(Source: <http://www.visitsydneyaustralia.com.au/spectacle-isld.html>)

5.2.1.3 Discussion

When compared to Snapper Island, both Cockatoo and Spectacle Island have higher historical value as their respective histories date from the mid-19th century. This is reflected in the status of their heritage listings.

From a rarity perspective, each of the islands shares an equal ranking despite Snapper Island's more recent history. Each of the islands have unique backgrounds and former usages. Additionally, Snapper Island's distinctive form further demonstrates its rarity.

Likewise, each of the islands share similar characteristics rankings, as each demonstrates their respective functions as dockyard, explosives factory and training depot. The nature of the visual landscape of each island means the former purposes are easily identifiable and valued within the broader understanding of the site.

Aesthetically, each island contributes to the maritime and naval character of Sydney Harbour. Due to its more recent history, Snapper Island retains a strong connection with its past recruits and has associational values with Len Forsythe. Some of this associational history has been transferred to Spectacle Island and Garden Island, following the relocation of the Len Forsythe collection and the Sydney Depot Cadets. Cockatoo and Spectacle Islands also retain associative values, with Governor Gibbs and NSW Colonial Architect, James Barnet, respectively.

Although comparable in terms of their former military usage, the comparative analysis of Snapper Island against Cockatoo and Spectacle Islands has indicated that, overall, Snapper Island remains a unique example of cadet training facilities in Australia.

5.2.2 Identification of Historic Themes

An overview of the history of the Site is provided in *Section 4* and *Appendix B* of this report. The Australian Historic Themes Framework has been used to identify the relevant historic themes for the Site. The identification of historic themes assists with the assessment of potential built heritage values. The Site provides an insight into the Australian Historic Themes identified in *Table 5.1*.

Table 5.1 Australian Historic Themes

Theme Groups	Themes	Sub Theme
3 Developing local, regional and national economies	3.11 Altering the environment	3.11.2 Reclaiming land 3.11.4 Clearing vegetation
6 Educating	6.3 Training people for the work place	
7 Governing	7.7 Defending Australia	7.7.1 Providing for the common defence
8 Developing Australia's cultural life	8.9 Honouring achievement	
9 Marking the phases of life	9.2 Growing up	9.2.2 Joining youth organisations

5.2.3 Assessment of Heritage Values

As the Site is already included on the CHL, the analysis against the CHL criteria in *Table 5.2* below has been undertaken as a validation exercise, based on historical research and site analysis. ERM has provided revised statements against the criteria where necessary. The assessment has been undertaken based on the evidence presented in *Appendices C to E* (forming the technical chapters of this report) and supporting documentation (*Appendices F to I*).

If there is strong possibility that the Site will reach threshold for National significance, this is indicated by a cross in the relevant Heritage Status column. If State heritage assessment criteria can be or has been applied (even to determine 'local' significance level) this is also indicated in the relevant column.

Table 5.2 Summary Significance Assessment against CHL Heritage Criteria

Criteria	Values	Current CHL Citation	ERM Assessment	Contributory Elements	Significance Ranking	Heritage Status		
						CHL	NHL	State
a <i>the place's importance in the course, or pattern, of Australia's natural or cultural history;</i>	Natural	Does not reach threshold for this criterion	The study area has been significantly modified and does not retain vegetation indicative of its pre-European state. Additionally, blasting and land reclamation activities have significantly altered the appearance of the island.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Historic	Snapper Island, comprising the original sandstone area, fore and after areas of made ground, and a range of utilitarian buildings and maritime structures and the Len Forsythe Museum Collection, is historically important as the primary expression of the Navy League UK, established at Drummoyne in 1921 by Len Forsythe, who was the need to establish a voluntary training scheme for young boys, as naval cadets. The Sea Cadet movement is believed to be one of the oldest youth movements in the English speaking world. The Snapper Island facility was officially opened on 26 November 1932 by Sir Charles Cox, on behalf of the Minister for Defence, as a living memorial to HMAS Sydney. HMAS Sydney, the first Royal Australian Navy ship to	Snapper Island remains a unique and important example of the work and contribution of the Navy League cadets to the operations of the Australian Navy. ERM concurs with this assessment.	Main Deck, J. Payne Building, Gymnasium, Guardhouse, Reclaimed Land, Sea Walls – High Boatshed, Officer's Cottage, Officer's Wardroom Mess – Moderate Generator Room, Women's Toilet - Low	High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Criteria	Values	Current CHL Citation	ERM Assessment	Contributory Elements	Significance Ranking	Heritage Status		
						CHL	NHL	State
		sink an enemy warship, the Emden, had been an inspiration to Forsythe. Snapper Island was the headquarters of Sydney's naval cadet groups and the Navy League from 1932 to 1977, and as such provided a voluntary step towards recruitment in the Australian Navy. Attributes: All buildings, structures, artefacts, retaining walls, landscaping wharves, ramps and other features on the island.						
b <i>the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history;</i>	Natural	Does not reach threshold for this criterion	There have been no rare or threatened species recorded within the study area. The study area does not possess any uncommon, rare or endangered aspect of Australia's natural history. Therefore, the study area does not meet this criterion for natural heritage values.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Historic	Does not reach threshold for this criterion	ERM concurs with this assessment.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c <i>the place's potential to yield information that will contribute to</i>	Natural	Does not reach threshold for this criterion	Given its lack of biodiversity and natural integrity, the study area does not have any recognised or potential scientific value. The study area does not meet this criterion for natural heritage values.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Criteria	Values	Current CHL Citation	ERM Assessment	Contributory Elements	Significance Ranking	Heritage Status		
						CHL	NHL	State
<i>an understanding of Australia's natural or cultural history;</i>			Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.					
	Historic	Does not reach threshold for this criterion	ERM concurs with this assessment.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>d</i> <i>the place's importance in demonstrating the principal characteristics of:</i> <i>i) a class of Australia's natural or cultural places; or</i> <i>ii) a class of Australia's natural or cultural environments;</i>	Natural	Does not reach threshold for this criterion	The study area has been significantly modified and does not retain any vegetation indicative of its pre-European state. As a result, the study area does not have importance in demonstrating principal characteristics of a class of Australia's natural environments. The study area does not meet this criterion for natural heritage values.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Historic	Snapper Island is of exceptional interest as a privately initiated and seminal naval cadet training facility, as the earliest surviving Navy League training depot in NSW and for its ship like planning and layout. Attributes: All aspects of development on the island, including the ship like planning and layout.	Snapper Island remains a place of interest in relation to its naval cadet training history. The island retains the overall ship like shape and many of the features which allow the planning to be interpreted; however, the overgrown vegetation and degrading structures somewhat obscure this interpretation.	Main Deck, J. Payne Building, Gymnasium, Guardhouse, Reclaimed Land, Sea Walls – High Boatshed, Officer's Cottage, Officer's	High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Criteria	Values	Current CHL Citation	ERM Assessment	Contributory Elements	Significance Ranking	Heritage Status		
						CHL	NHL	State
				Wardroom Mess – Moderate Generator Room, Women's Toilet - Low				
e <i>the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;</i>	Natural	Does not reach threshold for this criterion	ERM concurs with this assessment.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Historic	The Snapper Island training facility is recognised for its contribution to the landscape values of Sydney Harbour. Attributes: All aspects of the place including built form, open space and relationship to the harbour.	Snapper Island retains its landscape character, although it has been somewhat obscured by overgrown vegetation and significant faunal activity. The structures, which are rapidly aging and degrading, are a unique and distinctive feature which contribute to the landscape values of Sydney Harbour.	Main Deck, J. Payne Building, Gymnasium, Guardhouse, Reclaimed Land, Sea Walls – High Boatshed, Officer's Cottage, Officer's Wardroom Mess – Moderate Generator Room, Women's Toilet - Low	High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f <i>the place's importance in demonstrating</i>	Natural	Does not reach threshold for this criterion	The study area does not meet this criterion for natural heritage values.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Criteria	Values	Current CHL Citation	ERM Assessment	Contributory Elements	Significance Ranking	Heritage Status		
						CHL	NHL	State
<i>a high degree of creative or technical achievement at a particular period;</i>			Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.					
	Historic	Does not reach threshold for this criterion	ERM concurs with this assessment.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>g the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;</i>	Natural	Does not reach threshold for this criterion	The study area does not meet this criterion for natural heritage values.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Historic	Snapper Island is highly valued by Sydney's naval cadet group and the local communities for its symbolic, cultural, educational and social associations. Attributes: all aspects of the place.	ERM concurs with this assessment.	Main Deck, J. Payne Building, Gymnasium, Guardhouse, Reclaimed Land, Sea Walls – High Boatshed, Officer's Cottage, Officer's Wardroom Mess – Moderate Generator Room, Women's Toilet - Low	High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>h</i>	Natural	Does not reach threshold for this criterion	The study area does not meet this criterion for natural heritage values.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Criteria	Values	Current CHL Citation	ERM Assessment	Contributory Elements	Significance Ranking	Heritage Status		
						CHL	NHL	State
<i>the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history;</i>	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Historic	Snapper Island is closely associated with Len Forsythe, founder of the Navy League in Australia, and the driving force behind the development of Snapper Island as the focus of naval cadet training in Sydney. Attributes: planning and layout of the facility.	Snapper Island retains its association with Len Forsythe through the layout and planning of the island. The removal of the museum collection, which was largely filled with pieces collected by Forsythe, has diminished the visual interpretation of this association.	Main Deck, J. Payne Building, Gymnasium, Guardhouse, Reclaimed Land, Sea Walls – High Boatshed, Officer's Cottage, Officer's Wardroom Mess – Moderate Generator Room, Women's Toilet - Low	High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>i</i> <i>the place's importance as part of Indigenous tradition.</i>	Natural	Does not reach threshold for this criterion	This criterion is not relevant to natural heritage values.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Indigenous	Does not reach threshold for this criterion	There are no known tangible Indigenous cultural heritage values within the Site. Due to the extensive level of disturbance to the Site, it is considered that there is a low potential for unknown tangible Indigenous heritage objects to occur.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Historic	Does not reach threshold for this criterion	This criterion is not relevant to historic heritage values.	None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.2.4 Significance of Elements

Throughout the site assessment, the significance of contributory items has been evaluated along with overall heritage values. Table 5.3 and Figure 5.1 show the assessed significance level of each element at the Site.

Table 5.3 Significance of Site Elements

Building No. (where relevant)	Item Name	Ranking
2	Guard House	High
3	Officer's Wardroom Mess	Moderate
4	Generator Room	Low
5	Women's Toilet	Low
6	Boatshed and Workshop	Moderate
8	Gymnasium	Moderate
9	J. Payne Memorial Building	Moderate
10	Main Deck	High
14	Officer's Cottage	Moderate
A	Island layout and landform	High
B	Views to and from the Island	Moderate
-	Sea Walls	High
-	Cabbage Trees	Moderate
-	Movable Heritage	Low

5.2.5 Conclusion

The ranking of built heritage values against the criteria for the CHL has confirmed that the Site meets the threshold for listing under the criteria for historical, associative, aesthetic and social significance values, and for its potential to yield information that may contribute to an understanding of Australia's cultural history. As no criteria were met at an exceptional level, the Site does not have potential National heritage values.

5.3 Statement of Significance

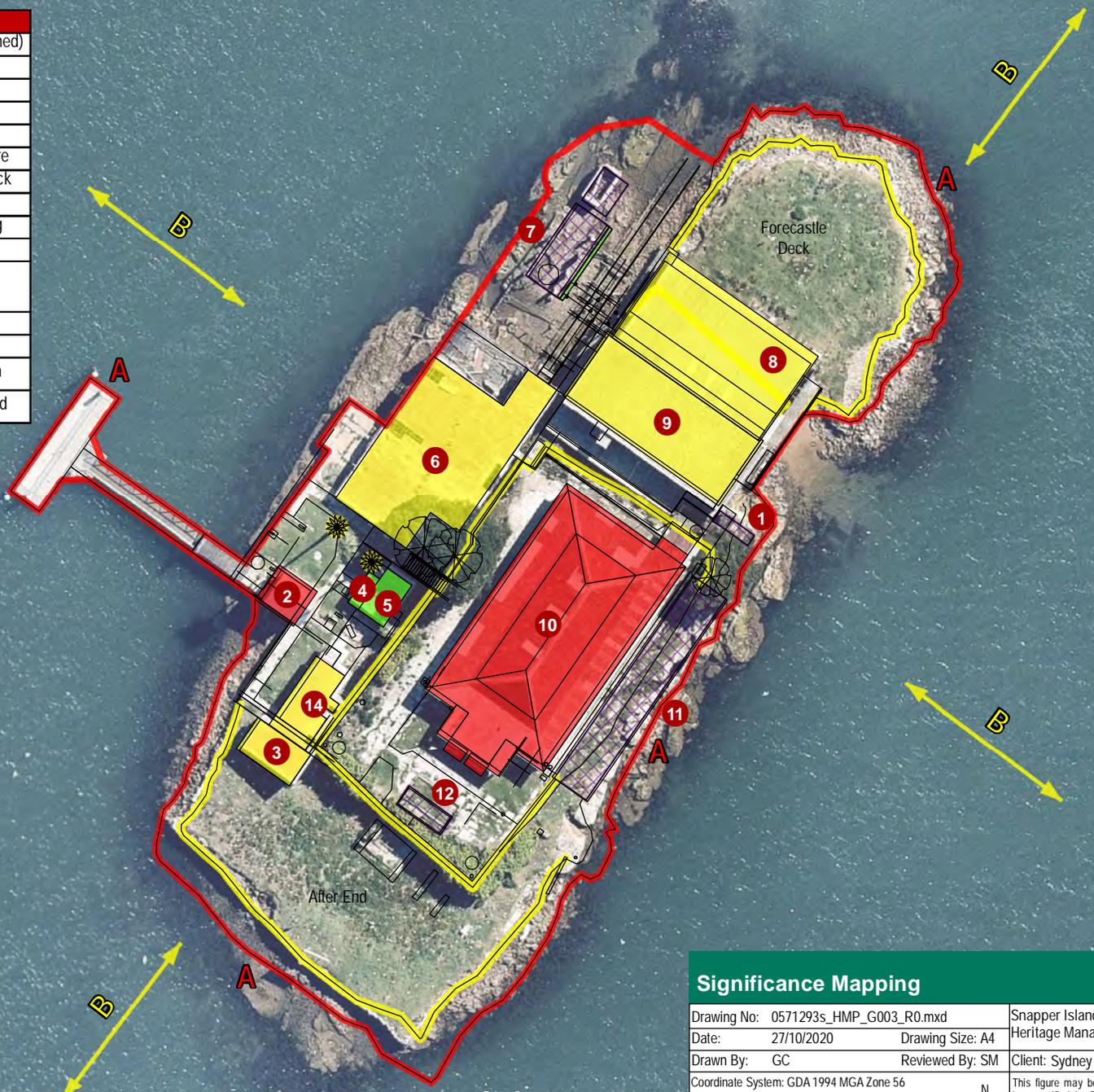
The following CHL statement of significance has been revised by ERM based on the validation analysis against the criterion provided above.

Snapper Island, comprising the original sandstone area, fore and aft areas of made ground, a range of utilitarian buildings and maritime structures, is historically important as the primary expression of the Navy League UK (NSW Branch). The Navy League UK (NSW Branch) was established at Drummoyne in 1921 by Len Forsythe, who saw the need to establish a voluntary training scheme for young boys, as naval cadets. The Sea Cadet movement is believed to be one of the oldest youth movements in the English-speaking world. The Snapper Island facility was officially opened on 26 November 1932 by Sir Charles Cox, on behalf of the Minister for Defence, as a living memorial to HMAS Sydney. HMAS Sydney, the first Royal Australian Navy ship to sink an enemy warship, the Emden, had been an inspiration to Forsythe. Snapper Island was the headquarters of Sydney's naval cadet groups and the Navy League from 1932 to 1977, and as such

provided a voluntary step towards recruitment in the Australian Navy. Snapper Island has remained unoccupied since 2007.

Today, Snapper Island represents a unique landscape element within the former naval core of Sydney Harbour. The utilitarian buildings, constructed by the Navy League Cadets, retain their original layout and provide a tangible link to the training ethos implemented by Forsythe. The form of the island, with its land modifications, is a rare and interesting element, which inspires public interest and increases its aesthetic values.

Site Features	
1	Flammable Store (Demolished)
2	Guard House
3	Officers Wardroom Mess
4	Storage Room
5	Women's Toilet Room
6	Boatshed, Workshop & Store
7	Men's Toilet & Shower Block
8	Gymnasium
9	J. Payne Memorial Building
10	Main Deck, Museum
11	Mess Deck, Standard
12	Classroom (Demolished)
14	Signal Station (Demolished)
14	Officers Cottage
A	Island Lay out and Landform
B	Views to and from the Island



Legend	
—	Site Features
Heritage Significance:	
■ (Red)	High
■ (Yellow)	Moderate
■ (Green)	Low
⊗	Demolished

Data Source:
Nearmap Imagery September 2020

Significance Mapping			F5.1
Drawing No: 0571293s_HMP_G003_R0.mxd	Snapper Island, Sydney Harbour		
Date: 27/10/2020	Drawing Size: A4	Heritage Management Plan	
Drawn By: GC	Reviewed By: SM	Client: Sydney Harbour Federation Trust	
Coordinate System: GDA 1994 MGA Zone 56		This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	
0 5 10 15m 			
			

6. MANAGEMENT OF HERITAGE SIGNIFICANCE

The information and analysis presented in the preceding chapters of this CMP shows that currently Finance has a responsibility for the heritage values of Snapper Island, as assessed against the Commonwealth Heritage List criteria.

This section presents and discusses the range of potential risks from the interaction of day-to-day and strategic activities and the heritage values of the place. This section also presents policies and guidelines to address the on-going management and care of the heritage values at Snapper Island.

6.1 Objectives

The objective of future site management is to conserve the Commonwealth heritage values of Snapper Island in the context of a range of management requirements and issues.

6.2 Risk Assessment

This section identifies and rates the current and future risks to the heritage values of the Site. The purpose of this risk assessment is to identify policy and guideline requirements for the effective management of the Site's heritage values.

This risk assessment was based on Australian Standard AS/NZS 4360.

The assessment includes consideration of the current ownership and management strategies as well as potential for future uses. The risks are categorised and recommendations provided as to how the risks can be practically addressed. The risk assessment has been undertaken using the likelihood and severity categories presented in *Table 6.1*.

The risk matrix presented below utilises a cross reference of likelihood (probability that the risk will occur) and Consequence (severity of the result of the risk occurring) to determine an overall risk rating. The ratings applied can be modified and downgraded based on the application of mitigation measures. The higher risk rating applied the more extensive management measures required to mitigate adverse impacts to heritage values.

Table 6.1 Risk Assessment Matrix

Risk Assessment Matrix					
Likelihood Rating	Consequence Rating				
	Severe	Major	Moderate	Minor	Negligible
Almost Certain	Very High	Very High	High	Medium	Low
Likely	Very High	High	High	Medium	Low
Possible	High	High	Medium	Medium	Low
Unlikely	High	Medium	Medium	Low	Low
Rare	Medium	Medium	Low	Low	Low

6.2.1 Risk Categories

Given the purpose of this document is to inform decision making about the future of Snapper Island, risk categories relating to Change of Ownership, Future Use and Development, Interpretation and Management Frameworks have not been included. Future statutory management documentation will need to consider these risks in order to fulfil all requirements under the EPBC Act.

The following risk categories have been considered for Snapper Island:

1. Legislative Compliance
2. Consultation
3. Changes to Fabric
4. Maintenance of Heritage Values
5. Public Access

6.2.2 Risk Register and Risk Responses

The assessment of risks is presented in Table 6.2 below. Identified risks have been presented with comments against each of the assessed heritage value categories, and a risk rating applied. The risks have been listed in descending order of risk rating (i.e. starting with the highest risk).

Recommended risk responses have been identified to assist in avoiding or reducing potential threats to the heritage values of the place. These recommendations have informed the heritage management policies and guidelines contained in the following section. The recommendations are provided in *Table 6.2*. These recommended risk responses have informed the heritage conservation policies and guidelines provided in this Section.

These risk responses in conjunction with the policies and guidelines would assist the Commonwealth in providing continued protection of the identified heritage values of Snapper Island.

Table 6.2 Risk Assessment and Risk Response Summary

Risk Category	Risk Description	Unmitigated impact on Heritage values	Likelihood	Consequence	Risk Rating	Mitigation Management	Post Mitigation Rating	Policies and Guidelines
Legislative Compliance	Compliance with the <i>EPBC Act 1999</i> is required whilst in Commonwealth ownership. NSW statutory requirements would only apply if the property is divested out of Commonwealth ownership in the future. Confusion over legislative requirements could lead to non-compliance.	Activities may be undertaken that may result in damage to or loss of heritage values.	Unlikely	Major	Medium	A summary of legislative requirements is included at <i>Section 2</i> of this CMP to assist management authorities to achieve legislative compliance on heritage issues under the EPBC Act 1999.	Low	<i>Section 2</i>
Consultation	Consultation with stakeholders can take time, which can delay activities. Lack of stakeholder consultation when planning changes that may impact heritage values can cause delays.	Activities may be undertaken that may result in damage to or loss of heritage values.	Unlikely	Major	Medium	Where an activity is proposed that may require an EPBC referral, early consultation with DoAWE is advised to ensure all timelines for approvals are factored into work programs.	Low	<i>Section 6</i>

Risk Category	Risk Description	Unmitigated impact on Heritage values	Likelihood	Consequence	Risk Rating	Mitigation Management	Post Mitigation Rating	Policies and Guidelines
Changes to Fabric	Unsympathetic changes to heritage fabric.	Damage to or loss of heritage values.	Possible	Major	High	Ensure any work is planned in consideration of heritage values. Physical works affecting heritage values should be conservation focussed, and significant changes should be avoided.	Low	Guidelines regarding building fabric and contributory elements are provided in <i>Section 6</i> .
Maintenance of Heritage Values	Unsympathetic maintenance of heritage fabric.	Damage to or loss of heritage values.	Possible	Major	High	Ensure all maintenance is low impact and seeks to conserve and retain fabric and setting in-situ.	Low	Maintenance Plan provided at <i>Section 6.5</i>
Public Access	Visitor numbers may result in damage to heritage items and sites, including vandalism and souveniring.	Damage to heritage sites and places, with a consequential loss and damage to the heritage values.	Unlikely	Major	Medium	The interpretation of Snapper Island should act to educate visitors as to the values and significance of the Island.	Low	Interpretation and access guidelines are provided in <i>Section 6</i>
Public Access	Currently, there are a number of safety concerns regarding access to and around buildings. Visitor safety is compromised.	An accident may occur causing injury or loss of life.	Possible	Major	High	The critical repair items and maintenance recommendations in <i>Section 6</i> of this CMP should be implemented to prevent potential safety incidents. No unauthorised access to buildings until a structural investigation has been undertaken.	Low	<i>Section 6.5</i>

6.3 Policies and Guidelines

The following section provides site-specific heritage management policies and guidelines for implementation at Snapper Island. As this document has been prepared to inform decision making around the transference of Snapper Island to the Harbour Trust, the policies have been developed under the assumption that this transfer will occur. Therefore, the policies reflect actions and ongoing management of the place under control of the Harbour Trust, rather than reflecting current ownership and management arrangements.

6.3.1 Approach to Heritage Conservation Management

The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (2013) (the Burra Charter) is widely recognised for its guiding principles on conservation in Australia in terms of the physical fabric. The Burra Charter contains basic conservation principles in a range of articles, which address cultural significance and how to protect it. This CMP advocates an understanding of the Burra Charter principles, which include:

- the place itself is important;
- understand the significance of the place;
- understand the fabric;
- significance should guide decisions;
- do as much as is necessary, but as little as possible;
- keep records; and
- do everything in a logical order.

In the first instance, the CMP should be adopted by the owner. It is important that the personnel responsible for the management and maintenance of the Site are familiar with the requirements of a heritage site. Awareness of the matters to consider and procedures to follow is essential to the successful ongoing conservation management of the heritage place. A succinct heritage training and awareness package should be developed and provided to appropriate personnel and any contractors on an ongoing basis.

Policy 1

The conservation and management of the heritage values of the Site should be carried out in accordance with the principles of the Burra Charter.

Policy 2

This CMP should inform the preparation of a statutory management plan for Snapper Island, under the requirements of the EPBC and SHFT Acts.

6.3.2 Review of the Conservation Management Plan

For this CMP to remain a useful heritage management and conservation tool it needs to be reviewed and updated at regular intervals. The review is to be undertaken by the site manager, with assistance from a heritage specialist as required. The review is to focus on amending responsibilities, include commentary on any works undertaken since the last CMP review; it will also consider any changes or planned changes of use and the interpretation strategy.

Whilst Snapper Island remains a Commonwealth property, in accordance with the EPBC Act, this CMP must be reviewed at least once every five years. The review should assess the content of the

plan and determine its effectiveness in protecting the heritage values of the place, and make recommendations for updating or re-writing the plan as required.

Policy 3

Future statutory management documentation for Snapper Island should be reviewed at regular intervals in accordance with Section 324W of the EPBC Act.

6.3.3 Change in Ownership

Properties that are considered surplus to Commonwealth requirements are disposed of in accordance with the requirements of the Commonwealth Property Disposals Policy, which is administered by the Department of Finance.

Policy 4

If part or all of Snapper Island is to be disposed of in the future, the relevant Commonwealth agency will notify the Minister for the Environment (DAWE) in accordance with Section 341ZE of the EPBC Act that a place listed on the CHL is to be sold.

Policy 5

Should be property be divested out of Commonwealth ownership, the relevant Commonwealth agency will ensure the ongoing protection of identified Commonwealth heritage values post-sale. This may include nomination of the site to the NSW State Heritage Register. The CMP will also be provided to the purchaser.

6.3.4 Future Management

Snapper Island is currently unoccupied and the future use of the Site is currently unknown. Given the uncertainty around the future management and use of Snapper Island, it is recommended that a specific resolution is sought through a consultative approach between Finance, the Harbour Trust and any relevant stakeholders.

Policy 6

A specific resolution concerning the future or adaptive reuse of the Site should be sought through a consultative process between the Harbour Trust and relevant stakeholders.

Once a resolution for the future use and management of the Site has been agreed, it is important that the personnel responsible for Site management and maintenance are familiar with the requirements of a heritage site. Information contained in this CMP can be utilised for training materials that can be included in safety inductions for groups undertaking any activities on Snapper Island and briefings to maintenance contractors.

Policy 7

Heritage conservation awareness training should be developed and implemented for personnel responsible for the management and maintenance of the Site.

6.3.4.1 Future Use and Adaptive reuse

It is understood that there are considerable contaminants on the island (through the nature of the development of Snapper Island and via deteriorating building fabric) for which remediation recommendations have previously been posed. In addition, the impact of the marine environment and general lack of conservation, critical repairs, and general maintenance on the Island over the last decade has resulted in the significant deterioration of some of the buildings on the island. As such, prior to any considered future use, the island should be subject to remediation and no buildings on the island should be made accessible until a structural investigation has been undertaken. In addition, prior to any considered future or adaptive reuse of the Island or buildings, critical repairs should be addressed for general public safety (refer to *Section 6.5*).

Policy 8

A structural investigation of all buildings should be undertaken prior to public access to buildings. Critical repairs and conservation of fabric are also required prior to re-opening the Site to the public (refer to Repairs Schedule at Table 5.5)

Policy 9

Future uses should be determined in accordance with the recommendations of the Comprehensive Plan (Harbour Trust 2003) and any future statutory management plans.

6.3.4.2 Future Development

Future development opportunities at Snapper Island will arise out of a consultative process between the Harbour Trust and any other relevant stakeholders.

All future development proposals should seek to retain and enhance existing heritage values as part of the Site planning process. The retention of an appropriate visual setting and physical environment is an essential element of heritage conservation. The island retains the physical siting and general layout from when it was established, and contributes to the landscape values of Sydney Harbour. The Site has a visual relationship with the surrounding islands in the harbour (Spectacle and Cockatoo Islands) along with the coastal locations of Drummoyne and Balmain (refer to *Figure 6.1*). These views to and from the island should be retained.



Figure 6.1 Significant views to and from Snapper Island

Policy 10

Future development proposals should consider the retention of significant view lines to and from the Island.

Design in a historic context aims to preserve the special qualities that give a place character in a way that respects the old while reflecting the new, and meeting the amenity needs of its users. A wide range of design solutions may emerge for any design problem after careful analysis of surrounding buildings and sympathetic interpretation of their design elements.

Conservation opportunities exist for all buildings on the island however specifically those that have high Commonwealth Heritage values including Building 10 (Main Deck) and Building 2 (Guard House). Original fabric and internal layouts should be conserved and new uses found for these buildings. Opportunity exists for reconstruction and adaptation for buildings of moderate and low significance, such a reconstruction of Building 6 (Boatshed, Workshop and Store) or adaptation of Building 8 (Gymnasium) for an alternative purpose. Future alterations may consider reconstruction of the walkway between Building 10 (Main Deck) and Building 9 (J. Payne Memorial Building) to provide safe and equitable access. Additional considerations may include the installation of a ramp or lift to provide equitable access to the upper deck of the island. For elements of low significance, additional modification and alteration, including replacement of materials and features, would be permissible to allow new uses. Further discussion of adaptation and amendment is included in *Section 6.3.6.2*.

The layout of the island is integral to its significance and should be retained in order to maintain the integrity of the island through its intra-site patterning. As such, new development should be limited to and be sympathetic in scale to existing footprints where buildings have been removed or demolished, such as the former Building 12 (Signal Station), Building 11 (Mess Deck), Building 7 (Ablutions Block)

and Building 1 (Flammable Store). Specific areas where development should be avoided include the Forecastle Deck and After End.

The nature of any proposed new development should be assessed in terms of bulk, massing, form, scale and materials, with a view to minimising impacts on the heritage values. Any new development, including additions to existing structures must be deferential to the building and contemporary in design.

Figure 6.2 shows areas for development opportunity and buildings where opportunities exist for conservation and restoration.

Policy 11

To retain the intra-site patterning on Snapper Island, new development should be limited to the footprints of removed or demolished buildings (Building Nos 12 Signal Station, 11 Mess Deck, 7 Ablution Block and 1 Flammable Store).

Policy 12

New development should be avoided in the open areas of the Forecastle Deck and After End.

Policy 13

Any new development or additions to existing structures should be deferential to the existing buildings and contemporary in design. New buildings/ structures should consider the footprint, bulk, scale and materials of the adjacent buildings on the island.

Policy 14

Consideration should be given to the interpretation within the footprint of former buildings, including through signage, design of plantings, and establishment of new buildings in similar bulk and design at these locations.

Site Features	
1	Flammable Store (Demolished)
2	Guard House
3	Officers Wardroom Mess
4	Storage Room
5	Women's Toilet Room
6	Boatshed, Workshop & Store
7	Men's Toilet & Shower Block
8	Gymnasium
9	J. Payne Memorial Building
10	Main Deck, Museum
11	Mess Deck, Standard Classroom (Demolished)
12	Signal Station (Demolished)
14	Officers Cottage



Legend	
—	Site Features
Opportunities for Development:	
	New Development Opportunities
	Conservation Opportunity (Elements of High Significance)
	Conservation, Reconstruction and Adaptation Opportunities (Elements of Moderate Significance)
	Conservation, Reconstruction and Adaptation Opportunities (Elements of Low Significance)

Data Source:
Nearmap Imagery September 2020

Opportunities for Development		F6.2
Drawing No: 0571293s_HMP_G004_R0.mxd	Snapper Island, Sydney Harbour	
Date: 27/10/2020	Drawing Size: A4	Heritage Management Plan
Drawn By: GC	Reviewed By: SM	Client: Sydney Harbour Federation Trust
Coordinate System: GDA 1994 MGA Zone 56		<p>This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.</p>



6.3.4.3 Access and Safety

There are currently safety issues concerning access to and around some of the buildings on the Island. Access issues have been created by walkways and stairs being in disrepair, overgrown vegetation, and accumulation of items and material around the island creating hazards.

A general 'clean-up' of the Island was recommended to remove disused and deteriorating timbers, scrap metals and other types of rubbish. Initial works were undertaken by ERM and Australia's Insurance Builders (AIB), under instruction from Finance, in March 2019. These works were able to control some of the overgrown vegetation, remove a significant volume of rubbish and scrap materials from the island, significantly improving access in a number of areas. Access restrictions still apply in some areas where walkways are in disrepair or buildings are too deteriorated to access. Appropriate signage is displayed on buildings that cannot be entered.

Silver gull and pigeon infestation is also creating health and safety issues and access constraints to some buildings and parts of the island. During preparation of the 2019 HMP, Finance commissioned Kleinfelder (2019) to prepare a report on management of the Silver Gulls. The Kleinfelder report concluded the following:

- The study area has limited biodiversity values due to the following factors:
 - The study area is relatively small and has low connectivity with the surrounding environment;
 - The vegetation is dominated by exotic species, some of which are Weeds of National Significance (WoNS) and/or Priority weeds;
 - The vegetation is not commensurate with any native PCTs;
 - The study area contains no important habitat features for threatened species listed under the BC Act or the EPBC Act;
 - The study area has minimal potential for habitat rehabilitation;
 - The study area is being fouled by the Silver Gull colony; and
 - The Silver Gull colony is impacting on the heritage and the biodiversity of the study area.
- The management of Snapper Island is non-compliant with the intent of the EPBC Act and the requirements for managing and protecting heritage values. In order to improve compliance it is highly recommended that a Management Strategy be implemented to eradicate or significantly reduce the numbers of Silver Gulls, as well as the WoNS/Priority weeds and weed species. It is understood that there is a plan in place for BRSP, on behalf of Finance, to commission these works at the end of Silver Gull nesting season.

In April 2020, Ecosure was engaged by the Harbour Trust to prepare a Seagull Management Plan (SMP) for Sub Base Platypus, Cockatoo Island, and Snapper Island. The SMP noted a superabundance of Silver Gulls nesting at all three locations, with a count of approximately 945 birds on Snapper Island alone. The SMP recommended several management measures to help reduce the Silver Gull population, including:

- Habitat management;
- Building and exclusion deterrents;
- Waste management;
- Dispersal;
- Egg oiling;
- Egg destruction;
- Trapping;

- Culling; and
- Nest removal.

Some of these actions can be undertaken without a permit, while others will require permits to complete. Actions relating to population management were assessed by Ecosure based on their impact on the welfare of the birds, public perception of the actions, and impact to the surrounding community.

In mid-2020, Finance engaged Alison Hunt & Associates Pty Ltd (AH & Associates) to commence seagull management actions at Snapper Island, in line with the recommendations of the Ecosure (2020) report. At the time of preparation of this report, AH & Associates are undertaking a program of egg oiling, to deter further breeding, and ongoing Silver Gull survey, to keep a record of the numbers of birds at the site. Additionally, AH & Associates are working with Australia's Insurance Builders (AIB) to devise and implement a scope of works to provide building and exclusion deterrents, including bird netting, sealing of structures, and management of vegetation.

Policy 14

The management of bird infestation, including general population control measures as recommended by Ecosure (2020) should be determined in consultation with an appropriately qualified Ecologist.

Access to the upper level of Building 9 (J Payne Memorial Building) is currently via a ladder owing to the removal of the internal stairs, removed by Finance after vacation of Snapper Island by the Sydney Training Depot Snapper Island Ltd. Access to the upper level of the island is currently via a set of stone stairs. No disability access is afforded to these areas. Disability access could be considered through the installation of a lift or ramp; however, location would need to consider impacts to the significance of the fabric of the building/ element and overall significance of the Island.

Any works or the adaptive reuse of the Island must consider current equitable access obligations under the Disability Discrimination Act 1992.

Policy 15

Any works and the adaptive reuse of Snapper Island should consider equitable access obligations under the Disability Discrimination Act 1992.

6.3.5 Interpretation

There is currently no interpretation of the heritage values of Snapper Island.

The purpose of interpretation of heritage places is to reveal and explain their significance and to enable that significance to be understood by the people that manage the place and the public that access it. A heritage interpretation strategy can be developed where there is a public access and/or interest in the place.

Potential interpretation opportunities exist in providing more easily accessible information about the island (e.g. an online presence/website) and perhaps allocating set "open days" or visiting hours where guided tours or information talks could be provided. Discrete interpretive panels or posters with historical photographs for reference could also be placed around the Island/ buildings to enhance interpretation not just for external visitors but also for the future users of the island.

Any interpretive strategies should be developed in consultation with Commonwealth personnel and guided by the following best practice documents:

- Heritage Interpretation Policy, Heritage Information Series, Heritage Council of NSW 2005a;
- Interpreting Heritage Places and Items: Guidelines, Heritage Information Series, Heritage Council of NSW 2005b;
- Interpreting Our Heritage, Freeman Tilden 1975;
- The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance Australia ICOMOS 2013; and
- Australian Historic Themes Framework, Australian Heritage Commission 2001.

Policy 16

Consider opportunities to improve the heritage interpretation at Snapper Island through the development of an interpretation strategy and methods that include online information, open days and discrete interpretative panels around the island.

6.3.6 Management of Contributory Elements

6.3.6.1 Site Management Framework

Snapper Island is currently part of Finance's non-Defence Property Portfolio. Overall responsibility of the Site's management and maintenance therefore currently resides with BRSP on behalf of Finance.

Currently, there is no evidence of ad-hoc or cyclical maintenance and upkeep of the Site.

In the event of transfer, the Harbour Trust would become responsible for the ongoing maintenance and management of Snapper Island.

6.3.6.2 Detailed Management Guidelines for Contributory Elements

Tolerance for Change

Managing places of heritage significance involves understanding which attributes of an element or a site contribute to its significance, and then assessing each of the attributes' 'tolerance for change'. For buildings and structures (or groups of buildings and structures), their form, fabric, function and/or location are usually the key attributes that embody their significance. To assist future planning and management of the site, specific attributes of the built and landscape components have been analysed and their 'tolerance for change' assessed.

While 'tolerance for change' levels can be a useful guide to conservation and development works and take into account official heritage values, the Commonwealth (or National) Heritage values as identified in the CHL or NHL listing are to take precedence in planning change.

The analysis of contributory heritage elements described in this report assists with managing any proposed change to Snapper Island's heritage values. Contributory elements have been assessed against their grades of significance for sensitivity or 'tolerance for change' to identify the extent to which their heritage values are able to tolerate alteration without adversely affecting the nature or degree of their significance to the whole-of-site values.

The rankings for tolerance for change are presented in below in *Table 6.3* and are derived from Burke (2012).

Table 6.3 Tolerance for Change Definitions

Degree	Policy/Management Action
No tolerance for change – highly sensitive	The key attributes (form, fabric, function, location, intangible values) strongly contribute to the heritage significance of the element and/or its contribution to the significance of the site. The element retains a high degree of integrity and authenticity with only very minor alterations that respect or enhance its significance. The key attributes of the element or the site should be retained and conserved. Any change may result in adverse impact on the assessed significance of the element or site.
Low tolerance for change	The key attributes (form, fabric, function, location, intangible values) contribute to the heritage significance of the element and/or its contribution to the site. The element retains a moderate degree of integrity and authenticity with only minor alterations that respect its significance.
Moderate tolerance for change	The key attributes (form, fabric, function, location, intangible values) partly contribute to the heritage significance of the element and/or its contribution to the significance of the site; it may have undergone some alteration/change which does not detract from its authenticity and significance. The key attributes of the element should be generally retained and conserved. Moderate change to specific attributes is possible provided there are only minimal adverse impacts and the assessed significance of the element or the site overall is retained.
High tolerance for change – nil/low sensitivity	The key attributes (form, fabric, function, location, intangible values) of the element have relatively little individual heritage significance, but may contribute to the overall significance of the site. A greater level of change is possible to specific attributes of this element, avoiding adverse impacts and retaining the significance of the site overall.

Policy 17

Elements and fabric of high significance at Snapper Island should be retained, conserved and protected where practicable and subject to consideration of building condition, with minimal intervention. Tolerance for change is low.

Policy 18

Elements of moderate significance should be retained where possible and alterations should be sympathetic to the heritage values of the building/ element and subject to consideration of building condition. Tolerance for change is moderate.

Policy 19

Elements and fabric of low significance can be modified or removed, once all necessary EPBC Act approvals have been granted. Tolerance for change is high.

Policy 20

Any works that may impact on the significant fabric of Snapper Island should only be undertaken once the necessary EPBC Act approvals have been granted.

Table 6.4 below provides opportunities for conservation and development, highlighting the condition, heritage significance and tolerance for change ranking of contributory items at Snapper Island. The table provides detailed management guidance for each building, based on the assessed significance and tolerance for change of each element. Tolerance for change rankings for elements is shown in *Figure 6.3*.

Table 6.4 Detailed Management Guidance for Significant Elements on Snapper Island

Description	Location	Condition	History/ Date of construction	Significance Ranking	Tolerance for Change	Recommendations	Photo
Site layout and landform	Whole Island	Fair	Early 1930s – the formation of the island into a ship with the seawalls constructed to form a bow and stern. Buildings constructed and layout determined.	High	Low	The planning and layout of the island should be conserved where possible. If buildings are to be removed or demolished, the positioning of buildings and features should be recorded and interpreted. Refer to Policies 17 and 20	 <p>Near Map 2020</p>
Sea walls	Around the Forecastle Deck and After Deck of the Island	Poor	1931 – during the formation of the island into a ship by unskilled labour.	Moderate	Moderate	Sea walls require a level of engineering to ensure longevity. Recommend consultation with maritime engineer and heritage architect to devise suitable repair or replacement approach to deteriorating sea walls. The sea walls are significantly linked with the general layout of the island and assist in the 'reading' of the ship aesthetic. Works should be sympathetic to this element and associated value.	 <p>ERM 2020</p>
Forecastle Deck	Northern portion of island	Fair	1931 – during the formation of the island into a ship by unskilled labour	High	Low	No structures should be installed on the Forecastle Deck. Consideration should be given to remediating the soils/fill material. Consideration should be given to removal of vegetation to deter Silver Gull	

Description	Location	Condition	History/ Date of construction	Significance Ranking	Tolerance for Change	Recommendations	Photo
						nesting, and replacement with gravel or similar substrate.	ERM 2020
After End	Southern portion of island	Fair	1931 – during the formation of the island into a ship by unskilled labour	High	Low	No structures should be installed on the After End. Consideration should be given to remediating the soils/fill material. Consideration should be given to removal of vegetation to deter Silver Gull nesting, and replacement with gravel or similar substrate. BBQ areas should be retained, as evidence of reuse (former gun emplacements).	 ERM 2020
Significant Views	Refer to <i>Figure 6.1</i>	Very Good	N/A	Low	N/A	Future development should include the retention of significant view lines to and from Snapper Island – refer to <i>Figure 6.1</i> .	 ERM 2018
Cabbage Trees (x 2)	Lower Deck, to the north-east of the Guardhouse	Fair	1930s	Moderate	Moderate	An arborists report should be commissioned to ascertain the health of the trees and determine options for retention or removal (as appropriate) Efforts should be made to retain the Cabbage Tree Palms, subject to health, and annual inspections should be undertaken. The palms are to be protected during any works undertaken on the island and should not be removed to allow future development.	 ERM 2018

Description	Location	Condition	History/ Date of construction	Significance Ranking	Tolerance for Change	Recommendations	Photo
Movable heritage	N/A	Poor/ Fair	Some elements date to establishment of the island as a military training facility - 1930s – such as the lockers within the guardhouse.	Low	High	Separate movable heritage catalogue should be developed - survey recommended outside silver gull roosting season. Military uniforms contained in #9 J Payne Building for example. Objects presently on the island are generally of low significance and should only be retained if they are of use in interpretation.	 <p>ERM 2018</p>
Building 2 - Guard House	Entrance to Island – Refer to <i>Figure 6.2</i>	Fair – some rust and corrosion evident	Constructed 1932 - one of the first buildings on Site – resituated in its current position in 1950s	High	Low	Retain and conserve exterior fabric. Minimal intervention and tolerance for change. Any protective finishes should be suitable for the fabric and reflective of the present treatment. If no suitable finishes can be obtained, no new finishes should be applied. Maintain in accordance with maintenance schedule <i>Section 6.5.3</i> .	 <p>ERM 2020</p>
Building 3 - Officer's Wardroom Mess	South-west corner of Island – Refer to <i>Figure 6.2</i>	Fair	Constructed 1942 as part of the island's expansion during WWII.	Moderate	Moderate	Retain and conserve fabric where possible. Fabric may be removed to reconstruct earlier configurations. Restoration/ reconstruction preferred. Maintain in accordance with the maintenance schedule <i>Section 6.5.3</i> .	 <p>ERM 2020</p>

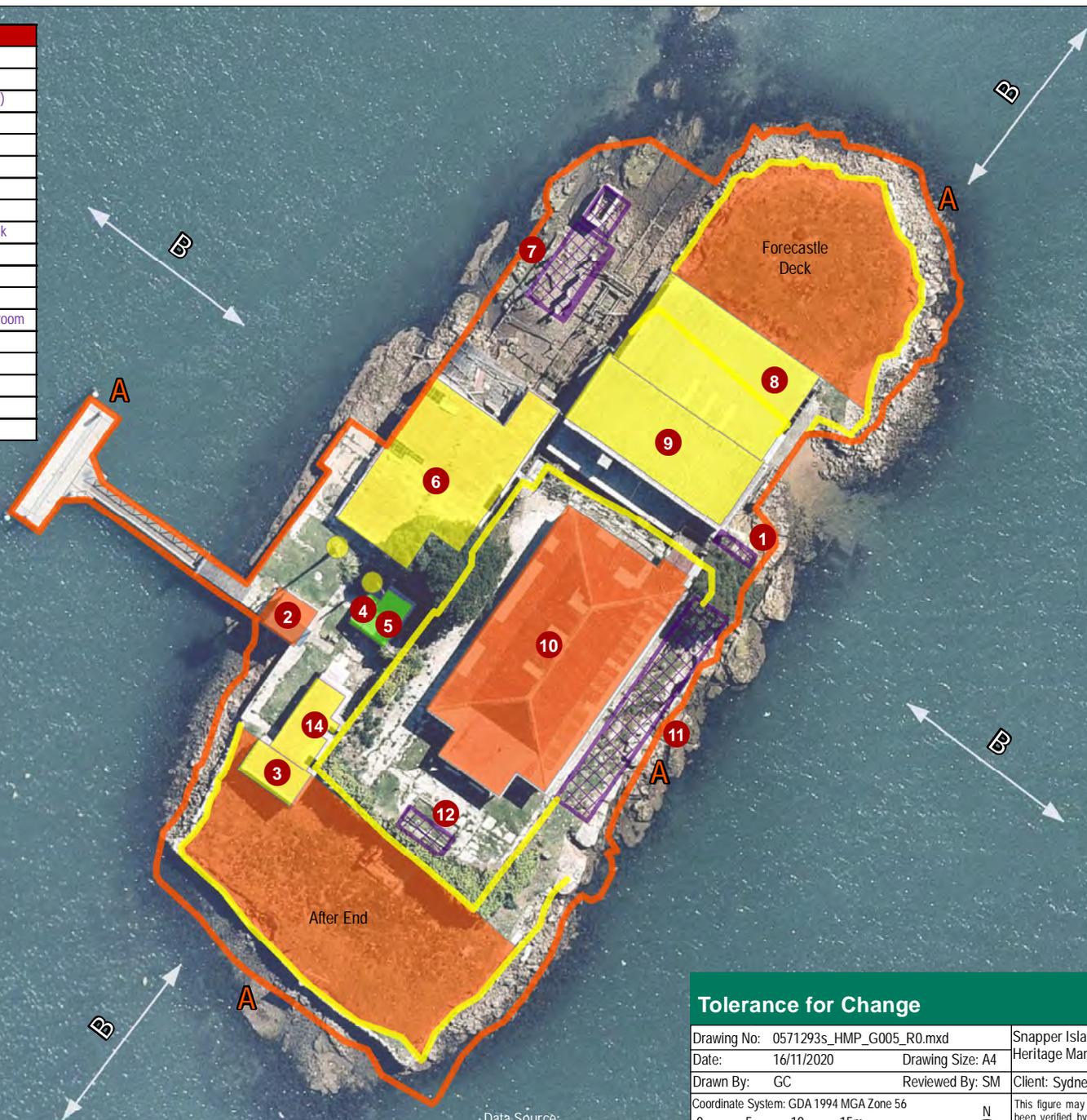
Description	Location	Condition	History/ Date of construction	Significance Ranking	Tolerance for Change	Recommendations	Photo
Building 4 - Generator Room	Behind Guard House – Refer to <i>Figure 6.2</i>	Poor	c.1940-46 (does not appear in earlier historical imagery)	Low	High	Preserve and maintain fabric in accordance with the maintenance schedule <i>Section 6.5.3</i> . Fabric may be removed to reconstruct earlier configurations, or added to stabilise and secure the structure. Sympathetic alterations and additions appropriate.	 ERM 2020
Building 5 - Women's Toilet	Adjacent to Building 4 Generator Room. Refer to <i>Figure 6.2</i>	Fair	1932 – one of the first buildings constructed – fittings are later additions	Low	High	Preserve and maintain fabric in accordance with the maintenance schedule <i>Section 6.5.3</i> . Fabric may be removed to reconstruct earlier configurations, or added to stabilise and secure the structure.. Sympathetic alterations and additions appropriate.	 ERM 2018
Building 6 - Boatshed and Workshop	Port side of the island. Refer to <i>Figure 6.2</i>	Very Poor – considerable deterioration of all fabric.	c.1931 – one of the first buildings constructed on the island	Moderate	Moderate	Removal and replacement of fabric as necessary and to provide structural stability. Replacement of finishes should only be undertaken where suitable products are available. Restoration or reconstruction is recommended. Demolition should only be approved where no other feasible alternatives remain. Undertake all critical repairs and maintenance in accordance with <i>Section 6.5.3</i> .	 ERM 2020

Description	Location	Condition	History/ Date of construction	Significance Ranking	Tolerance for Change	Recommendations	Photo
Building 8 - Gymnasium	North side of island. Refer to <i>Figure 6.2</i> .	Fair/ Poor	c.1940 -1946 – constructed to accommodate increase use (defence forces and cadets) during WWII. The only steel framed building on the island.	Moderate	Moderate	Decontaminate (including asbestos removal), stabilise and maintain current configuration. Preserve and maintain fabric. Conserve painted signage on exterior “Sydney Training Depot”. Reversible fittings/ fit-outs are appropriate. Sympathetic alterations. Maintain fabric in accordance with the maintenance schedule at <i>Section 6.5.3</i> .	 <p>ERM 2020</p>
Building 9 - J. Payne Memorial Building	South of Building 8 Gymnasium. Refer to <i>Figure 6.2</i>	Fair	1938 – constructed by the cadets. In 1944, the upper level was re-fitted as a recreation deck.	Moderate	Moderate	Decontaminate (including asbestos removal), stabilise and maintain current configuration. Retain and conserve fabric. New sympathetic use is appropriate. Reversible fittings and fit-out appropriate. Replacement of finishes should only be undertaken where suitable products are available.. The doors in the upper level from HMAS Sydney should be conserved and maintained. The internal and external stairs should be reinstated to provide safe access. Maintain fabric in accordance with <i>Section 6.5.3</i> .	 <p>ERM 2018</p>

Description	Location	Condition	History/ Date of construction	Significance Ranking	Tolerance for Change	Recommendations	Photo
Building - 10 Main Deck	Centre of island. Refer to <i>Figure 6.2</i>	Fair	1928-1932 – one of the first buildings to be constructed at Snapper Island. The Main Deck originally constructed at Drummoyne Depot and reconstructed on Snapper.	High	Low	Decontaminate (including asbestos removal), stabilise and maintain current configuration. Full roof replacement required to seal the building and prevent egress of water. Retain and conserve fabric. Exterior finishes should only be replaced if suitable options are available, including consideration of current treatment. Internally, reversible fittings and fit-out is appropriate to accommodate sympathetic new uses. The doors from <i>HMAS Sydney</i> should be conserved and maintained. Maintain fabric in accordance with <i>Section 6.5.3</i> .	 <p>ERM 2018</p>
Building 14 - Officer's Cottage	South west end of island. Refer to <i>Figure 6.2</i>	Poor	1932 – one of the first buildings to be constructed at Snapper Island.	Moderate	Moderate	Retain and conserve fabric where possible. Restoration of internal cladding and finishes will be required to allow new uses. No new finishes to be applied to the exterior, unless suitable products can be obtained, and these reflect current treatment. Internally, reversible fittings and fit-outs are appropriate. Maintain fabric in accordance with <i>Section 6.3.6</i> .	 <p>ERM 2020</p>

Description	Location	Condition	History/ Date of construction	Significance Ranking	Tolerance for Change	Recommendations	Photo
							
							ERM 2020

Site Features
After End
Forecastle Deck
Building 1 - Flammable Store (Demolished)
Building 2 - Guard House
Building 3 - Officer's Wardroom Mess
Building 4 - Generator Room
Building 5 - Women's Toilet
Building 6 - Boatshed and Workshop
Building 7 - Men's Toilet and Shower Block
Building 8 - Gymnasium
Building 9 - J. Payne Memorial Building
Building 10 - Main Deck
Building 11 - Mess Deck, Standard Classroom
Building 12 - Signal Station (Demolished)
Building 14 - Officer's Cottage
Cabbage Trees (x2)
A - Island Layout and Landform
B - Views to and from the Island



Legend
Tolerance:
 Low
 Moderate
 High
 Demolished

Data Source:
Nearmap Imagery September 2020

Tolerance for Change	
Drawing No: 0571293s_HMP_G005_R0.mxd	Snapper Island, Sydney Harbour
Date: 16/11/2020	Heritage Management Plan
Drawn By: GC	Reviewed By: SM
Client: Sydney Harbour Federation Trust	
Coordinate System: GDA 1994 MGA Zone 56	
0 5 10 15m	
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	

F6.3

6.3.6.3 Managing Significant Fabric

Site elements identified as significant may be highly intact, rare, or play a major part in contributing to the historical significance of a building or Snapper Island as a whole. Original and early fabric, both internally and externally, is of significance and should be retained and conserved.

Different parts of each building may have different levels of significance based on their age, condition and integrity. Most structures on Snapper Island are constructed of timber (timber framed buildings with timber framed windows and doors) and corrugated galvanised iron (CGI) – walls and roofs. Other important fabric includes stone (sea walls and stairs to the upper level) and steel/ metals (eaves and the pre-fabricated framing of Building 9 [J Payne Building]). Some general guidance for the conservation and maintenance of this fabric is provided below. Detailed management recommendations for each building and element is provided in *Table 6.3*.

Significant Fabric – General Approach

Timber

All buildings on Snapper Island contain some timber elements, for example, a building frame, window and door architraves, or a roof truss. Regular and consistent maintenance is pivotal to the care of historic timbers to prevent moisture penetration. This is best prevented through regular painting with an appropriate finish. Repairs should be undertaken by a carpenter and where timbers require replacement, always use the conservation approach of “like for like” and consider splicing to retain as much original fabric as possible.

The NSW Heritage Office has a series of maintenance publications that includes timber repairs and wood preservation:

- <https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/maintenance52timber.pdf>
- <https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/maintenance51woodpreservation.pdf>

Best practice publications for the conservation of historic timbers can also be found on the ICOMOS website:

- http://openarchive.icomos.org/1656/1/Conservation_of_Historic_Timber_Structures-2.pdf

Corrugated Iron and Steel/ Metals

Many of the buildings on Snapper Island have CGI wall sheets and/ or roofs, and/or metal eaves, gutters and downpipes or framing. Where repair or replacement is required, repair materials should match the existing. When CGI lap sheets have rusted around their fixings, it is recommended a slip sheet is inserted to extend the life of the roof or wall. Patching small holes by lead soldering a patch of iron over the hole will also extend the life of a sheet.

The NSW Heritage Office has a series of maintenance publications that include the care of corrugated iron and steel and metal work:

- <https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/maintenance41corrugated.pdf>
- <https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/maintenance31metalwork.pdf>

6.4 Maintenance of Heritage Significance

6.5 Maintenance Protocols

This section provides maintenance protocols to guide regular inspections, Catch up Maintenance Schedule, Cyclical Preventative Maintenance Inspection Schedule and Planned Maintenance Works that ensures heritage values are conserved.

The Site has not been subject to regular, effective maintenance, which has contributed to its poor condition overall.

6.5.1 Reasons for Maintenance

The desirable standard of maintenance depends on the intensity of use and climatic conditions. A policy of preventative maintenance work is less expensive in every way. Neglecting maintenance leads to decay and may lead to costly repair or the building replacement cycle being the only viable option.

A clear understanding of the building materials, construction type and historical development, and as a result the likely problems that may be encountered, assists with the anticipation and appropriate maintenance and repair. Maintenance is defined by the Burra Charter as the continuous protective care of the fabric, contents and setting of a place. Preventative Maintenance is carried out to prevent an item failing or wearing out by providing systematic inspection, detection and prevention of damage or failure, and is usually programmed. If carried out properly, preventative maintenance will reduce the probability of decay. This contrasts with corrective maintenance, whereby damaged or deteriorating material is replaced or repaired. Preventative maintenance can not only reduce, or even avoid, the need for repairs later; it will prevent the loss of original fabric and is cost-effective. Corrective maintenance is disruptive and costly in both significant fabric and financial terms.

Regular inspections and preventative maintenance thus form the basis of the most cost effective approach to the conservation of buildings and items of heritage significance. While some heritage buildings and items have materials that may require specialised care, the majority of preventative maintenance is standard housekeeping that can be undertaken as part of programmed maintenance activities for all assets.

Regular inspection and preventative maintenance activities can contribute to extending the life of an asset and reduce the whole of life costs associated with using the building. The need for major conservation work is most commonly the result of insufficient inspection and maintenance. The cost benefits of developing and implementing an inspection and preventative maintenance regime is outlined in graph below (*Figure 6.4*).

Continuation of existing uses and seeking new or adaptive re-use of heritage items also plays a key role in conserving heritage values by ensuring maintenance issues are identified early and supporting justification for funding works for ongoing care.

Preventive maintenance costs markedly less than repairing extensive damage or building failures

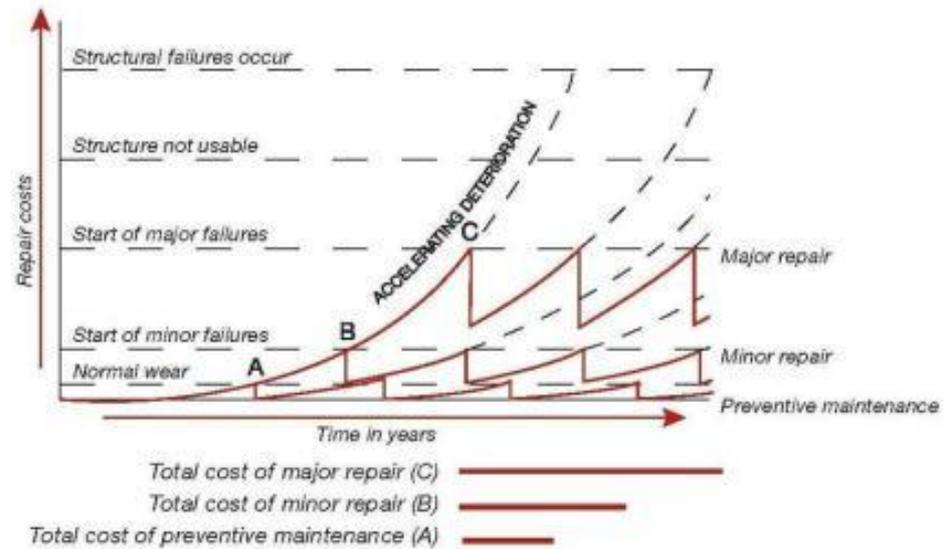


Diagram from *Preventive Maintenance of Buildings*, Van Nostrand Reinhold, New York, 1991.

Figure 6.4 Preventative Maintenance Costs Diagram

Source: NSW Heritage Office 2004: 3)

6.5.2 Regular Inspection

Regular annual inspections of Snapper Island should be undertaken by the land owner/manager. These inspections are important as part of the ongoing care of the heritage values and fabric of the buildings and the associated elements on the island. Additional guidance for these inspections is provided below.

Maintenance and examination of the Site should ideally be tackled by routines of six monthly, annual and five yearly inspections, followed by brief reports. The inspections should be undertaken by the Property Manager and a heritage practitioner with knowledge of historic buildings and conservation of building materials and methods. These should be integrated into annual inspections.

Examination of the fabric of the buildings and their surrounds should be conducted systematically by circulating around each building externally and internally in a clockwise direction. Examiners should use their senses to observe and note each building and surrounding environment condition and defects.

The checklist provided below in *Section 6.5.3.2* is an indication of what needs to be considered for Snapper Island to ensure issues that may have an impact on heritage values are mitigated. This checklist should also be integrated into the owner's inspection checklist.

6.5.3 Maintenance Plans

This section presents prioritised implementation plans comprising specific work tasks to manage the heritage values of the Site and individually significant features. These works should be integrated into the Finance and PSP maintenance plans, minor capital expenditure programs or capital expenditure programs.

The maintenance plans are prioritised according to the risk framework and divided into the following topics:

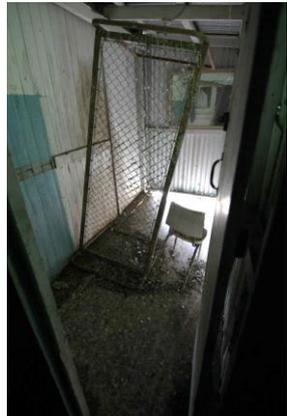
- Catch Up Maintenance;
- Cyclical Preventative Maintenance Schedule; and
- Planned Works.

6.5.3.1 Catch Up Maintenance

The following section summarises faults observed during the December 2018 survey, with minor amendments based on additional visits in 2019 and 2020, general housekeeping and maintenance issues and provides advice on how these issues should be rectified. These items are summarised in *Table 6.3*.

Table 6.5 Catch Up Maintenance and Repairs

Location	Priority	Fault	Recommendation	Photograph
Building 2 – Guard House				
All internal spaces	Low Complete within 2 years.	Cleanliness of the spaces to be improved.	Deep clean to be undertaken in all internal spaces to remove accumulated dust and grime to establish base maintenance level. Removal of refuse and broken furniture.	 ERM 2020
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	
Buildings 4 and 5 – Generator Room and Women's Toilet				
Generator Room and Women's toilet.	Medium Complete within 12 months.	Asbestos material to be removed.	Isolation and removal of asbestos material within structure, prior to cleaning and maintenance inspection.	 ERM 2020
	High	Sealing of structures	Internal spaces to be sealed (with bird mesh or similar) to prevent egress by Silver Gulls and reduce available nesting space.	 ERM 2020
Building 6 – Boatshed and Workshop				

Location	Priority	Fault	Recommendation	Photograph
Boatshed Timbers	High Complete within 6 months.	Timbers failing due to marine weathering and wave action.	Additional engineering assessment of structure to guide repair and replacement should be undertaken and recommendations should be implemented. The structure is integral to the significance of the island and should be retained.	 ERM 2020
Building 8 - Gymnasium				
Gymnasium	Medium Complete within 12 months.	Foundation, floor and interior spaces in poor condition.	Engineering assessment of sub floor to guide repair and replacement. Repair and replacement within the gymnasium to be undertaken to allow for use of the space. Removal of miscellaneous refuse and debris.	 ERM 2020
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	
Building 9 – J. Payne Memorial Building				
Former Sick Bay	High Complete within 6 months.	Damage to floor.	Engineering assessment of sub floor to guide repair and replacement. Floor to be repaired and reinstated. This process will limit access of animals and water/contaminants into the space.	 ERM 2018
Stairs	Medium Complete within 12 months.	Stairs missing.	Stairs to be reinstated, to allow easy access to the upper level. Include assessment of the viability of the structure.	 ERM 2018
All internal spaces	Low Complete within 2 years.	Cleanliness of the spaces to be improved.	Deep clean to be undertaken in all internal spaces to remove accumulated dust and grime to establish base	

Location	Priority	Fault	Recommendation	Photograph
			maintenance level. Removal of refuse and broken furniture.	
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	
ERM 2018				
Building 10 – Main Deck				
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	
				ERM 2018
External Doors	High Complete within 6 months.	External doors not all closed/secured	Repairs should be made to external doors to ensure birds and other animals cannot access the internal spaces and increase security.	
				ERM 2018
North-west corner room	Medium Complete within 12 months.	Water damage to plaster panelling.	Investigate source of water damage and repair, conduct inspection for additional damage in surrounding panels. Replace damaged panel with like material.	
				ERM 2018
All internal spaces	Medium Complete within 12 months.	Cleanliness of the spaces is low, animal activity has had detrimental impact throughout.	Deep clean to be undertaken in all internal spaces to remove accumulated dust, grime and animal droppings. Additional inspection to be undertaken to establish maintenance base level and determine if any additional urgent repairs	

Location	Priority	Fault	Recommendation	Photograph
			required. Removal of refuse and broken furniture.	ERM 2018
North end, central room	Low Complete within 2 years.	Damaged wall panelling.	Remove tape, repair damaged panelling and repaint along with cyclical maintenance schedule.	 ERM 2018

Building 14 – Officer’s Cottage

Throughout Officer’s Cottage	Moderate Complete within 2 years.	Water damage to be repaired	Internal finishes, such as flooring and timber cladding, should be repaired to previous standard.	 ERM 2020
	Low Complete within 2 years.	Cleaning and removal of refuse.	Deep clean and additional inspection to be undertaken to establish maintenance base level Removal of refuse and furniture.	
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	
All internal spaces	High	Internal water damaged to be repaired.	Repair/replace water damaged panelling/flooring with like-for-like materials.	No image available.

Exterior spaces

Upper deck and lower deck	High Complete within 6 months.	Vegetation overgrown and unmanaged.	General vegetation management/removal to be undertaken. Slashing, weeding and preventative spraying.	 ERM 2018
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Location	Priority	Fault	Recommendation	Photograph
Walkways and gantries	High Complete within 6 months.	Timber walkways badly degraded and unsafe for use.	Timber walkways to be repaired/replaced. Degraded and broken timbers to be removed from the island and disposed of appropriately.	 ERM 2018
Upper deck and lower deck	MHigh Complete within 6 months.	General refuse dumping	Refuse, miscellaneous items and unusable building materials to be removed and disposed of appropriately.	 ERM 2018

6.5.3.2 Cyclical Preventative Maintenance Schedule

The following checklist is an indication of what needs to be considered for the Site to ensure issues that may have an impact on heritage values are mitigated. The following should also be integrated into the owner's inspection checklist.

Six month cyclical maintenance plan

- check plant growth over island and prune/mow where necessary;
- monitor animal/vermin activity and place additional traps/baits where necessary;
- inspect termite activity and treat where necessary;
- check external windows and doors for damage and repair as necessary;
- check for graffiti/other signs that the island has been illegally accessed;
- check rainwater goods to ensure they are free of leaves and other debris; and
- conduct basic cleaning to ensure condition does not continue to deteriorate.

Annual cyclical maintenance plan

- Check the condition of stairs, seawalls and retaining walls;
- check the condition of plantings and vegetation;
- check condition of all directional and interpretive signage (where available);
- check condition and integrity of all contributory elements of significance identified in Table 4.3;
- check and clear stormwater pits and drains;
- inspect roofs (outside and inside);
- check glazing. Clean windows and painted surrounds;
- check opening and closing of all doors and windows and ease and lubricate as required; and
- clean light fittings and change bulbs or fluorescent tubes.

5 yearly cyclical maintenance plan

Every five years the heritage practitioner should make a full report especially noting any structural defects that should be kept under observation and the cyclical maintenance plan should be updated, drawing attention to any defects that should be kept under observation or where further study might be required. Proposed actions should be prioritised and divided into the following categories and recorded in a log book:

- small items (basically good housekeeping);
- should building upgrades occur, requirement for repairs to mechanical, electrical, plumbing and drainage services;
- a rolling program of long term preventive maintenance carried out year by year; and
- major items of conservation such as roofing, walls, windows, doors and floor coverings and services.

The scope of a typical five yearly inspection would be consistent with the list of items set out in the annual inspection.

6.5.3.3 Planned Works

At this stage, there are no planned works for Snapper Island.

The statutory CMP should be prepared to reflect any planned works as they arise.

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APPENDIX A HERITAGE REGISTER LISTINGS

Place Details

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Snapper Island, Drummoyne, NSW, Australia

Photographs	None
List	Commonwealth Heritage List
Class	Historic
Legal Status	Listed place (22/06/2004)
Place ID	105477
Place File No	1/17/013/0009

Summary Statement of Significance

Snapper Island, comprising the original sandstone area, fore and aft areas of made ground, a range of utilitarian buildings and maritime structures, is historically important as the primary expression of the Navy League UK, established at Drummoyne in 1921 by Len Forsythe, who saw the need to establish a voluntary training scheme for young boys, as naval cadets. The Sea Cadet movement is believed to be one of the oldest youth movements in the English speaking world.

The Snapper Island facility was officially opened on 26 November 1932 by Sir Charles Cox, on behalf of the Minister for Defence, as a living memorial to HMAS Sydney. HMAS Sydney, the first Royal Australian Navy ship to sink an enemy warship, the Emden, had been an inspiration to Forsythe. Snapper Island was the headquarters of Sydney's naval cadet groups and the Navy League from 1932 to 1977, and as such provided a voluntary step towards recruitment in the Australian Navy.

(Criterion A.4)

(Historic Themes: 6.3 Training people for the workplace, 7.7 Defending Australia, 8.9 Commemorating significant events)

Snapper Island is of exceptional interest as a privately initiated and seminal naval cadet training facility, as the earliest surviving Navy League training depot in NSW and for its ship-like planning and layout.

(Criterion D.2)

The Snapper Island training facility is recognised for its contribution to the landscape values of Sydney Harbour.

(Criterion E.1)

Snapper Island is highly valued by Sydney's naval cadet groups and the local communities for its symbolic, cultural, educational and social associations.

(Criterion G.1)

Snapper Island is closely associated with Len Forsythe, founder of the Navy League in Australia, and the driving force behind the development of Snapper Island as the focus of naval cadet training in Sydney.

(Criterion H.1)

Official Values

Criterion A Processes

Snapper Island, comprising the original sandstone area, fore and aft areas of made ground, a range of utilitarian buildings and maritime structures and the Len Forsythe Museum Collection, is historically important as the primary expression of the Navy League UK, established at Drummoyne in 1921 by Len Forsythe, who saw the need to establish a voluntary training scheme for young boys, as naval cadets. The Sea Cadet movement is believed to be one of the oldest youth movements in the English speaking world.

The Snapper Island facility was officially opened on 26 November 1932 by Sir Charles Cox, on behalf of the Minister for Defence, as a living memorial to HMAS Sydney. HMAS Sydney, the first Royal Australian Navy ship to sink an enemy warship, the Emden, had been an inspiration to Forsythe. Snapper Island was the headquarters of Sydney's naval cadet groups and the Navy League from 1932 to 1977, and as such provided a voluntary step towards recruitment in the Australian Navy.

Attributes

All buildings, structures, artefacts, retaining walls, landscaping wharves, ramps and other features on the island.

Criterion D Characteristic values

Snapper Island is of exceptional interest as a privately initiated and seminal naval cadet training facility, as the earliest surviving Navy League training depot in NSW and for its ship like planning and layout.

Attributes

All aspects of development on the island, including the shiplike planning and layout.

Criterion E Aesthetic characteristics

The Snapper Island training facility is recognised for its contribution to the landscape values of Sydney Harbour.

Attributes

All aspects of the place including built form, open space and relationship to the harbour.

Criterion G Social value

Snapper Island is highly valued by Sydney's naval cadet groups and the local communities for its symbolic, cultural, educational and social associations.

Attributes

All aspects of the place.

Criterion H Significant people

Snapper Island is closely associated with Len Forsythe, founder of the Navy League in Australia, and the driving force behind the development of Snapper Island as the focus of naval cadet training in Sydney.

Attributes

Planning and layout of the facility.

Description

Snapper Island is a 1.65-hectare island at the mouth of the Parramatta River located approximately 300 metres north-east of Birkenhead Point, Drummoyne and oriented in a north-east/south-west direction. Cockatoo Island lies to the north-east and Spectacle Island to the north-west.

The building platform is retained in part by rubble stone walls and in part by concrete sea walls. On the south-eastern side the original foreshore outcrops survive to form part of the side of the ship shaped island below the Mess Deck Starboard Classroom and between buildings 9 and 10, the J Payne Memorial Building and Main Deck Museum. The upper level of the island includes the Port Waist and Rifle Range, the Quarterdeck and the site of the Main Deck which define the original island areas. The lower level includes the Forecastle Deck, After End and the sites of buildings 3-6, 7-9 and 14. The Port Waist and part of the Quarterdeck are cement paved in common with areas between buildings 9-10. Capstan Flat comprises lawn and concrete pathways.

The island was planned to reflect the layout of ships at sea, the Main Deck building flanked by Port and Starboard Waists with Quarter Deck and After End at the stern and the Forecastle Deck at the prow. The Officers Accommodation is clearly separated from other ranks and closely associated with the Signal Station and Quarterdeck towards the stern. The Port and Starboard wharves (Items 1, 15), which provide access, are of timber construction as is the slatted boat Whaler ramp adjacent to building 6 (the Boatshed, Workshop and Store) and a number of walkways. The Baths and Tidal pools have collapsed. The main approach to the island on the north western side is identified by the two cabbage tree palms planted in the 1930s and the Officers accommodation. Buildings, which define the islands naval superstructure, and illustrate its cadet and museum roles, include the following.

Guard House (Item 2)
Officers Wardroom Mess (3)
Generator Room (4)
Mens and Womens Toilet Blocks (5, 7)
Boat Shed, Workshop and Store (6)
Gymnasium (8)
J Payne Memorial Building (9)
Main Deck-Museum (10)
Mess Deck-Starboard Classroom (11)
Signal Station (12)
Officers Cottage (14)
Flammable Store (16)

These main buildings which define the ship-like planning and layout are predominantly corrugated galvanised iron and timber, with a combination of hipped and skillion roof forms. A signal mast adds to the maritime character.

Other features illustrating the training role of the island include boat davits, a capstan, derricks, bollards and winches and signal masts. Other site features include a range of functional items from shipping, a memorial to Captain Bligh, cannon, anchors, a steam engine, naval field guns, gun barrels from Hood, Repulse and Renown, and the 1932 foundation stone laid by Miss Charles Fairfax on 21 May 1932. The island also contains a number of individual items of note including the original Austral petrol driven electric generator of 1931.

A small area of the original rock outcrops of the island remain which may contain archaeological evidence of former uses.

History

Snapper Island, levelled and cleared in 1931, was originally a low sandstone island, with rocky shores and sparse vegetation. Recorded in 1788, on early maps of Sydney Harbour, Snapper Island was part of the 'Hen & Chickens' group in 1827. In April 1879 the island was dedicated as a public reserve, following a decision of the NSW Legislative Assembly, and in 1892 Trustees were appointed.

The first use of the island for other than occasional recreational visits was after 1900 when part of the island was used to store timber. In 1913 Snapper Island was included in the 'naval waters' surrounding Cockatoo Island dockyards, and in 1918, at the end of the First World War, was leased to the dockyard for use in storing ships parts and materials.

In 1921 Len Forsythe founded the first Navy League Sea Cadet companies at Drummoyne and North Sydney as companies within the NSW branch of the Navy League UK. The Drummoyne Depot grew to include some 70 persons by 1929, but was unable to continue to rent adequate premises. With the assistance of Jack Payne, Managing Director of Cockatoo Island Dockyard, Forsythe was able to rent Snapper Island for 15 pounds per year. However, in order to use the island effectively, it was found that the surface had to be levelled by blasting and excavation. In addition the area was increased by one third, with the construction of sea walls and fill, until its shape represented a ship. Buildings and sea baths were also constructed.

A Royal Navy Reserve had been founded in Britain in 1859 and in 1867 special cadetships were in place to train future officers. Formed without government support, the Sea Cadets movement can claim the longest continuous history of any British youth movement, dating back to before the Crimean War when sailors returning home from the campaign formed Naval Lads Brigades to help children in the sea port back streets. So successful were the Brigades in helping disadvantaged youth that the Navy League adopted them in 1910. The Navy League in Britain in 1910 included a national membership of a quarter of a million persons dedicated to supporting the Royal Navy. Training was along Naval and Merchant Marine Lines with ranks and ratings equivalent to the Navy. The fundamental principle of the Navy League in the 1930s was 'Complete protection for British subjects and British commerce the world over'.

HMAS Sydney, the first vessel constructed for the Royal Australian Navy in 1913, and the first RAN ship to sink an enemy warship, the Emden, had been an inspiration to Forsythe. When the Sydney was broken up in 1932 at the Sutherland Dock, on Cockatoo Island, Forsythe obtained substantial remnants including the binnacle, engine room telegraph, steering wheel and deck rails which now enclose the island's 'Main Deck', for 30 pounds. Many other items were removed from the Sydney and the compass from the Emden was added to the growing collection of naval and maritime heritage. Over the years this collection, the Len Forsythe Collection, was augmented from many sources; donations included the mast of HMAS Sydney.

In 1932 the island developed rapidly with the construction of new and relocated buildings. These included the former Drummoyne Depot buildings (Main Deck, Signal Building and Guard House). A wharf was completed and the complex linked by decks, bridges and gangways in simulation of life on board ship. Paired palm trees identified the approaches to the island. On 26 November 1932 the facility was officially opened by Sir Charles Cox, on behalf of the Minister for Defence, as a living memorial to HMAS Sydney. Snapper Island became the headquarters of Sydney's naval cadet groups. There are now some 70 units in Australia.

From the beginning Forsythe's objectives had been to 'teach boys from 10 years of age habits of discipline, duty and self-respect'. By September 1938 cadet numbers had risen to 110 with 75 on the waiting list. The island now included accommodation, a sick bay, ward-room, gunners store, general store and officers mess and a petrol driven electric generator. The unit's fleet included two whalers, one cutter, four motor boats and skiffs and dinghies. In November 1938 the J Payne Memorial Building was officially opened by Prime Minister Joe Lyons.

Following the onset of the Second World War the island was taken over by the RAN Naval Guard and from 1942-43 a gun crew was stationed on the island, followed by B Wing Water Transport of the Australian Imperial Forces and No2 Independent Troop, Great Britain Maritime Royal Artillery. During the period 1939-45 various new buildings were erected and further land reclaimed.

The island was handed back to the cadets on 22 January 1946, when a Women's Division was established in the Officers Cottage. By 1947 200 cadets were using the island, when the Navy League of Australia was formed to replace the former Navy League UK. In 1954 the island became 'Training Ship Sydney' as part of the newly formed Australian Sea Cadet Corps.

In 1952 the museum had been opened to the public and in 1960 the Len Forsythe Museum was opened in the Main Deck building coinciding with the formation of the Snapper Island Company as a registered charity. In 1976 the unit decided not to be absorbed into the Royal Naval Reserve Cadets, based at Spectacle Island, in order to retain its identity. Snapper Island continues to be leased to the Snapper Island Company Ltd, which maintains the island and continues to operate the fleet in conjunction with the local community and TAFE and school groups.

Condition and Integrity

Integrity:

The Preliminary Heritage Study of February 2001, by Clive Lucas Stapleton and Partners, indicates that the fabric of the place is essentially intact

Condition:

The general condition can be best described as run down due to lack of the ongoing maintenance usual for places in such marine environments.

The building structures appear to be in reasonable order however they have suffered serious termite problems in the past and active termite infestations are likely. (February 2001)

The DASCEM report of March 2000 has identified potential contaminants.

Location

About 1.65ha, in Sydney Harbour, 300 metres northeast of Birkenhead Point, between Balmain and Drummoyne.

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Report Produced Mon Dec 3 14:31:33 2018



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Snapper Island

Item details

Name of item: Snapper Island

Primary address: , Parramatta River, NSW 2041

Local govt. area: Unincorporated Waterway

All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
	Parramatta River	Unincorporated Waterway			Primary Address

Listings

Heritage Listing	Listing Title	Listing Number	Gazette Date	Gazette Number	Gazette Page
Regional Environmental Plan	Sydney Harbour Catchment 2005	3	28 Sep 05		

References, internet links & images

None

Note: internet links may be to web pages, documents or images.

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APPENDIX B HERITAGE CONTEXT

B. HISTORICAL BACKGROUND

The following sections present a detailed contextual history of Snapper Island. This historical background has utilised the brief history included in the Clive Lucas and Stapleton (2007) Conservation Management Plan for Snapper Island, and the subsequent update by ERM in 2019. ERM has undertaken detailed archival research including both primary and secondary sources from the following key institutions:

- National Archives of Australia;
- National Library of Australia (Trove online database);
- National Maritime Museum; and
- State Library of New South Wales.

B.1 Application of Australian Historic Themes Framework

The Australian Historic Themes Framework was developed by the AHC in 2001. The framework provides a research tool for developing a wider recognition of nuanced heritage values. The application of Australian Historic Themes (AHTs) can be used at national, state or local level to ensure that heritage objects, sites and events can be understood, assessed and presented within the context of a broad theme, rather than as singular items of interest. AHTs relevant to Snapper Island and its history have been identified and are used to guide the summary history in this section.

B.2 Pre-European Ethno-history

AHT 2 – Peopling Australia, AHT 2.1 – Living as Australia's earliest inhabitants

Snapper Island, prior to clearance and levelling, was a small sandstone knoll in Sydney Harbour. Like the other islands situated in the harbour, Snapper Island is a drowned knoll, essentially a highpoint along the sandstone ridges that make up the harbour, which were flooded around 6000 years ago. Snapper Island, accompanied by Cockatoo Island and Spectacle Island, lies at the confluence of three tributary waterways – Parramatta River, Lane Cove River and Iron Cove (Clark and Clark, 2000).

Nineteenth century images show Snapper Island to be a small island with rocky shores, sparse vegetation and low shrubs (*Photograph B.1*). The vegetation is likely to have been typical of Sydney sandstone vegetation, consisting of drought hardy and able to survive in shallow, sandy soils along sandstone outcrops. There is little evidence remaining of the original form or vegetation of Snapper Island. The proximity of Snapper Island to the shore, the low profile of the island and the relatively shallow waters surrounding it would have made it ideal as a vantage point for fishing. Fishing was an important subsistence activity in pre-contact Aboriginal communities, and it is likely that Snapper Island was utilised for spear fishing and collecting shellfish and molluscs (Clark and Clark 2000:5). Evidence of Aboriginal occupation of Snapper Island is unlikely to have survived the levelling and infilling works which occurred from the 1930s.



Photograph B.1 Spectacle and Snapper Islands from Balmain (Snapper Island indicated) (c1870-1875), American & Australian Photographic Company (Source: Mitchell Library, Home and Away 40247)

B.3 The Sydney Harbour Islands in the 19th Century

AHT 3.1 – Exploring the coastline, AHT 3.3.5 – Layout out boundaries

Snapper Island is one of a historical group of Sydney Harbour islands (consisting of Cockatoo, Spectacle and Snapper) which, in the early 1800s, were known as the 'Hen & Chickens' respectively (Joseph Cross 1820s map of NSW) (*Figure B.2*). Cockatoo and Spectacle Islands were already in use by this time, although Snapper Island remained empty. In 1878, the Legislative Assembly resolved that some harbour land needed to be designated as public reserves, as large portions of foreshore land were being acquired by wealthy private individuals. In 1879, Snapper Island, Clark Island and Rodd Island were declared public reserves and made available as parkland (Clark and Clark, 2000 via Notes on General Survey 1881) (*Photograph B.2*).

Snapper Island was described in 1891 as 'a small, rocky, barren islet called Snapper Island, whose only office is to supply to standing room for sea fowl – some place where they can meet and deliberate unmolested (The Sydney Morning Herald 23 May 1891 p.4) (*Figure B.1*).

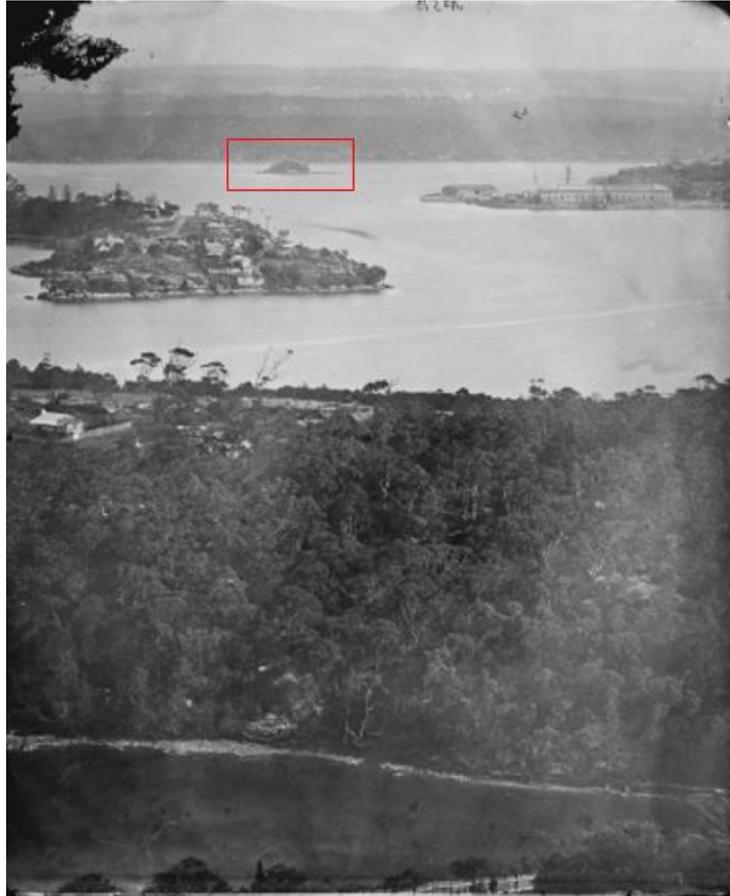


Figure B.1 Lithograph by S.Sedgfield from early watercolour by W.H Raworth, Snapper Island shown on the right c.1875-77 (NLA Pic S2109 LOC 2652)

The northern and southern edges of Snapper Island consisted of bare, tide-washed ledges that ran some distance into the bay, which made navigation dangerous for visitors in small dingies. The flora at Snapper in the 19th century was known as '*chiefly rank grass, a few sumptive-looking bushes and three stumps*' (The Sydney Morning Herald 23 May 1891 p.4). In 1905, there was a public concern that the beautiful Harbour islands were becoming alienated from the public, through the establishment of dock yards and 'keep-off' notices. The public was concerned that the Harbour frontage areas were being taken over by greedy developers who erect 'ugly buildings' stating:

'One cannot blame the business instincts of the Commissioners, but they might develop a little artistic taste, and stipulate that the buildings along the foreshores shall be ornamental.' (The Sydney Mail 9 Aug 1905 p.337).

On February 1, 1913 the Commonwealth Government took over control of the Harbour islands from the NSW government. Cockatoo Island, Spectacle Island and Snapper Island were all ceded to Federal authorities as well as all rights to the use of all the waters embraced by the three islands (The Argus 10 Jan 1913 p.6). At the time, Spectacle Island was used as a depot for explosives, and Snapper was used a temporary store for timber in connection with the Cockatoo Dock (The Argus 10 Jan 1913 p.6) (Photograph B.3).



Photograph B.2 Sydney Harbour islands and foreshores with Long Nose Point and Cockatoo Island, Snapper Island in the background (indicated) c.1870-1875 (SL NSW: FL1254463)



Photograph B.3 Snapper Island c.1900, and timber pile rack on its right side (detail of a framed panorama on Spectacle Island, Clive Lucas Stapleton 2000)

B.3.1 Recreational use of Snapper Island

AHT 8 – Developing Australia’s Cultural Life, AHT 8.1 – Organising Recreation, AHT 8.1.4 – Enjoying the natural environment

While Snapper was made a public reserve alongside Clark Island and Rodd Islands in 1879 (Clark and Clark, 2000), there was a public call in October 1911 for Snapper (referred to as Schnapper) to be reinstated as a public reserve. The Balmain Council met in 1911 to discuss the matter, with a motion by Alderman Scott –

“That having in view the advantages that have accrued by reason on islands in Port Jackson being improved for the public. This council take the necessary steps to approach the Government with the object of Schnapper¹ Island [...] being similarly improved and dedicated as a public reserve”
(*Evening News 19 Oct 1911 p.4*)

There was a small patch of beach that was attractive for the occasional picnicker, however the island was used most frequently by fishermen and adventurous children. In addition, parties seeking privacy, such as lovers and two-up schools, would opportunistically sneak off to Snapper Island.

In 1891 on a visit to explore the Island, a writer for the Sydney Morning Herald known as ‘Vaurien’ described what they saw on the beach:

[...] yet even here, under the beetling rock, were evidences of recent hilarity and merry-making in the shape of the remains of a fire and the broken fragments of a feast. Probably some boys, influenced by the wild stories of the pirates of old, stopped here for a night during the warm weather, and imagine themselves buccaneers (*Vaurien 23 May 1891:4*).

In 1914, complaints were made by picnickers on Snapper Island that the Island had become a favourite Sunday rendezvous for gamblers. There was a spot on the Island of only a small area that was partially covered with scrub ‘*regarded as an excellent spot for carrying on unlawful games*’, according to the Evening News:

‘Picnickers who went to Schnapper Island on Sunday state that they found it in the possession of a crows of youths and men who used disgusting language as they played two-up and drank beer’ (*Evening News 29 July 1914:6*).

The two-uppers would guard against police raid by placing one party member on a high part of the island to keep watch.

By 1915, the Island had become infested with rats and was overgrown with lantana. The Evening News (15 Apr 1915 p.8) reported that Schnapper Island was ‘swarming with rats’ and was not sure if their presence was due to an invasion or to natural increase in population. It was noted that at one time the little islet was a favourite resort for picnic parties, though it had more recently been rarely visited by picnickers. As mentioned earlier, the Island was leased to the Cockatoo Island Dockyard during this time and became a storage place for piles of old boilers, and ‘other odds and ends’ this ensured the rats were very rarely disturbed.

¹ During the late 19th and early 20th century, Snapper Island was often referred to as ‘Schnapper’ Island, with a number of news articles from these eras referring to it as such.

B.4 Naval presence in Sydney

AHT 7.7 – Defending Australia, AHT 7.7.1 – Providing for the common defence

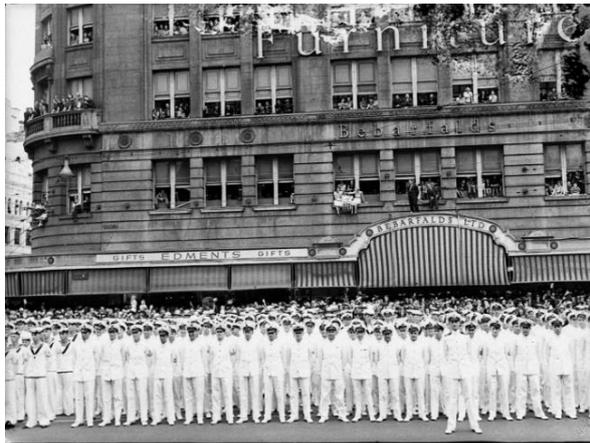
The 'Sydney Training Depot' on Snapper Island has both a tangible, and intangible connection to the history of naval presence in Sydney. The Depot – named and constructed after the HMAS Sydney – was credited with inspiring a generation of budding naval cadets and provided support to naval forces during WWII. The Sydney Training Depot was structured to provide naval cadets with strong discipline, integrity and life skills based on traditional naval training that was commended by the Royal Australian Navy (RAN) and the Royal Maritime Artillery (RMA) during WWII. This section will provide a brief summary of Naval presence in Sydney and short history of HMAS Sydney, extracted from the RAN historic timeline provided by the ABC ('100 years of the RAN' 2013).

During times of war and peace, the Navy has always had an important role shaping Australia, and in Sydney the Navy has had a strong presence since the discovery of Botany Bay in 1770. It was two months after Federation, that localised coastal defences comprised of gun batteries and naval forces were brought together to become the Commonwealth Naval Forces. Only seven years later in 1908, America's Great White Fleet – 16 Battleships and several escort ships – visit Australia as part of its circumnavigation of the globe under the orders of President Theodore Roosevelt (*Photograph 8.4*). In 1911, the Commonwealth's forces were granted the title of Royal Australian Navy (RAN) and by 1913 the battle cruiser HMAS Australia was commissioned into the RAN at Portsmouth, England. In this same year, the RAN fleet, led by HMAS Australia sailed into Sydney Harbour accompanied by HMAS Melbourne, HMAS Sydney, HMAS Encounter, HMAS Warrego, HMAS Parramatta and HMAS Yarra.



Photograph B.4 Spectators with pram on grass by Sydney Harbour, USS "Nebraska" in background during the visit of the Great White Fleet, 1908 (SLNSW: Home and Away – 34365)

The HMAS Sydney is associated with some of the most decorated, and tragic moments in the Navy's history. During WWI, Sydney (I) registered Australia's first significant victory at sea, when it destroyed the German light cruiser Emden near the Cocos Island on November 9, 1914. Sydney II, a light cruiser, was commissioned into the Navy in 1935 after her launch with a march of the RAN through Sydney in 1934 (*Photograph B.5 & Photograph B.6*). Sydney II was returning from patrol and escort duties in 1941 when she encountered the German raider Komoran off the north-coast of Western Australia. Sadly, this encounter had a tragic ending, with the Sydney II and its 645-crew members lost. The Sydney II wreck was found almost 67 years later.



Photograph B.5 Crew of HMAS Sydney parade through Sydney streets 1934-41 (SL NSW: FL1306694)



Photograph B.6 Crew of HMAS Sydney marching through streets 1934 (SL NSW: FL1306694)

B.4.1 Early Navy use of Snapper Island

From 1913, Snapper Island was placed under the control of the Royal Australian Navy, as part of the naval waters surrounding Cockatoo and Spectacles Islands. Very little is known about the early naval use of Snapper Island from this time, however it was used by the Cockatoo Dockyard (as mentioned earlier) to store ships' parts, and corrugated iron (Clive Lucas Stapleton, 2010).

B.5 Establishment of the Navy League in NSW

AHT 6 – Educating, AHT 6.1 – Forming associations, libraries, and institutes for self-education

AHT 9 – Marking the Phases of Life, AHT 9.2 – Growing up, AHT 9.2.2 – Joining Youth Organisations

With the Defence Act of 1909, Australia had legislated for the peacetime conscription of all able-bodied white male boys for the purpose of military training. It was two years later in 1911 that the Australian naval and sea cadet movement introduced the compulsory military (army) and naval training for boys (Laat 2013). This 'Universal Training Scheme' made cadet training compulsory for all boys from the year that they turned 12, up until they turned 18, at which point their training was continued until the age of 25 in adult military forces. The wider scheme was administered and controlled by the army, with less than 5% of cadets allocated to the navy.

This compulsory scheme had a major impact on the existing naval and sea cadet organisations in Australia at the time, who fought for formal navy recognition and support, including an exemption from compulsory defence-based training (Laat 2013). During this compulsory training scheme, the navy's attention was directed towards the compulsory naval cadets, both officially and publically (Laat 2013:99). Despite this, the community-based branch of the movement continued to seek navy support and recognition, with applications still being received for support of new Boys' Naval Brigade units as late as 1914, though gaining little support from the navy.

The Navy League was formed in England in 1894, with a ceremony at Nelson's Column on Trafalgar Day to demonstrate the importance of the navy. Soon after its establishment, action was taken to create an Australian branch in Sydney by January 1896. The forerunner to this organisation was the Sea Cadet Movement founded in Great Britain after the Crimean War (1854-56). By 1903, there were branches of the British Navy League in Sydney, Melbourne, Perth, Adelaide and Hobart. The first Australian Navy League was established in June 1915 in Victoria and a Sydney branch was formed in November 1917. Sydney and Melbourne became the centre of activity for the Navy League of Australian for the next thirty years, with the Hobart branch not opened until April 1951 (Laat 2013: 106).

In Australia, the Navy League was focused in seamanship training to prepare for entry into the navy, as well as citizenship training through the development of characteristics such as obedience, self-reliance and service to the community. The Navy League wanted to mirror the naval cadet movement in Britain, which was officially recognised by the British Admiralty as important pre-entry training.

B.5.1 The 1st Port Jackson Sea Scout Troop

In September 1920, the committee of the Boy Scouts' Association had granted permission to Scoutmaster Leonard Edgar Forsythe of North Sydney to form a troop of sea scouts registered as the 1st Port Jackson Sea Scout Troop (*Photograph B.7*). Leonard Forsythe (1894-1981) was a returned Australian Infantry Forces (AIF) man and an enthusiast in signalling, who first came to notice as a Sea Scout leader when the national review of Sea Scout organisation was conducted by the navy in 1920. Shortly after, Forsythe transferred his allegiance to the Navy League Sea Cadet Corps (NLSCC) and became one of the Navy League's most successful, and vocal, unit commanders and state office bearers (Laat 2013). At this time, the Port Jackson Sea Scout Troop was only recognised as being in the initiatory stages, though there were 15 boys between the ages of 15 to 18 years who attended voluntarily outside of their compulsory training.



Photograph B.7 The 1st Post Jackson Sea Scout Troop c.1932 (Mosman Memories nd <http://mosmanmemories.net/photo/137/first-port-jackson-sea-scout-troop>)

The Port Jackson Sea Scout Troop went on to be a successful Troop into the 1930s and was the first evidence of the existence of a well-established sea scout troop in NSW that appeared to have no organisation, control, personnel or funding issues that concerned the Naval Board (Laat 2013: 111). Forsythe's model of volunteer naval cadet training was considered exemplary and later applied to the most successful Australian naval and sea cadet unit of any era, the Sydney Training Depot at Snapper Island.

B.5.2 Parramatta River Navy Sea Cadet Company

By 1923, the Parramatta River Navy League Sea Cadet Company (Drummoyne Company) was established under the Command of Leonard Forsythe, and a depot was opened at Drummoyne (Balmain), 'the first depot for sea cadets in Australasia' (The Daily Telegraph 28 May 1923:6) (Photograph B.8). The new depot was opened with an official opening ceremony on 28 May 1923 by Captain Crawford of the Royal Navy who arrived with a large party from Sydney. Captain Crawford addressed the cadets on the day, saying:

"All of you boys, are going to sea some day. To be a good sailor you have to be most unselfish man in the world. [...] The sea is a different service to any other in the world [...] always remember when you go to shore that you belong to Australia, and are a Britisher" (The Sydney Morning Herald 28 May 1923:10).



Photograph B.8 Parramatta River Navy League Sea Cadets c. 1920s (Pittwater Online News <http://www.pittwateronlinenews.com/naval-sea-cadets-in-pittwater-history.php>)

By 1926, the leaders of the Drummoyne Company initiated a fund raising program for a new building to serve as the headquarters for the Company. However, by 1928, it was reported that the company was struggling both in its fund raising effort and to retain cadet numbers which fell dramatically from 80 in 1924 to 24 by 1928. At this time the Company had no parade ground and only a portion of the boatshed in which to keep their gear and three boats, which were worse for wear (Samuel 1937: 25). In order to solve the funding crisis, the young cadets came together and in six weeks, managed to

raise £54 in pennies to repair their boats and buy new gear. This young spirit and drive for problem solving has been credited as *'the pivot in the history of the Sea Scout movement in Sydney'* (Samuel 1937: 25). The main influence for this drive was their commander, Leonard Forsythe (*Photograph B.9*), who felt strongly about helping young boys and men off the streets and to help them become better people:

"I have been earning my own living since I was 13, and I feel from the bottom of my heart for young lads who might be stranded on the streets" (*Mr Forsythe 1933 via The Daily Telegraph 25 Jul 1933: 9*).



Photograph B.9 Leonard Edgar Forsythe at Snapper Island c.1928 (NAA ID: 11729673)

The depot building for the Naval League at Drummoyne was established in 1928, it was a two story gabled roof structure. The building was later repurposed for use at Snapper Island as the Main Deck (building 10) (*Figure B.3 & Photograph B.10*). In the same year, Forsythe also formed a company at Iron Cove which he called 'Sydney' as a memorial to HMAS *Sydney*.

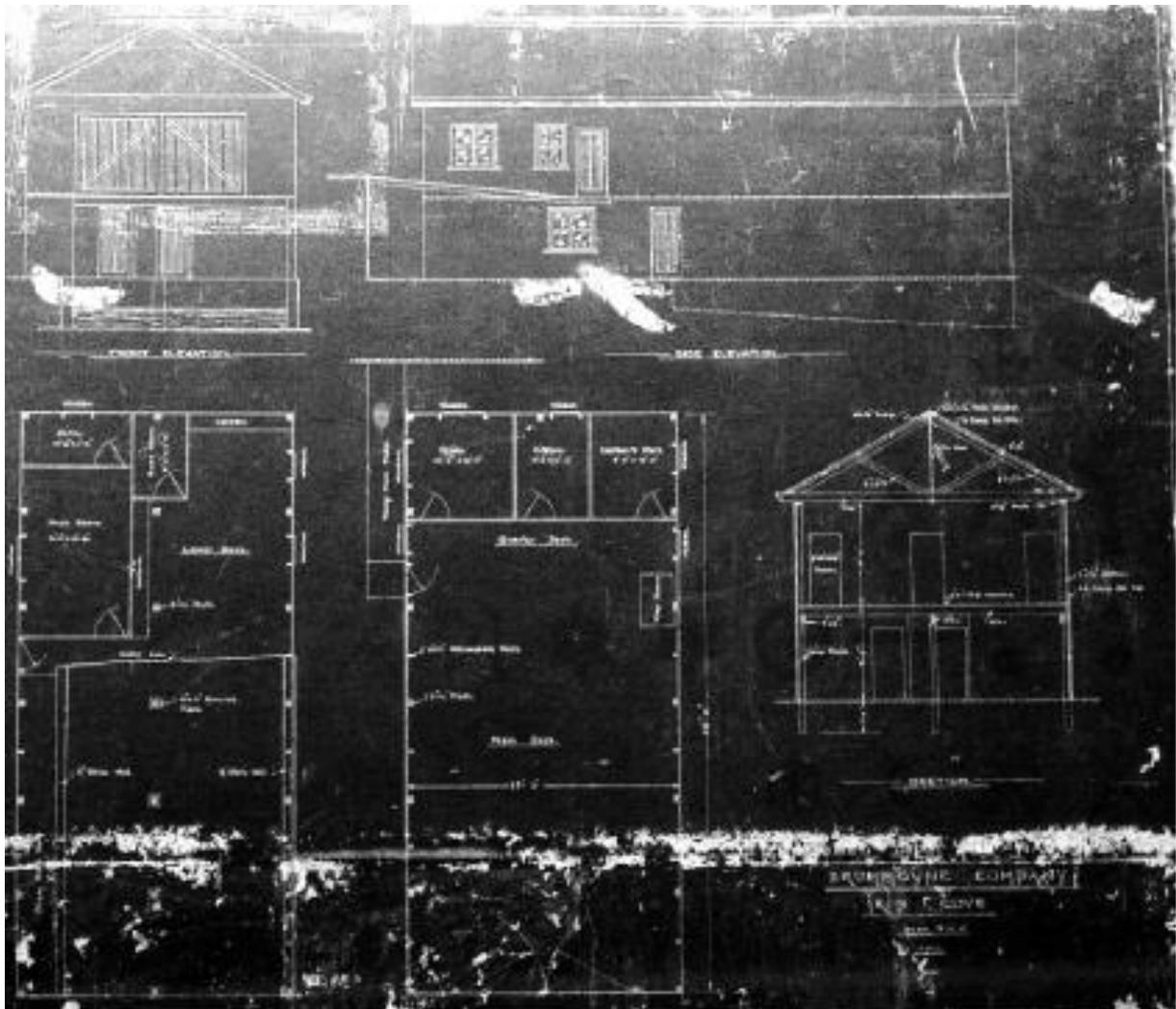


Figure B.3 Blueprint of proposed Drummoyne depot at Iron Cove, later repurposed at Snapper Island as main deck (building 10) (Clive Lucas, Stapleton 2000:38)

The Company's new depot was officially opened on 20 April 1929, by which time cadet numbers had risen to 70. In 1930, the company was inspected by Rear Admiral Evans, Royal Navy, Commanding Royal Australian Squadron, by Admiral Monro Kerr and Captain Benson in 1931 and late in the same year by Commodore Holbrook.

With the onset of the Depression, the annual £100 rent of Drummoyne depot presented financial difficulties for the company. During an inspection of the depot by Rear Admiral Evans, the idea of Snapper Island as an ideal location for sea cadet training was raised. Following the recommendation of officers, who were impressed by the enthusiasm and hard work of the sea cadets, a lease of Snapper Island was granted by the Commonwealth Government to Len Forsythe for fifteen years at fifteen pounds per year, for the purpose of establishing a depot.



Photograph B.10 "Sydney" Training Depot, Drummoyne 1928 (State Library of Victoria Image H98.105/223)

B.6 Drummoyne Depot moves to Snapper Island

AHT 9 – Marking the Phases of Life, AHT 9.2 – Growing up, AHT 9.2.2 – Joining Youth Organisations

Snapper was chosen as ideal for the training of naval cadets as Forsythe had the vision to turn the small island into a 'ship'. Though, this would be no easy task. In 1937, the story of Snapper Island was said to have 'no parallel anywhere in the British Empire' (Samuel 1937:25).

'These boys, a mere half-hundred of them, of course under the indefatigable Mr. Leonard Forsythe, undertook the herculean task of themselves constructing a depot on Snapper Island, and equipping it in every way up to the requisite standard. This work was tackled without funds and with little outside financial support, but there was no lack of loyalty and enthusiasm.'
(Samuel 1937:25).

A start was made on July 7, 1931 to prepare the island for occupation, thirty to fifty cadets were co-opted to clear the island. The dense scrub and lantana bushes were cleared away to make possible a survey of the actual surface of the island. On 11 July 1931 The Sun newspaper reported that when completed, '[the depot] *will be equalled only by similar establishments in England*' (The Sun 11 July 1931:2). The ideal depot and future home of the Sea Cadets was mapped out two weeks later, and it was found that it was necessary to lower the whole surface of the island by nine feet six inches to gain a flat surface on which to construct buildings. A thousand tonnes of rock was blasted and the island was levelled with the excess rock used for reclamation, as the island was found to be too small for the required structures. A seawall was also constructed from the rubble with additional rock from around the harbour also being sourced by Forsythe. The sea wall was a total length of 279 feet, eight (8) feet high and five (5) feet in thickness. In total the area of the island was increased by one-third. From its inception the formation of the island into a ship was planned with the seawalls constructed to form a bow and stern (ERM, 2014).

All of this work was done by the small company of sea cadets, unaided by outside labour and almost without financial assistance, between August 1931 and January 1932 (*Photograph B.11*). The work was completed during the cadets' spare time, on school holidays '*and on every other conceivable occasion*' (Sydney Mail 24 Nov 1937:25). In an article by the Sydney Mail in November 1937, Snapper was described as a 'mighty atom':

'In spite of its size Snapper Island is today a mighty atom, a symbol of the Imperial spirit, and to a Britisher should be the most inspiring spot in Sydney. The work that has been done there in just a few short years and is being carried on to-day gives a bright promise for the future patriotism and loyalty of Australian Youth' (*Edward Samuel, Sydney Mail 24 Nov 1937:25*
Australian Boys and the Sea)

A ship routine was observed at all times, with cadets entering the depot acquiring the same rating and privileges as they would have aboard a naval boat. The depot was shown an active interest by its patron, Commodore Holbrook (then commanding the Royal Australian Squadron). Holbrook visited the Depot early in its construction and was '*keenly interested in the plans of the establishment, and stated his intention of keeping an eye of the growth of the depot*' (The Sun 11 Jul 1931:2).

The Sydney Training Depot was opened in November 1931 and by 1932 a wharf had been constructed and additional land reclamation had taken place on the western side of the island. Two cabbage tree palms were also planted in 1931, which survive and remain as landmarks on Snapper Island (*Photograph B.12*). A number of buildings were relocated from the Drummoyne Depot including the Guardhouse (Building 2), main building which was transformed to become the Main Deck (Building 10) and the Signal Station (Building 12). The Commanding Officer's Cottage, Toilets (Building 5) and Boatshed (Building 6) were also constructed between 1931 and 1932, along with a miniature rifle range (*Photograph B.13*).



Photograph B.11 Young cadets at Snapper Island c.1930 (NAA ID: 111633592)



Photograph B.12 Two Cabbage tree palms, planted 1931 (Clive Lucas, Stapleton Pty Ltd 2000)

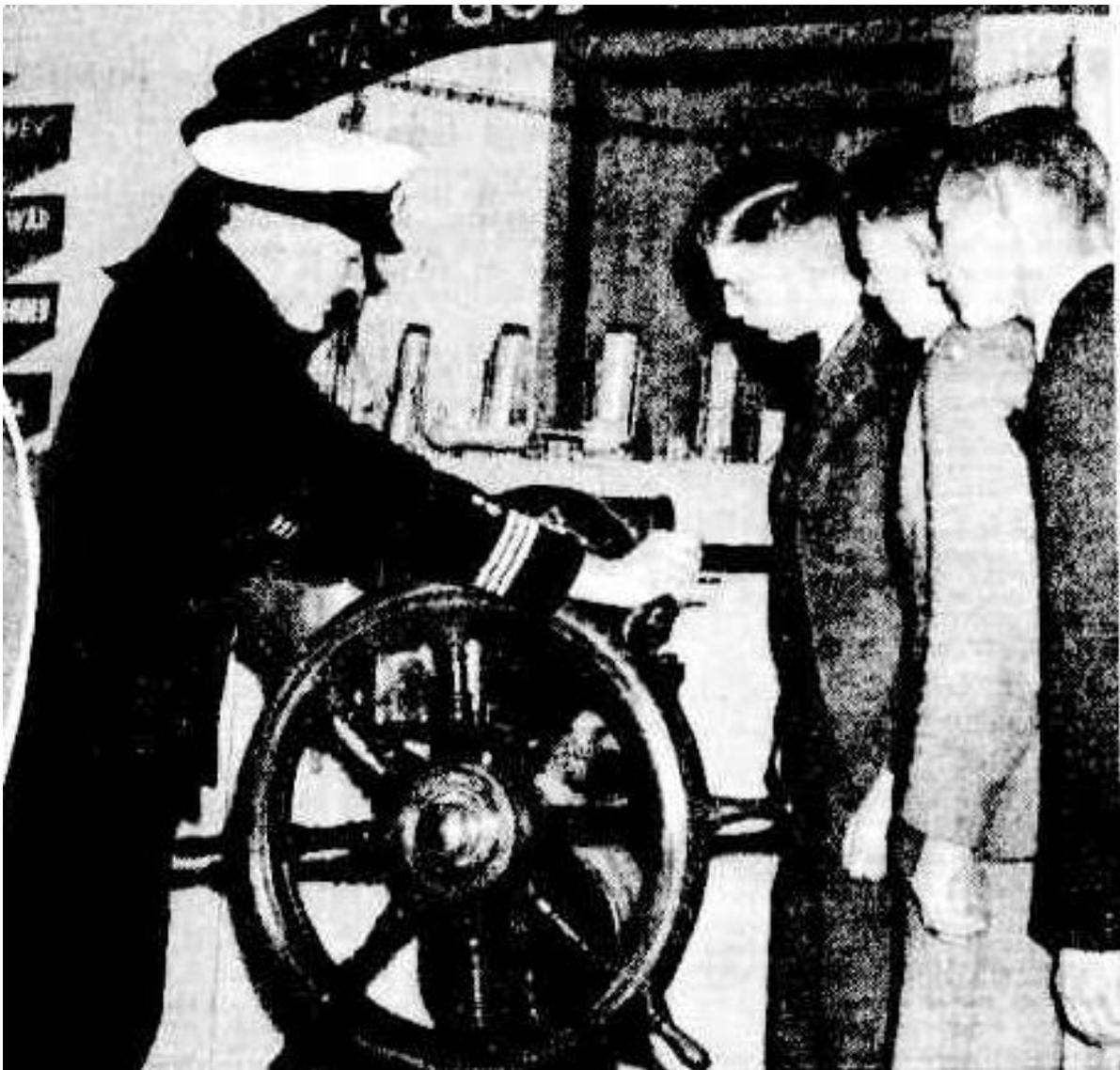


Photograph B.13 Post Waist and Miniature Rifle Range at Snapper Island c.1938 (Len Forsythe Museum Photographic Collection)

B.6.1 Commemoration to HMAS “Sydney”

The Depot was planned along the same lines of a warship, with all cabins and departments leading off a main deck, which was 60ft by 25ft. The upper deck of the Signal Station was built in the form of a battle ship and the forward end of Snapper Island contained quarters for the Commander, also an office. The Island was also always manned, with members of the Sea Cadets always on watch (Sydney Mail 24 Nov 1937:35). The commemoration of HMAS *Sydney* through the naming of the Snapper Island depot as the “Sydney” Training Depot coincided with the scrapping of the war ship. On the main deck was the most comprehensive display of relics from the original HMAS Sydney in existence, also a perfect scale model of the ship, designed and made by the Commander and two of the cadets (*Photograph B.14*).

The range of relics that Forsythe was able to salvage from the HMAS *Sydney* formed the nucleus of the museum collection later also developed by Forsythe. Some items such as doors were re-used in the construction of the depot buildings (*Photograph B.15*). Forsythe also salvaged the engine room telegraphs from HMAS Sydney, the hand and steam steering wheels and a binnacle.



Photograph B.14 Commander Forsythe showing new recruits the HMAS Sydney wheel, see behind the scale model of the ship built by Cadets (Sydney Morning Herald 27 Jul 1940 p.16)



Photograph B.15 Young Cadets practicing knot tying at Snapper, the doors behind them were repurposed from HMAS Sydney (State Library NSW: FL1435388)

The engine-room at the time contained a powerful petrol motor, which supplied the island with power and light. Once the bridge was a complete semaphore-signalling unit, where two or more cadets would receive messages from the other ships in the Harbour. Along the lower section of the island was the original foretopgallant mast of HMAS Sydney, with battles scars said to have been clearly shown (Samuel 1937: 36). The Depot also had a fleet of 16 vessels, including four (4) "whalers", a number of gigs, a cutter and three (3) motorboats.

The island did not originally have a telephone line to mainland Sydney. Lack of funding made a cable connection difficult, however it was rumoured that an old cable, which once connected to Cockatoo Island with the mainland, was at the bottom of the Harbour, and cadets at Snapper salvaged this cable. With permission of the postal authorities, Snapper Island was then connected by phone to the mainland (Samuel 1937:36).

On 26 November 1938, the Jack Payne Memorial Building was opened by the Prime Minister Joseph Lyons (*Photograph B.16 & Photograph B.17*). Jack Payne was the former Superintendent of the Cockatoo Island Dockyard. At the time, Forsythe commissioned photographer Sam Hood to document Snapper Island and its activities. This record has provided valuable photographic evidence of the years 1937 and 1938, a number of these photographs have been provided (*Photograph B.18 to Photograph B.22*).



Photograph B.16 The J Payne Memorial Building being constructed 1938 (SLNSW Home and Away collection ID: 18438)



Photograph B.17 Prime Minister Joe Lyons at the official opening of the Jack Payne Memorial building 26 Nov 1938 (Snapper Island Museum Photographic Collection via Clive Lucas, Stapleton 2000:41)



Photograph B.18 Navy League Cadets at Snapper Island 1935 (ANMM, Samuel J Hood Studio Collection Object ID 00024966)



Photograph B.19 Naval League Cadets at boat ramps Snapper Island circa 1938 (SL NSW Sam Hood Collection FL1375016)



Photograph B.20 East side of Snapper Island circa 1938 (SL NSW Sam Hood Collection FL1467099)



Photograph B.21 Snapper Island cadets mooring at snapper (SLNSW Sam Hood Collection FL1312957)

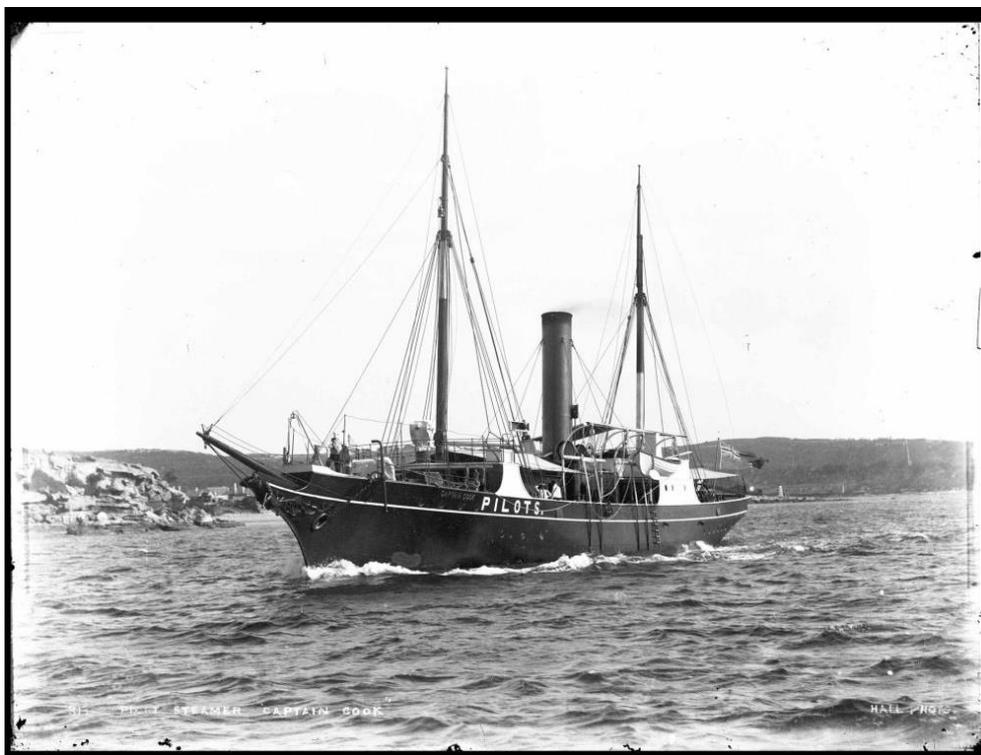


Photograph B.22 Navy League's Sydney Training Depot (taken for Mr Len Forsythe) (State Library NSW: FL1316819)

B.6.2 Bequest of the “Captain Cook” pilot steamer

In 1940, the old pilot steamer *Captain Cook* was saved from the shipbreakers and officially handed over to the Sea Cadet Corps by the premier, Mr. Mair, as a gift from the Government of New South Wales. The *Captain Cook* (built 1877) was often claimed to be the first purpose built Pilot Steamer in the world (ANMM 2020). Instead of being broken up, *Captain Cook* was moored near the Sydney Training Depot on Snapper Island, to serve as a training ship for the young cadets. The name of the old pilot steamer was taken by a new *Captain Cook*, and so the steamer was re-named *Captain Phillip*, in honour of the founder of NSW.

“I only hope that this gesture of ours may encourage the Commonwealth Government to find an equally useful purpose for those historic vessels of war which, too often broken up or discarded when they become obsolete, could, as in the case of the *Captain Cook*, continue in some such capacity as this to keep alive the great traditions of the sea” (*Mr. Mair (Premier of NSW via The Sydney Morning Herald, 9 Feb 1940).*)



Photograph B.23 Old Captain Cook pilot steamer c.1910 (Australian National Maritime Museum ID: ANMS1092 [207])

The President of the Maritime Services Board, Captain G.D. Williams presented Commander Forsythe with a photograph and paintings of the ship and its brass plate. By this time with the outbreak of WWII, the facilities at the Depot had been placed at the disposal of the naval authorities. The White Ensign was flown over Snapper Island and the establishment was being used in part as a depot for harbour naval transport. Naval guards were accommodated on the island, and most of the trained personnel had been taken over by the navy. When on naval duty the young cadets were paid wages, and petrol used was also paid for. The total cost to the Navy at this time was approximately £2000 per year (Samuel 1937:36).

B.6.3 The Self-Help Cadets: Girls and Boys of Snapper Island

AHT 9 – Marking the Phases of Life, AHT 9.2 – Growing up, AHT 9.2.2 – Joining Youth Organisations

Forsythe was passionate about helping young people off the streets and fronted over £1700 of his own money towards the “Sydney” Depot at Snapper Island. While the funding was not a gift, rather an interest free long-term loan to the Sea Cadets, it made it possible to construct building at Snapper and for the Sea Cadets to settle into training. Self-help was always the dominant spirit of the Depot, with Cadets encouraged to learn new skills and find ways to raise funds through social events for new features such as a tennis court and swimming baths in the island.

“There is an interest in life for the lads at the depot, and a chance to become better citizens. They can learn wireless telegraphy, seamanship, boat repairing, and care of motor-boat engines. The out-of-work-boys are there every afternoon” (*Mr Forsythe 1933 via The Daily Telegraph 25 Jul 1933: 9*).

By 1937, the strength of the Company at Snapper Island was 110, with 75 young boys and men on the enrolment waiting list (*Figure B.4*). The Company had very little room and money to support too many enrolments, though there were said to be hundreds of boys anxious to join up. The “Sydney” Training Depot was known for its thoroughness, cleanliness and discipline – imbued with the spirit of the Navy. Cadets learned a full range of maritime skills and all aspects of life on a naval boat. They also learned radio operation, water safety, first aid, cooking, marksmanship and a range of construction skills during the land reclamation and building work. All of these activities were undertaken around a strict naval schedule (*The Sydney Morning Herald 27 Jul 1940:16*).



Figure B.4 “Sydney” cadets, 1937 (Samuel 1937:25)

The boys at the age of 10 to 14 would enter into the boy division at Snapper Island, with boys from 14 to 18 into the cadet division, and from 18 upwards into the seaman division. Many of these young boys and men travelled long distances, and with their own savings to train at Snapper Island.

‘Drawn from every sphere of life, many of these embryo seafarers have to travel miles to parade on Wednesday nights and Saturday afternoons’ (*Samuel 1937:25*).

The cadets were expected to pay for their own uniforms and also to subscribe sixpence a week each to keep the Company financially alive. Food on Snapper Island was also provided by the Cadets and cooked in the galley.

‘The height of ambition for each lad seems to be to spend his annual holiday and every other available moment in camp at the Depot and work – truly a labour of love, as every boy and every officer on the island has to work for his living in some sphere of life’ (*Samuel 1937:25*).

The purpose of corps was to instil a love of the sea, not necessarily induce them to enter the navy or merchant navy, though many of them did enter these fields after the four (4) year course. From

landing at Snapper Island, the cadets would 'aboard' the island across the 'ship's' boom (*Figure B.5*). Novices were known to quickly become sure-footed, despite the precarious entrance (Samuel 1937:25). Trainees became adept at repairing all types of rigging, with Boys who displayed outstanding ability able to apply to become Petty Officers with a chance for a career (*Figure B.6*).



Figure B.5 Cadets 'boarding' the Snapper Island 'ship' from the boom (Samuel 1937:25)

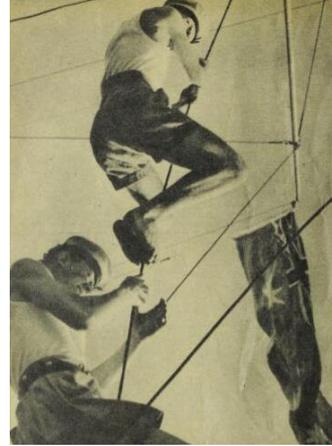


Figure B.6 Cadets repairing rigging at Snapper Island (Samuel 1937:25)

The engineering workshop was well equipped, with boys learning to repair and overhaul engines (*Figure B.7*). Wire and rope splicing was an important part of the seamanship course at Snapper. The cadets learnt to manipulate the fid, a skill which was used to separate strands of the rope so the free ends can be spliced into place (*Figure B.8*).

The Signal Station kept in constant contact with the ship's boats on the Harbour carrying messages for classes learning the secrets of seamanship. There was also very practical training at Snapper Island, with cadets going out on the small whaling vessels. Cadets were also involved in sailing competitions, sailing in ten feet raft dinghies. This was a very popular part of the training course, with the cadets winning many trophies for sailing (NAA ID: 11139781).

Shipping authorities at the time were concerned at the lack of suitable facilities for training personnel in Australia and welcomed the continuation of the school at Snapper Island.



Figure B.7 Cadets learning how to overhaul engines (Samuel 1937:25)



Figure B.8 Cadets learning how to manipulate the fid (Samuel 1937:25)

B.6.3.1 Women's Volunteer Naval Reserve

From 1945, girls from the Women's Volunteer Naval Reserve were admitted into the Sydney Naval Training Corps (Figure B.9). These young women were trained in semaphore and other branches of signalling (Figure B.10). These cadets were accepted from the age of 14 and older. The sick bay at Snapper fitted out as a service unit, with fully equipped medical supplies for the girls to learn first aid and to receive training as Sick Berth attendants (Figure B.11).

Not all women began a naval career after their training at Snapper, though some did join the Navy and mercantile marine.

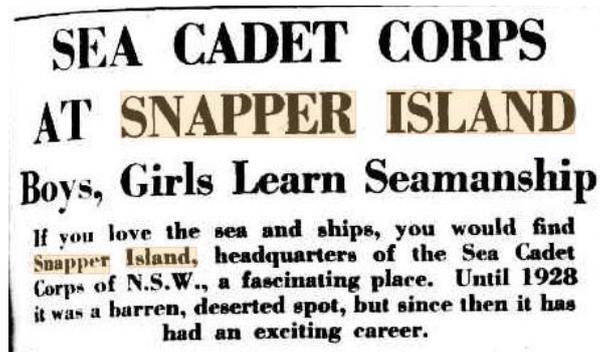


Figure B.9 The Sydney Morning Herald first page news, 18 Dec 1946 (The Sydney Morning Herald 18 Dec 1946 p.1)



Figure B.10 Women's Volunteer Naval Reserve cadets practicing semaphore signalling at Snapper (Samuel 1937:25)



Figure B.11 Women's Volunteer Naval Reserve cadets 'tending' to sickbed (Samuel 1937:25)

B.7 WWII: Snapper Island as RAN Accommodation

AHT 7.7 – Defending Australia, AHT 7.7.1 – Providing for the common defence

Prior to WWII Forsythe offered Snapper Island to the Royal Australian Navy for accommodation for naval guards. At this time Cadets were also offered up to ferry guards to and from their posts around the harbour.

Snapper Island was also subsequently occupied by Naval Guards, USA Ship and Gun Crews, 'B' Water transport of the Australian Imperial Forces and Independent Troop, Great Britain Maritime

Royal Artillery. It was believed that Snapper Island had been 'taken over' by these Companies and that the Sydney Training Depot was re-located; however, The Sun newspaper reported (3 May 1944 p.5) that the Payne Memorial Building on the Island was made available as a billet and club for men of the Maritime Royal Artillery, though the Island had not been taken over by them 'as was originally stated'.

In September 1944. Lady Wakehurst visited the Royal Maritime Artillery at Snapper Island and presented members with portraits of the King and Queen. Lady Wakehurst was brought to Snapper Island at her own request and was taken to the landing barge used by troops for transport to the mainland. Wakehurst was received by the then Commanding Officer of the base, Captain Peter Casson, and inspected a guard of honour of maritime military gunners. Wakehurst spent time speaking informally with many of the gunners, interested in their personal stories and experiences from the War and bombings in Britain (The Sydney Morning Herald 21 Sep 1944 p.6).

During WWII, further reclamation took place on the island and a number of additional buildings were constructed. These included the Ablution Block (Building 7), Ward Room (Building 3), Gymnasium (Building 8), and Starboard Class Room/Mess (Building 11). The Recreation Deck of the J Payne Memorial Building was also refitted using the King George Fund for Sailors in 1944 (Clive Lucas Stapleton, 2010).



Photograph B.24 1943 Aerial Image of Snapper Island. Location of Ablutions Block marked in red, although not present at this time (LPI SIX Maps).

B.8 Post War Changes to the Sea Cadets

In 1950, the Navy League became incorporated in Australia, and amendments to the Naval Defence Act enabled the Royal Australian Navy to share some responsibility for the training of Navy League

Cadets. In 1954, the Australian Sea Cadet Corps (ASCC) was formed from the old Navy League Sea Cadet Corps and the Snapper Island Sea Cadet Unit.

B.8.1 Sydney Training Depot Snapper Island Ltd.

The Snapper Island Unit became known as the TS (Training Ship) Sydney Unit. In 1960, Forsythe formed Sydney Training Depot Snapper Island Ltd., so that the activities of the group would continue after his death (*Photograph B.25*). It was in the same year that Forsythe opened a museum of artefacts and curiosities from Australia's naval history on Snapper Island. He also formed the Snapper Island Company made up of cadets and ex-cadets to create and manage the museum (The Dictionary of Sydney 2020).

By 1970, the various branches of the military considered dropping their respective cadet corps. A Committee of Inquiry investigated the ASCC and recommended that the Commonwealth Government take over responsibility for the organisation, ending the Navy League's involvement in naval cadet training. Legislation was passed forming a single organisation called the Naval Reserve Cadets (NRC) under the control of the Royal Australian Navy.

In 1974, the Naval Historical Society of Australia and its recently appointed committee visited Snapper Island. Following this visit, a close association between Forsythe and the Society (who had its own collection of naval artefacts on Garden Island) was developed (Naval Historical Society 1990).



Photograph B.25 Snapper Island 1960 (Dictionary of Sydney and City of Sydney Archives [081\081685])

In 1976, the Snapper Island Unit decided not to join the NRC and to remain independent; however, in 1977 the Snapper Island Unit split with some members transferring to Spectacle Island (ERM, 2014).

Len Forsythe died in 1981 after being awarded the British Empire Medal in 1973. His funeral was conducted in the chapel at Garden Island. Following the death of Forsythe the Naval Historical Society of Australia maintained the gallery in the Snapper Island Museum (Naval Historical Society 1990).

By 1987, the Snapper Island Unit received an eviction notice from the Commonwealth due to the proximity of explosives storage in lighters around and on Spectacle Island. This was challenged in the court by Sydney Training Depot Snapper Island Ltd and later rescinded by the then Minister for Defence, Kim Beazley as the storage of explosives at Spectacle Island had ceased. At this time, the Royal Australian Navy also attempted to control the island, but this was later withdrawn.

In the 1980s, Snapper Island was transferred as a surplus Navy property to Finance's predecessor, the Department of Administrative Services, for disposal. In 1999, the Finance Minister approved the transfer of the Site to Sydney Harbour Foreshore Trust (SHFT).



Photograph B.26 The wardroom at Snapper Island – the founder, Lieutenant Commander Forsythe (left) with First Lieutenant J Hampson. In the background are Petty Officer Instructors Fell and Gillette (c1960) (NAA Item 11729674).

B.9 Len Forsythe Collection and the Snapper Island Museum

By 2000, there were no cadets being trained at Snapper Island and general public access had ceased unless by appointment. Up to 2006, Sydney Training Depot Snapper Island Ltd operated the museum on the island and looked after the Len Forsythe collection.

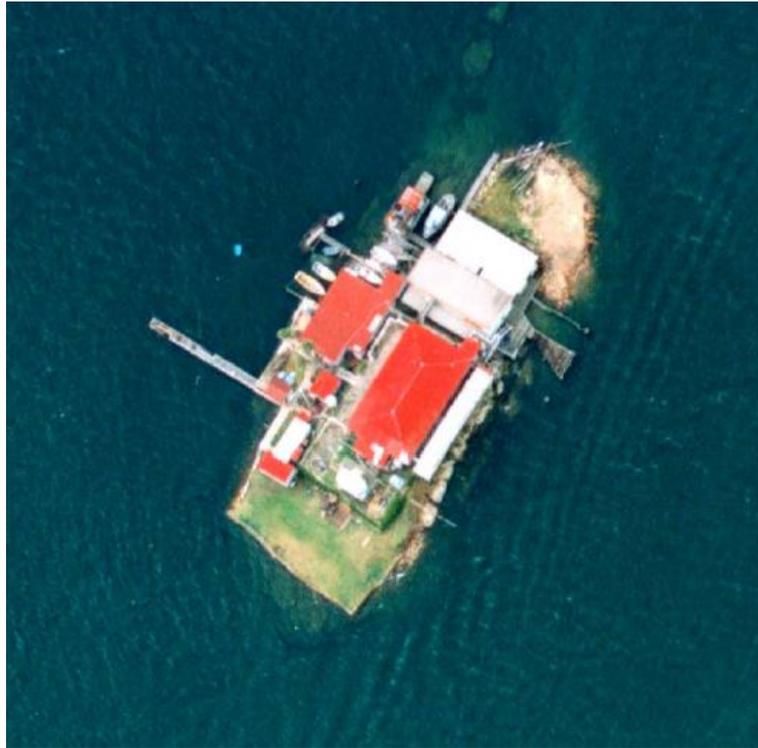
The museum collection was subsequently removed to Spectacle Island and the Navy Museum at Garden Island c2006 and the island has remained unoccupied since. The company was evicted by the Commonwealth due to the poor condition of the buildings and the inability to procure adequate insurance cover.



Photograph B.27 Interior of Quarter-deck at Snapper, with souvenirs from HMAS Sydney displayed, including steering column, compass and telemeters (State Library NSW: FL1373653)

B.10 Snapper Island Today

Snapper Island remains vacant and in varying states of disrepair. Several buildings have been removed and others are inaccessible due to structural instability. Over the past several years, vegetation management works have been undertaken on a semi regular basis to limit nesting of Silver Gulls and mitigate adverse impacts on the structures. Stabilisation works, such as replacement of roof sheeting, repair/ replacement of doors, and installation of bird-proofing measures have been undertaken to respond to deterioration of the structures. Several heritage advice and management documents have been prepared during this time.



Photograph B.28 1999 aerial photograph of Snapper Island (Department of Conservation and Land Management via Clive Lucas 2001)

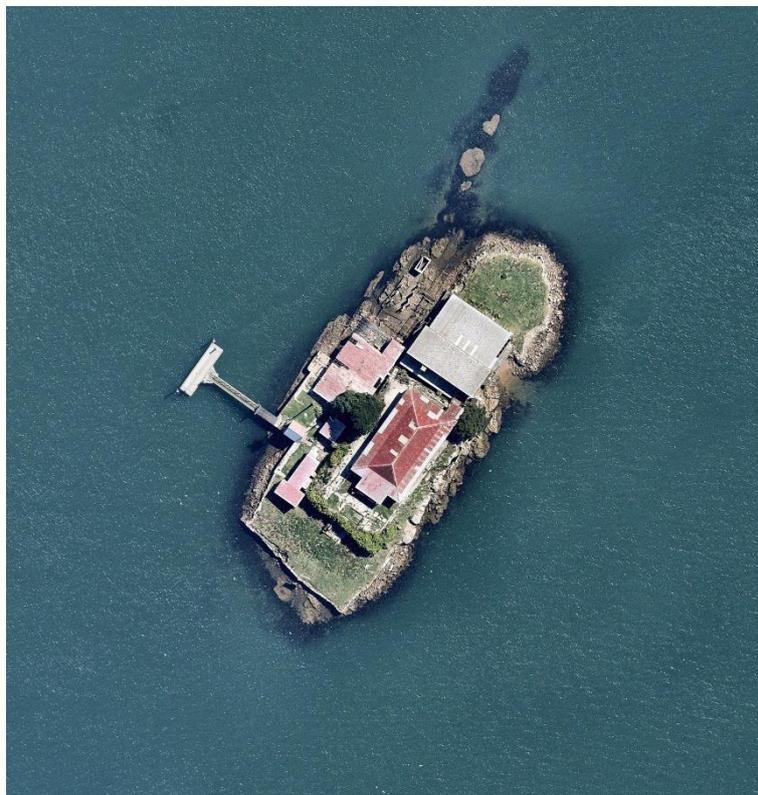


Figure B.12 2020 aerial photograph of Snapper Island (NearMap)

APPENDIX C PHYSICAL ANALYSIS

Building 2 – Guard House

The Guard House is situated on the far port side of the island, at the end of the port wharf. The building acts at the entry way to Snapper Island and is labelled with the name in bold letters. The structure is timber and corrugated iron, with a narrow hallway running directly through with a small room to the north of the hallway. There is a bench on the southern side of the hallway. The structure is in fair condition, with some corrosion. There appears to be no major structural damage to the building.



Figure 8.13 Guardhouse, from Port Wharf (ERM, 2018)

Building 3 – Officer’s Wardroom Mess

The Officer’s Wardroom Mess is a small single storey timber and corrugated iron structure at the aft end of the island, adjacent to the Officer’s Cottage (Building 14). An internal inspection of the building could not be undertaken during the site inspection. The building is in in poor to fair condition, with corrosion and flaking paint noted (as is common across the island).



Figure 8.14 Officer’s Wardroom Mess, from Port Wharf (ERM, 2018)

Building 4 – Generator Room and Building 5 – Women’s Toilet Block

The Generator room and Women's Toilet block are small timber framed corrugated iron structures located on port side of the lower deck of the island. Access to the interior of the structures was not available during the site inspection and a thorough analysis of the internal condition could not be undertaken. The exterior of the structures is corroded and there is evidence of flaking paint. Additionally, the generator room is marked as containing asbestos. The structures are in poor condition and no subject to regular use or maintenance.



Photograph 8.29 Generator room, from port side (ERM, 2018)



Photograph 8.30 Women’s toilet block, from central walkway (ERM, 2018)

Building 6 – Boatshed and Workshop

The Boatshed and Workshop are located on the port side of the island, to the north of the guardhouse. The Boatshed/workshop are timber framed structures with corrugated iron sheeting on the exterior. The Boatshed is open at the northern end, the workshop has a small opening at the western end. The structures are in very poor condition, with hazard signage indicating asbestos contamination and unstable surfaces. The open end of the Boatshed shows the poor condition of the flooring and of the internal framing – some of which has decayed and fallen. Leading from the Boatshed is a ramp constructed of timber and iron 'I' beams. The 'I' beams are heavily corroded and the timbers are water damaged.



Photograph 8.31 Boatshed from fore end of island (ERM, 2018)



Photograph 8.32 Iron boat ramp, with heavy corrosion (ERM, 2018)

Building 7 – Ablutions Block

The Ablutions Block is a simple timber frame corrugated iron structure situated on concrete pillars to raise it above the tide level. The structure is a single storey containing showers and toilets, with an additional elevated timber structure at the aft end which holds a corrugated iron water tank. To the north of the structure is the remains of a concrete septic tank, located at water level.

The structure is in very poor condition. The concrete pillars are suffering spalling and cracking, the timber have rotted and cause collapse of portions, and the lead paints are flaking and falling away from the structure. As a result of this condition and the serious health and safety risks posed by the structure, with EPBC Approval this building was demolished in early 2019.



Figure 8.15 Ablutions Block, from port side of Gymnasium prior to demolition (ERM, 2018)

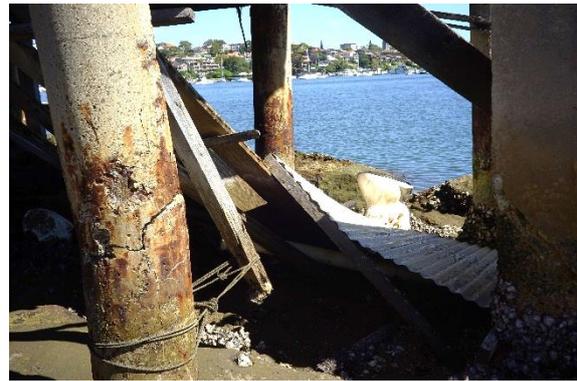


Figure 8.16 Base pillars of Ablutions Block prior to demolition (ERM, 2018)

Building 8 – Gymnasium

The gymnasium is a single storey timber and corrugated iron structure located just north of the J. Payne Memorial Building at the fore end of the island. The interior could not be accessed, as the door (at the starboard end) was locked and there was no available key. Previous investigations indicate that the building consists of one long room with no internal divisions. The structure is in poor condition, with significant corrosion of the corrugated iron noted during the inspection.



Photograph 8.33 Port side of the Gymnasium (ERM, 2018)



Photograph 8.34 Aft wall of the Gymnasium, from covered walkway (ERM, 2018)

Building 9 – J. Payne Memorial Building

The J. Payne Memorial building is two storey timber frame corrugated iron structure situated on the lower deck at the fore end of the island. The structure contains bunks and storage rooms on the lower floor and a former recreation room on the upper floor. The upper floor has a double door on the aft side, which formerly lead to a walkway which accessed the upper deck. This walkway has since collapsed and been removed and the door is no longer operable.

The building has timber floors throughout and the timbers of the upper floor is still in good condition. The stairs have been removed and replaced with an aluminium ladder, allowing access to the upper floor. The walls are clad with plasterboard and timber framing, with timber doors and window frames throughout.

The lower floor has two sets of double doors leading to a covered walkway between the J. Payne building and the Gymnasium, on the aft side. The doors lead into a main bunk room, containing a number of steel frame bunk beds. There are a series of smaller rooms leading off the main bunk, including an officer's quarters with lockers and additional beds; a storage/locker room which still contains uniforms and provisions; a small sick bay containing an upturned bed, in which the flooring has collapsed; and a sitting room.

The upper floor has a similar layout, featuring a central room with four smaller rooms branching off. The main room contains several chairs/couches, a billiards table with maps laid out across the top, and miscellaneous items including a type writer and a 'Hoover' vacuum cleaning. The four smaller rooms are located at the starboard and port ends. At the starboard end, one contains storage cupboards with food and other supplies still inside, and some speakers and a lamp affixed to the wall. The other room consists of a small kitchenette with cupboards and a fridge still remaining. The items within the building are generally in poor condition; however the structure itself is in a fair to good condition. At the port end, the rooms contain additional beds and storage units.



Photograph 8.35 Lower floor, bunks and general layout (ERM, 2018)



Photograph 8.36 Lower floor, sitting room with discarded furniture (ERM, 2018)



Photograph 8.37 Upper floor, general layout (ERM, 2018)



Photograph 8.38 Upper floor, starboard end storage room (ERM, 2018)

Building 10 – Main Deck

The Main Deck is the most prominent building on Snapper Island, as it is centrally located and occupies the majority of the upper deck. The structure is single storey timber frame with corrugated iron cladding to the exterior. The roof is hipped with skillion surrounds, all clad with corrugated iron sheeting. The main entrance is through a set of double timber doors on the port side of the building, leading into the main hall of the deck. There are secondary entrances on the starboard and fore sides of the building, leading to the kitchen. There are also two fire exit doors on the fore and aft sides, although these have been permanently fixed closed since the abandonment of the building.

The interior of the structure is simple in design. There are a total of 15 rooms branching off the main hall, some with remnant bulkhead fittings at the base of the entry. These were designed to simulate stepping over the partitions on a naval ship. The walls are clad with vertical timber boards which have been painted in pale blue. The roof framing and cladding is exposed with no remaining ceiling. The floors are timber boards, with some accent paintings in hallways and surrounding doors.

The aft end of the interior retains the paintings used to decorate the HMAS Sydney display area. No fittings remain in this location. The remainder of the main hall contains miscellaneous items which have been left behind, including a record player, several lockers, a picnic set and a drawer of silver cutlery. The rooms branching off the main hall contain various other materials and objects which have been left, including painting, footlockers, radio equipment, kitchen appliances and tools. One of the rooms still contains mattresses in a bunk and a couch, which have remained unused for many years. There are some remaining display cases, demonstrating the former museum usage.

The structure is in fair conditions, although there is significant dust, grime and bird droppings throughout the interior. No significant damage impacting the main structure was noted during the inspection. There is evidence of some water damage and peeling paint throughout, along with some carpets in side rooms which are in need of replacement. The concrete flooring in the kitchen has significant cracking and is in need of repair.



Photograph 8.39 Exterior of Main Deck, from Aft end (ERM, 2018)



Photograph 8.40 Interior of main deck looking to fore end (ERM, 2018)



Photograph 8.41 Discarded items (ERM, 2018)



Photograph 8.42 Kitchen at fore end of structure (ERM, 2018)



Photograph 8.43 Evidence of water damage to a portion of internal walling (ERM, 2018)



Photograph 8.44 Evidence of significant bird activity within the structure (ERM, 2018)

Building 14 – Officer’s Cottage

The Officer’s Cottage is a small single storey corrugated iron structure, probably with a timber frame (although this is not visible). The roof is a corrugated iron skillion, which was ‘peeling’ away from the building framing and severely damaged during the most recent inspection. The Cottage consists of two rooms, a living/dining/kitchen space and a bedroom, with an ensuite bathroom.

Access to the cottage is through a timber door into the living area, which contains a small kitchenette, a hearth/fireplace, a sitting area and a small dining table. Flooring throughout is carpet. The interior walls are timber cladding and plasterboard. The splashback to the kitchenette is linoleum or vinyl.

The bedroom contains a single bed and a chair, while the bathroom contains a toilet, small sink and medicine cabinet, and a locker. The rooms have miscellaneous items stored within them, including personal effects and building supplies.

The exterior of structure is in fair to poor condition, with only minimal corrosion impacting the external walls. The condition of the roof is very poor, as the corrugated iron has detached and is allowing water and other materials into the structure.

The interior is in fair condition, with no major structural damage. The carpets are dirty and paint splattered but largely intact. The cabinets are water damaged and dirty, but appear structurally sound and could be repaired. The bathroom is in fair condition, although it is unlikely that the plumbing is still in good working order.



Photograph 8.45 Living/dining space (ERM, 2018)



Photograph 8.46 Kitchenette (ERM, 2018)



Photograph 8.47 Bedroom, showing bed and beside table (ERM, 2018)



Photograph 8.48 Bathroom, showing toilet and interior walling (ERM, 2018)

APPENDIX D HISTORIC AND INDIGENOUS HERITAGE ASSESSMENT

Description

The Site has been described in detail in *Section 3.2* and *Appendix C* of this CMP. The history of the site is detailed in *Section 4*. The key elements of the Site in relation to its historic heritage values are outlined below.

- The site has been constructed to mimic the shape and layout of a ship, in order to aid training of the navy cadets. This layout remains intact on the island and is easily interpreted, despite overgrown vegetation.
- The main deck remains the most distinct 'naval' style structure on the island, retaining evidence of decorative and structural features reminiscent of naval vessels, utilised in training.
- The utilitarian form of the structures demonstrates the 'makeshift' and haphazard construction of the island's building, linking to the historic construction by Naval Cadets. The form and materials are easily identifiable and remain as evidence of this event.
- The landscape position of the island within Sydney Harbour links to the social and aesthetic values, as the community value the island as a feature of their local environment.

CHL Site Features

The entire site is included on the CHL. Key features of the site highlighted in the listing are:

- the fore and aft areas of reclaimed land;
- the utilitarian structures, built by the Navy League Cadets;
- the landscape features of the island within Sydney Harbour.

Assessment of Built Heritage Significance

This section analyses the site and its components in terms of its intactness, rarity, and archaeological potential.

Integrity and Intactness

The site has remained largely in the same layout since its establishment in 1932, although buildings have been added and removed throughout the course of its usage. Structures added, particularly during WWII and the 1960s, added necessary support structures to the island and contributed to the overall function and aesthetic. The removal of buildings, which has occurred largely since the removal of the Sea Cadets and the Len Forsythe museum collection, has been detrimental to the aesthetic and historical values of the island. The loss of the signal station, in particular, has dramatically influenced interpretation of Snapper Island's ship like design.

Although the overall layout of the island remains intact, the fabric utilised in the structures has been significantly compromised. In the years since the removal of activities at Snapper Island, the structures have deteriorated through exposure to environmental factors. As many of the structures are timber and corrugated iron, continual exposure to salt water and salt spray has been detrimental to the overall condition of the fabric. Structures such as the boat shed were in very poor condition at the time of the site inspection and will likely require demolition or emergency repair.

The larger structures, such as the main deck, J. Payne memorial building and the Gymnasium, are in better condition, suffering only mild damage or deterioration. The remaining structures are in a fair to poor condition and require urgent attention.

Archaeological Potential

The Clive Lucas Stapleton CMP (2007) analysed the archaeological potential of the site. The key findings are summarised here for ease of reference:

- Snapper Island, consisting of a heavily modified landscape of excavation, levelling and land reclamation, is broadly defined as an archaeological feature in itself. Evidence of these activities is related to two phases, Stage 1 initial levelling and fill (undertaken by hand by the Navy League) and Stage 2 reclamation of the fore and aft ends (undertaken by machine).
- The sandstone outcrop and shoreline, along the southeast of the island, remains as evidence of the natural formation of the island. This area also contains a small man-made rock wall containing a semi-circular garden.
- Evidence of former structures predating the levelling and infill activities is unlikely to be identified.
- Evidence of Aboriginal occupation of the island is similarly unlikely to be identified.
- Evidence of the former baths/ocean pools may be located beneath the water on the northeast side of the island. Pylons from the construction of these baths was evident above the water line during the 2007 inspection.
- Two remnant pylons, potential former mooring posts, were identified on the southwest side of the island during the 2007 inspection.
- Underwater features or artefacts may be located in the water surrounding the island, particular in the location of the slipway, Port Wharf (original location), the former baths and the timber storage structure.
- Artefacts in the landfill are general refuse and industrial scrap, which is to be expected in the demolition fill that has been used to create the land. Some artefacts have been used in the construction of sea walls, marking the time in which they were constructed. Other objects located on the island are largely 'dumped' items, such as air conditioners and larger industrial rubbish.
- Small personal items, such as tools etc are unlikely to be identified on the surface or in situ at Snapper Island, due to the culture of reuse and repair. Items would likely be lost rather than discarded. Additionally, there is no evidence of rubbish discard on the island, suggesting most refuse was taken to the mainland for disposal.
- The retaining walls constructed around the island are evidence of the techniques utilised by unskilled workers in manufacturing the island and its buildings.

Analysis of this assessment against the documentary information as reviewed in the previous section identifies the following issues:

- Evidence of the ocean pools is no longer visible above the water at Snapper Island, although it is possible that remains are still located below the water in this location.

All other statements have been validated by assessments undertaken by ERM between 2018 and 2020. Historical and Aboriginal archaeological potential is considered to be low, and related strictly to evidence of land reclamation. Research and scientific value are also considered to be low, based on low potential for archaeological remains and limitations based on excavation at Snapper Island due to ground contamination.

APPENDIX E NATURAL HERITAGE ASSESSMENT

E NATURAL HERITAGE ASSESSMENT

This natural heritage assessment has been replicated from the HMP prepared in 2019 by ERM for the Department of Finance. No significant issues were identified during the 2019 assessment, and no changes to the vegetation or fauna on Snapper Island have occurred since its preparation. In consideration of these factors, the 2019 assessment has been deemed appropriate for inclusion in this report.

E.1 Methodology

E.1.1 Desktop Review

A two-step process was used to identify the biodiversity values within the site. This included a preliminary desktop investigation and a site area inspection.

Based on the desktop information and field observations, a likelihood of occurrence assessment was conducted. The assessment determined the likelihood that threatened and migratory species and ecological communities listed under the EPBC Act and/o

r BC Act occur within the site area.

The desktop investigation included obtaining current data on flora and fauna species, populations and communities which have the potential to occur within the site area, as well as a review of aerial imagery, relevant databases and available vegetation mapping data sets as shown in *Table E.1*.

Table E.0.1 Desktop Information Sources

Source	Description	Search Criteria
Protected Matters Search Tool (PMST)	The PMST is a predictive tool which provides an indication of Matters of National Environmental Significance (MNES) that are known, may, or have potential to occur within a search area.	10 km search area.
BioNet – Atlas of NSW Wildlife. NSW Government, Office of Environment and Heritage	The atlas of NSW contains records of flora and fauna species.	10 km search area.
OEH Threatened Biodiversity Profiles	The database provides information about species and ecological communities listed under the BC Act.	Individual species profiles.
Species Profile and Threats Database (SPRAT), Australian Government, Department of the Environment and Energy	The database is designed to provide information about species and ecological communities listed under the EPBC Act.	Individual species profiles.
The Native Vegetation of the Sydney Metropolitan Area – Version 3 – VIS_ID 4489	This mapping dataset and associated technical report details the broader context of vegetation types present within the locality of the project area.	Sydney Metropolitan Area.

PMST and BioNet searches focused on a 10 km radius from the site area from a central point of Latitude -33.852202 and Longitude 151.166962 as shown in *Appendix F* and *Appendix G*. Data from both searches was combined and a 'likelihood of occurrence' (LoO) assessment for each threatened and migratory species and ecological community listed under the EPBC Act and/or BC Act was completed as shown in *Appendix H*, using the criteria as shown below in *Table E.2*.

Table E.0.2 Likelihood of Occurrence Assessment Criteria

Category	Description
Known	<ul style="list-style-type: none"> ■ The ecological community / species has been recorded at the site during recent field surveys; or ■ Database records demonstrate that the ecological community / species has been known to occur at the site within the last 10 year period.
Potential	<ul style="list-style-type: none"> ■ The ecological community / species' known distribution includes the site, and suitable habitat is present within the site; or, ■ Database records demonstrate that the ecological community / species has been known to occur in the site, however has not been recorded within the last 10 years; or ■ The species is a wide ranging flying species which may 'fly-over' the site, regardless of the habitat types present and has been recorded within 10 km of the site.
Unlikely	<ul style="list-style-type: none"> ■ The ecological community / species has/ has not been recorded within 10 km of the site and suitable habitat does not occur within the site; or ■ The site is not within the TEC / species' known distribution; or ■ Sufficient field surveys have been conducted to conclude that the species is likely to be absent.

E.2 Site Inspection

An ecological site inspection was conducted on the 5th of December 2018 and included the following:

- Flora survey: flora species within the site area were surveyed using a meander technique, in a manner described by Cropper (1993) as the 'Random Meander Technique'. This involved walking in a random manner throughout the entire site and recording each plant species observed within each structural layer;
- Habitat assessment: to determine the general habitat value of the site area with observations of:
 - extent of habitat types;
 - habitat type in the site area and surrounding area including connection with similar habitat in the surrounding area;
 - level of disturbance; and
 - structural and floristic diversity.
- Incidental fauna observations: direct observations of fauna species as well as signs, tracks and other traces.

The site investigation effort and is summarised in *Table E.3*.

Table E.0.3 Site Investigation Summary

Date	Time	Activity	Weather
Wednesday 05/12/18	0900-1245	General site inspection Vegetation surveys	Daytime Temperature Min – 17.6 Daytime Temperature Max – 20.8 Max Wind Speed – 28 km / hr

1. Weather and climate data for survey dates was taken from the Bureau of Meteorology weather station, Sydney Harbour (Station 066196)

E.2.1 Limitations

The likelihood of occurrence assessment applies the precautionary method when determining the presence/absence of species within the site area. This method is used when detailed quantitative surveys are unavailable. If the site area occurs within the species known distribution and potential habitat occurs, it is assumed that the species has the potential to occur.

A large area of the site was not accessed due to the presence of nesting Silver Gulls (*Chroicocephalus novaehollandiae*). Limited physical inspection of these areas was conducted at a distance.

E.3 Description of environment

E.3.1 Matters of National Environmental Significance

The results of the LoO assessment for threatened and migratory species and ecological communities listed under the EPBC Act (MNES) is included in *Appendix H*. The full output of the PMST and BioNet search is also presented in *Appendix F* and *Appendix G*.

A summary table of threatened and migratory species listed under the EPBC Act and having potential to occur in the site area is summarised in *Table E.4*.

Table E.0.4 Summary of Threatened and Migratory Species Listed under the EPBC Act

Identification		Database			Assessment	
Species Name	Common Name	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Mi	BioNet		<p>Habitats are characterised by the presence of large areas of open water including larger rivers, swamps, lakes, and the sea.</p> <p>Occurs at sites near the sea or sea-shore, such as around bays and inlets, beaches, reefs, lagoons, estuaries and mangroves; and at, or in the vicinity of freshwater swamps, lakes, reservoirs, billabongs and saltmarsh.</p> <p>Terrestrial habitats include coastal dunes, tidal flats, grassland, heathland, woodland, and forest (including rainforest).</p> <p>Breeding habitat consists of mature tall open forest, open forest, tall woodland, and swamp sclerophyll forest close to foraging habitat.</p> <p>Feed mainly on fish and freshwater turtles, but also waterbirds, reptiles, mammals and carrion. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years .</p>	Potential – this wide ranging raptor may fly over the Site area whilst hunting. No potential hunting habitat was present within the Site, the disturbance present and lack of significant canopy trees reduces the site area’s potential to provide nesting habitat for this species.
<i>Hydroprogne caspia</i>	Caspian Tern	Mi	BioNet		<p>The Caspian Tern is mostly found in sheltered coastal embayments (harbours, lagoons, inlets, bays, estuaries and river deltas) and those with sandy or muddy margins are preferred.</p> <p>This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.</p>	Potential - The species may ‘fly-over’ the site
<i>Sterna hirundo</i>	Common Tern	Mi	BioNet		<p>Common Terns are marine, pelagic and coastal. In Australia, they are recorded in all marine zones, but are commonly observed in near-coastal waters, both on ocean beaches, platforms and headlands and in sheltered waters, such as bays, harbours and estuaries with muddy, sandy or rocky shores. Occasionally they are recorded in coastal and near-coastal wetlands, either saline or freshwater, including lagoons, rivers, lakes, swamps and saltworks. Sometimes they occur in mangroves or saltmarsh and, in bad weather, in coastal sand-dunes or coastal embayments.</p> <p>This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.</p>	Potential - The species may ‘fly-over’ the site,
<i>Hydroprogne caspia</i>	Caspian Tern	Mi	BioNet		<p>The Caspian Tern is mostly found in sheltered coastal embayments (harbours, lagoons, inlets, bays, estuaries and river deltas) and those with sandy or muddy margins are preferred.</p>	Potential - The species may ‘fly-over’ the site

Identification		Database			Assessment	
Species Name	Common Name	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
					This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	BioNet	PMST	<p>Occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops.</p> <p>This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.</p>	Potential – limited foraging habitat present within site

E.4 Whole of the Environment

E.4.1 Soils

Based on information from the Sydney 1:250,000 Geological Series Sheet 1966, the site is underlain by Hawkesbury Sandstone of the Wianamatta Group, describes as medium to coarse-grained quartz sandstone, very minor shale and laminite lenses.

E.4.2 Topography and Surface Hydrology

Snapper Island is a dual level island surrounded by Sydney Harbour. Based on the topography of the site surface water flow is likely to be south to north.

E.4.3 Ecology

Snapper Island occupies 0.4 ha and is located in the Sydney Basin bioregion, Pittwater sub region near Birkenhead Point in Sydney Harbour with Cockatoo and Spectacle Islands located to the north.

The site area is a low-lying boat-shaped island which was levelled and cleared in 1931. Previous to this, the island was a small sandstone knoll. Sparse vegetation and low lying shrubs characterised the islands throughout the nineteenth century. Two Cabbage Plant Palms (*Livistona australis*) were planted in 1931.

E.4.3.1 Vegetation and Habitat Description

The majority of the site area has been developed and consists of former defence buildings. The majority of the space surrounding the buildings consists of extensive noxious weed infestations, naturalised plants and native species. Native vegetation within the site area have been exposed to varying degrees of disturbance from weeds.

Key habitat features within the site area include low lying shrubs and rocky shores. Trees within the site area are mostly stunted, and none were observed to contain hollows of a significant size to provide roosting or nesting habitat for fauna species. A number of Defence buildings were observed to contain cavities and voids which may provide potential microbat roosting habitat. Fruit trees on the island may provide potential foraging habitat. These areas are likely to be utilised by species more tolerant of disturbance that are more common in urban environments and/or as a transitory 'stepping stone' by more mobile species.

The site inspection did not identify any native vegetation communities within the site area.

E.4.3.2 Threatened Ecological Communities

The LoO assessment identified that no TECs that have the potential to occur within the site area, this was confirmed during the site inspection.

E.4.3.3 Threatened Flora Species

No EPBC Act or BC Act listed threatened flora species were observed within the site area during the site inspection and no previous field surveys were available. A flora species list is included in *Appendix I*.

E.4.3.4 Threatened Fauna Species

There was evidence of megabat activity during the site inspection. The site area contains potential foraging habitat (fig trees) for megabat species and is within their distribution.

The LoO assessment identified an additional eleven BC listed threatened fauna species that have the potential to occur within the site area:

- *Haliaeetus leucogaster*, White-bellied Sea-Eagle (BC Act: Vulnerable, EPBC: Act Migratory)
- *Lophoictinia isura*, Square-tailed Kite (BC Act: Vulnerable)
- *Burhinus grillarius*, Bush Stone-curlew (BC Act: Endangered)
- *Haematopus longirostris*, Pied Oystercatcher (BC Act: Endangered)
- *Ninox strenua*, Powerful Owl (BC Act: Vulnerable)
- *Pteropus poliocephalus*, Grey-headed Flying-fox (BC Act: Vulnerable, EPBC Act: Vulnerable)
- *Saccolaimus flaviventris*, Yellow-bellied Sheath-tail-bat (BC Act: Vulnerable)
- *Mormopterus norfolkensis*, Eastern Freetail-bat (BC Act: Vulnerable)
- *Miniopterus australis*, Little Bentwing-bat (BC Act: Vulnerable)
- *Miniopterus schreibersii oceanensis*, Eastern Bentwing-bat (BC Act: Vulnerable)
- *Myotis macropus*, Southern Myotis (BC Act: Vulnerable)

While potential habitat for these species is present within the site area, it is considered to be degraded, particularly due to the abundance of weeds and the site area being limited to 0.4 ha within a highly disturbed landscape.

E.4.3.5 Migratory Species

The LoO assessment identified four migratory species listed under the EPBC Act that have the potential to occur within the site area:

- *Haliaeetus leucogaster*, White-bellied Sea-Eagle
- *Hydroprogne caspia*, Caspian Tern
- *Sterna hirundo*, Common Tern
- *Hydroprogne caspia*, Caspian Tern

E.5 References

Cropper, S.C. (1993) Management of Endangered Plants. CSIRO Publications Victoria.

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Office of Environment and Heritage (2019) Threatened Biodiversity Profile Search, Office of Environment and Heritage, NSW. Available from: <https://www.environment.nsw.gov.au/threatenedspeciesapp/>

MydigitalEarth (2014). The Michael Morcombe eGuide to Australian Birds (Version 1.4.4). [Mobile application software] Retrieved from: <http://www.michaelmorcombe.com.au/>

APPENDIX F

EPBC PROTECTED MATTERS SEARCH REPORT



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 22/01/19 13:41:07

[Summary](#)

[Details](#)

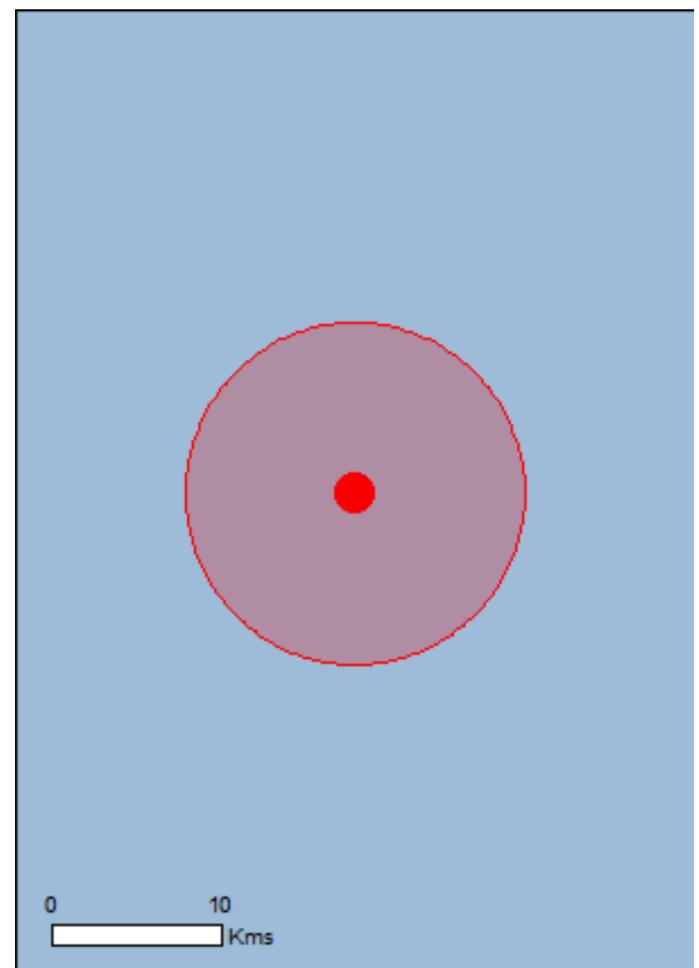
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

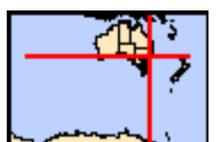
[Acknowledgements](#)



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[Coordinates](#)

[Buffer: 10.0Km](#)



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	6
National Heritage Places:	7
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	10
Listed Threatened Species:	86
Listed Migratory Species:	69

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	52
Commonwealth Heritage Places:	54
Listed Marine Species:	93
Whales and Other Cetaceans:	11
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	6
Regional Forest Agreements:	None
Invasive Species:	48
Nationally Important Wetlands:	3
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

World Heritage Properties		[Resource Information]
Name	State	Status
Australian Convict Sites (Cockatoo Island Convict Site Buffer Zone)	NSW	Buffer zone
Australian Convict Sites (Hyde Park Barracks Buffer Zone)	NSW	Buffer zone
Sydney Opera House - Buffer Zone	NSW	Buffer zone
Australian Convict Sites (Cockatoo Island Convict Site)	NSW	Declared property
Australian Convict Sites (Hyde Park Barracks)	NSW	Declared property
Sydney Opera House	NSW	Declared property

National Heritage Properties		[Resource Information]
Name	State	Status
Indigenous		
Cyprus Hellene Club - Australian Hall	NSW	Listed place
Historic		
Centennial Park	NSW	Listed place
Cockatoo Island	NSW	Listed place
First Government House Site	NSW	Listed place
Hyde Park Barracks	NSW	Listed place
Sydney Harbour Bridge	NSW	Listed place
Sydney Opera House	NSW	Listed place

Wetlands of International Importance (Ramsar)		[Resource Information]
Name		Proximity
Towra point nature reserve		Within 10km of Ramsar

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion	Endangered	Community may occur within area
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community likely to occur within area
Coastal Upland Swamps in the Sydney Basin Bioregion	Endangered	Community likely to occur within area
Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion	Critically Endangered	Community may occur within area
Eastern Suburbs Banksia Scrub of the Sydney Region	Endangered	Community known to occur within area
Posidonia australis seagrass meadows of the Manning-Hawkesbury ecoregion	Endangered	Community likely to occur within area
Shale Sandstone Transition Forest of the Sydney Basin Bioregion	Critically Endangered	Community likely to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area
Turpentine-Ironbark Forest of the Sydney Basin Bioregion	Critically Endangered	Community likely to occur within area
Western Sydney Dry Rainforest and Moist Woodland on Shale	Critically Endangered	Community likely to occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species

Name	Status	Type of Presence
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	habitat known to occur within area Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour known to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within

Name	Status	Type of Presence area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Rostratula australis Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta steadi White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Fish		
Epinephelus daemeli Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area
Macquaria australasica Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat likely to occur within area
Frogs		
Heleioporus australiacus Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat known to occur within area
Mixophyes balbus Stuttering Frog, Southern Barred Frog (in Victoria) [1942]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Isoodon obesulus obesulus Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat known to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat likely to occur within area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Other		
Pommerhelix duralensis Dural Land Snail [85268]	Endangered	Species or species habitat likely to occur within area
Plants		
Acacia bynoeana Bynoe's Wattle, Tiny Wattle [8575]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Acacia pubescens Downy Wattle, Hairy Stemmed Wattle [18800]	Vulnerable	Species or species habitat known to occur within area
Acacia terminalis subsp. terminalis MS Sunshine Wattle (Sydney region) [88882]	Endangered	Species or species habitat known to occur within area
Allocasuarina glareicola [21932]	Endangered	Species or species habitat may occur within area
Asterolasia elegans [56780]	Endangered	Species or species habitat may occur within area
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat known to occur within area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area
Cynanchum elegans White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area
Darwinia biflora [14619]	Vulnerable	Species or species habitat likely to occur within area
Deyeuxia appressa [7438]	Endangered	Species or species habitat likely to occur within area
Eucalyptus camfieldii Camfield's Stringybark [15460]	Vulnerable	Species or species habitat likely to occur within area
Genoplesium baueri Yellow Gnat-orchid [7528]	Endangered	Species or species habitat known to occur within area
Haloragodendron lucasii Hal [6480]	Endangered	Species or species habitat likely to occur within area
Leptospermum deanei Deane's Tea-tree [21777]	Vulnerable	Species or species habitat may occur within area
Melaleuca biconvexa Biconvex Paperbark [5583]	Vulnerable	Species or species habitat may occur within area
Melaleuca deanei Deane's Melaleuca [5818]	Vulnerable	Species or species habitat likely to occur within area
Microtis angusii Angus's Onion Orchid [64530]	Endangered	Species or species habitat likely to occur within area
Pelargonium sp. Striatellum (G.W.Carr 10345) Omeo Stork's-bill [84065]	Endangered	Species or species habitat may occur within area
Persoonia hirsuta Hairy Geebung, Hairy Persoonia [19006]	Endangered	Species or species habitat known to occur within area

Name	Status	Type of Presence
Pimelea curviflora var. curviflora [4182]	Vulnerable	Species or species habitat known to occur within area
Pimelea spicata Spiked Rice-flower [20834]	Endangered	Species or species habitat may occur within area
Pterostylis saxicola Sydney Plains Greenhood [64537]	Endangered	Species or species habitat may occur within area
Syzygium paniculatum Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat known to occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area

Reptiles

Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Hoplocephalus bungaroides Broad-headed Snake [1182]	Vulnerable	Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Sharks

Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species

[[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Sternula albifrons Little Tern [82849]		Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area

Migratory Marine Species

Name	Threatened	Type of Presence
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat known to occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Arenaria interpres Ruddy Turnstone [872]		Foraging, feeding or related behaviour known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Foraging, feeding or related behaviour known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Foraging, feeding or related behaviour known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Foraging, feeding or related behaviour known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Foraging, feeding or related behaviour known to occur within area

Name	Threatened	Type of Presence
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Foraging, feeding or related behaviour known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area
Numenius phaeopus Whimbrel [849]		Foraging, feeding or related behaviour known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Philomachus pugnax Ruff (Reeve) [850]		Foraging, feeding or related behaviour known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Foraging, feeding or related behaviour known to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Foraging, feeding or related behaviour known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Foraging, feeding or related behaviour known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land -
Commonwealth Land - Airservices Australia
Commonwealth Land - Australia Post
Commonwealth Land - Australian & Overseas Telecommunications Corporation
Commonwealth Land - Australian Broadcasting Commission
Commonwealth Land - Australian Broadcasting Corporation
Commonwealth Land - Australian National University
Commonwealth Land - Australian Postal Commission
Commonwealth Land - Australian Postal Corporation
Commonwealth Land - Australian Telecommunications Commission

Name
Commonwealth Land - Australian Telecommunications Corporation
Commonwealth Land - Commonwealth Bank of Australia
Commonwealth Land - Commonwealth Scientific & Industrial Research Organisation
Commonwealth Land - Commonwealth Trading Bank of Australia
Commonwealth Land - Defence Housing Authority
Commonwealth Land - Defence Service Homes Corporation
Commonwealth Land - Director of War Service Homes
Commonwealth Land - Reserve Bank of Australia
Commonwealth Land - Telstra Corporation Limited
Defence - 21 CONST REGT - HABERFIELD DEPOT
Defence - COCKATOO ISLAND DOCKYARD
Defence - CONCORD OFFICE ACCN
Defence - DEFENCE PLAZA SYDNEY
Defence - DEGAUSSING RANGE
Defence - DSTO PYRMONT - (SEE SITE 1177)
Defence - FLEET BASE WHARVES
Defence - FOREST LODGE (SYDNEY) TRG DEP
Defence - GARDEN ISLAND
Defence - GLADESVILLE TRAINING DEPOT
Defence - HMAS KUTTABUL (AC 30/5 Lot4 DP218946)
Defence - HMAS PENGUIN
Defence - HMAS PLATYPUS - SPDU FOR DISPOSAL
Defence - HMAS WATERHEN
Defence - JENNER BUILDING
Defence - KENSINGTON DEPOT
Defence - KISMET/HMAS KUTTABUL-POTTS PT
Defence - LEICHHARDT STORES DEPOT
Defence - MARITIME COMD CTRE-POTTS POINT ; BOMERAH/TARANA
Defence - MARITIME HEADQUARTERS
Defence - MATERIAL RESEARCH LAB
Defence - MILLER'S POINT TRAINING DEPOT
Defence - NFI CHOWDER BAY (fuel depot)
Defence - NORTH SYDNEY - HYDRO OFFICE
Defence - OXFORD ST SYDNEY
Defence - PARKVIEW BUILDING - SYDNEY
Defence - SPECTACLE ISLAND
Defence - SYDNEY UNIVERSITY REGIMENT - DARLINGTON
Defence - TRESKO
Defence - VICTORIA BARRACKS - PADDINGTON
Defence - WILLOUGHBY TRG DEP
Defence - WOOLLOOMOOLOO CARPARK
Defence - ZETLAND NAVY SUPPLY CENTRE

Commonwealth Heritage Places		[Resource Information]
Name	State	Status
Historic		
Admiralty House Garden and Fortifications	NSW	Listed place
Admiralty House and Lodge	NSW	Listed place
Barracks Block	NSW	Listed place
Biloela Group	NSW	Listed place
Building VB1 and Parade Ground	NSW	Listed place
Building VB2 Guard House	NSW	Listed place
Buildings 31 and 32	NSW	Listed place
Buildings MQVB16 and VB56	NSW	Listed place
Buildings VB13, 15, 16 & 17	NSW	Listed place
Buildings VB41, 45 & 53	NSW	Listed place
Buildings VB60 and VB62	NSW	Listed place
Buildings VB69, 75 & 76 including Garden	NSW	Listed place
Buildings VB83, 84, 85, 87 & 89	NSW	Listed place
Buildings VB90, 91, 91A & 92	NSW	Listed place
Chain and Anchor Store (former)	NSW	Listed place
Chowder Bay Barracks Group	NSW	Listed place
Cockatoo Island Industrial Conservation Area	NSW	Listed place
Commonwealth Avenue Defence Housing	NSW	Listed place
Customs Marine Centre	NSW	Listed place
Defence site - Georges Heights and Middle Head	NSW	Listed place

Name	State	Status
Factory	NSW	Listed place
Fitzroy Dock	NSW	Listed place
Garden Island Precinct	NSW	Listed place
Gazebo	NSW	Listed place
General Post Office	NSW	Listed place
HMAS Penguin	NSW	Listed place
Headquarters 8th Brigade Precinct	NSW	Listed place
Headquarters Training Command Precinct	NSW	Listed place
Kirribilli House	NSW	Listed place
Kirribilli House Garden & Grounds	NSW	Listed place
Marrickville Post Office	NSW	Listed place
Mess Hall (former)	NSW	Listed place
Military Guard Room	NSW	Listed place
Military Road Framework - Defence Land	NSW	Listed place
Naval Store	NSW	Listed place
Navy Refuelling Depot and Caretakers House	NSW	Listed place
North Sydney Post Office	NSW	Listed place
Office Building	NSW	Listed place
Paddington Post Office	NSW	Listed place
Power House / Pump House	NSW	Listed place
Prison Barracks Precinct	NSW	Listed place
Pyrmont Post Office	NSW	Listed place
Reserve Bank	NSW	Listed place
Residences Group	NSW	Listed place
Rigging Shed and Chapel	NSW	Listed place
Snapper Island	NSW	Listed place
Spectacle Island Explosives Complex	NSW	Listed place
Sutherland Dock	NSW	Listed place
Sydney Customs House (former)	NSW	Listed place
Underground Grain Silos	NSW	Listed place
Victoria Barracks Perimeter Wall and Gates	NSW	Listed place
Victoria Barracks Precinct	NSW	Listed place
Victoria Barracks Squash Courts	NSW	Listed place
Woolwich Dock	NSW	Listed place

Listed Marine Species [\[Resource Information \]](#)

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]		Foraging, feeding or related behaviour known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Foraging, feeding or related behaviour known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species

Name	Threatened	Type of Presence
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	habitat known to occur within area Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Foraging, feeding or related behaviour known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Foraging, feeding or related behaviour known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Foraging, feeding or related behaviour known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Foraging, feeding or related behaviour known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely

Name	Threatened	Type of Presence
Gallinago stenura Pin-tailed Snipe [841]		to occur within area Foraging, feeding or related behaviour likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Foraging, feeding or related behaviour known to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Foraging, feeding or related behaviour known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Foraging, feeding or related behaviour known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Numenius phaeopus Whimbrel [849]		Foraging, feeding or related behaviour known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Philomachus pugnax Ruff (Reeve) [850]		Foraging, feeding or related behaviour known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Foraging, feeding or related behaviour known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Foraging, feeding or related behaviour known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Sterna albifrons Little Tern [813]		Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche sp. nov. Pacific Albatross [66511]	Vulnerable*	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species

Name	Threatened	Type of Presence
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		habitat known to occur within area Foraging, feeding or related behaviour known to occur within area
Fish		
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus abdominalis Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]		Species or species habitat known to occur within area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black		Species or species

Name	Threatened	Type of Presence
Pipefish [66277]		habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area

Mammals

Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area

Reptiles

Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and other Cetaceans

[[Resource Information](#)]

Name	Status	Type of Presence
Mammals		
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area

Name	Status	Type of Presence
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Garigal	NSW
Lane Cove	NSW
Parramatta River	NSW
Sydney Harbour	NSW
Wallumatta	NSW
Wolli Creek	NSW

Invasive Species [[Resource Information](#)]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Pycnonotus jocosus Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species

Name	Status	Type of Presence
Vulpes vulpes		habitat likely to occur within area
Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides		
Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia		
Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus		
Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus asparagoides		
Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus plumosus		
Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Asparagus scandens		
Asparagus Fern, Climbing Asparagus Fern [23255]		Species or species habitat likely to occur within area
Cabomba caroliniana		
Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera		
Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera		
Boneseed [16905]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. rotundata		
Bitou Bush [16332]		Species or species habitat likely to occur within area
Cytisus scoparius		
Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Dolichandra unguis-cati		
Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area
Eichhornia crassipes		
Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista linifolia		
Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista monspessulana		
Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana		
Broom [67538]		Species or species habitat may occur within area
Lantana camara		
Lantana, Common Lantana, Kamara Lantana,		Species or species

Name	Status	Type of Presence
Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892] Lycium ferocissimum African Boxthorn, Boxthorn [19235]		habitat likely to occur within area Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[Resource Information]
Name	State	
Bicentennial Park	NSW	
Botany Wetlands	NSW	
Eve St. Marsh, Arncliffe	NSW	

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-33.85223 151.16697

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

APPENDIX G BIONET ATLAS SEARCH RESULTS

Data from the BioNet BioNet Atlas website, which holds records from a number of custodians. The data are only indicative and cannot be considered a comprehensive inventory, and may contain errors and omissions. Species listed under the Sensitive Species Data Policy may have their locations denatured (^ rounded to 0.1°; ^^ rounded to 0.01°). Copyright the State of NSW through the Office of Environment and Heritage. Search criteria : Public Report of all Valid Records of Threatened (listed on TSC Act 1995) ,Commonwealth listed ,CAMBA listed ,JAMBA listed or ROKAMBA listed Entities in selected area [North: -33.81 West: 151.12 East: 151.22 South: -33.91] returned a total of 783 records of 81 species.

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Kingdom	Class	Family	Species Code	Scientific Name	Exotic	Common Name	NSW status	Comm. status	Records	Info
Animalia	Amphibia	Myobatrachidae	3116	<i>Pseudophryne australis</i>		Red-crowned Toadlet	V,P		7	
Animalia	Amphibia	Hylidae	3166	<i>Litoria aurea</i>		Green and Golden Bell Frog	E1,P	V	6	
Animalia	Aves	Phaethontidae	0108	<i>Phaethon lepturus</i>		White-tailed Tropicbird	P	C,J	1	
Animalia	Aves	Columbidae	0023	<i>Ptilinopus superbus</i>		Superb Fruit-Dove	V,P		6	
Animalia	Aves	Apodidae	0335	<i>Apus pacificus</i>		Fork-tailed Swift	P	C,J,K	6	
Animalia	Aves	Apodidae	0334	<i>Hirundapus caudacutus</i>		White-throated Needletail	P	C,J,K	7	
Animalia	Aves	Diomedidae	0086	<i>Diomedea exulans</i>		Wandering Albatross	E1,P	E,J	1	
Animalia	Aves	Procellariidae	0069	<i>Ardenna pacificus</i>		Wedge-tailed Shearwater	P	J	2	
Animalia	Aves	Ardeidae	0977	<i>Ardea ibis</i>		Cattle Egret	P	C,J	1	
Animalia	Aves	Ardeidae	0191	<i>Egretta sacra</i>		Eastern Reef Egret	P	C	1	
Animalia	Aves	Ardeidae	0196	<i>Ixobrychus flavicollis</i>		Black Bittern	V,P		3	
Animalia	Aves	Accipitridae	0223	^ <i>Erythroriorchis radiatus</i>		Red Goshawk	E4A,P,2	V	1	
Animalia	Aves	Accipitridae	0226	<i>Haliaeetus leucogaster</i>		White-bellied Sea-Eagle	V,P	C	25	
Animalia	Aves	Accipitridae	0230	^^ <i>Lophoictinia isura</i>		Square-tailed Kite	V,P,3		1	
Animalia	Aves	Burhinidae	0174	<i>Burhinus grallarius</i>		Bush Stone-curlew	E1,P		5	
Animalia	Aves	Haematopodidae	0130	<i>Haematopus longirostris</i>		Pied Oystercatcher	E1,P		1	
Animalia	Aves	Charadriidae	8006	<i>Pluvialis fulva</i>		Pacific Golden Plover	P	C,J,K	5	
Animalia	Aves	Scolopacidae	0157	<i>Actitis hypoleucos</i>		Common Sandpiper	P	C,J,K	2	
Animalia	Aves	Scolopacidae	0129	<i>Arenaria interpres</i>		Ruddy Turnstone	P	C,J,K	2	
Animalia	Aves	Scolopacidae	0163	<i>Calidris acuminata</i>		Sharp-tailed Sandpiper	P	C,J,K	36	
Animalia	Aves	Scolopacidae	0164	<i>Calidris canutus</i>		Red Knot	P	E,C,J,K	2	
Animalia	Aves	Scolopacidae	0161	<i>Calidris ferruginea</i>		Curlew Sandpiper	E1,P	CE,C,J,K	9	

Animalia	Aves	Scolopacidae	0162	<i>Calidris ruficollis</i>	Red-necked Stint	P	C,J,K	2	
Animalia	Aves	Scolopacidae	0153	<i>Limosa lapponica</i>	Bar-tailed Godwit	P	C,J,K	4	
Animalia	Aves	Scolopacidae	0149	<i>Numenius madagascariensis</i>	Eastern Curlew	P	CE,C,J,K	1	
Animalia	Aves	Scolopacidae	0151	<i>Numenius minutus</i>	Little Curlew	P	C,J,K	1	
Animalia	Aves	Scolopacidae	0155	<i>Tringa brevipes</i>	Grey-tailed Tattler	P	C,J,K	1	
Animalia	Aves	Stercorariidae	0945	<i>Stercorarius pomarinus</i>	Pomarine Jaeger	P	C,J	1	
Animalia	Aves	Laridae	0112	<i>Hydroprogne caspia</i>	Caspian Tern	P	C,J	2	
Animalia	Aves	Laridae	0953	<i>Sterna hirundo</i>	Common Tern	P	C,J,K	6	
Animalia	Aves	Laridae	0117	<i>Sternula albifrons</i>	Little Tern	E1,P	C,J,K	2	
Animalia	Aves	Cacatuidae	0265	<i>^Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	V,P,2		1	
Animalia	Aves	Psittacidae	0260	<i>Glossopsitta pusilla</i>	Little Lorikeet	V,P		1	
Animalia	Aves	Psittacidae	0309	<i>^^Lathamus discolor</i>	Swift Parrot	E1,P,3	CE	1	
Animalia	Aves	Strigidae	0246	<i>^^Ninox connivens</i>	Barking Owl	V,P,3		1	
Animalia	Aves	Strigidae	0248	<i>^^Ninox strenua</i>	Powerful Owl	V,P,3		197	
Animalia	Aves	Tytonidae	9924	<i>^^Tyto tenebricosa</i>	Sooty Owl	V,P,3		1	
Animalia	Aves	Meliphagidae	0603	<i>Anthochaera phrygia</i>	Regent Honeyeater	E4A,P	CE	2	
Animalia	Aves	Neosittidae	0549	<i>Daphoenositta chrysoptera</i>	Varied Sittella	V,P		2	
Animalia	Aves	Artamidae	8519	<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V,P		3	
Animalia	Mammalia	Dasyuridae	1008	<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V,P	E	1	
Animalia	Mammalia	Peramelidae	1097	<i>Perameles nasuta</i>	Long-nosed Bandicoot population in inner western Sydney	E2,P		25	
Animalia	Mammalia	Burramyidae	1150	<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V,P		1	
Animalia	Mammalia	Pteropodidae	1280	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V,P	V	227	
Animalia	Mammalia	Emballonuridae	1321	<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	V,P		1	
Animalia	Mammalia	Molossidae	1329	<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	V,P		10	

Animalia	Mammalia	Vespertilionidae	1346	<i>Miniopterus australis</i>	Little Bentwing-bat	V,P		2	
Animalia	Mammalia	Vespertilionidae	1834	<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	V,P		57	
Animalia	Mammalia	Vespertilionidae	1357	<i>Myotis macropus</i>	Southern Myotis	V,P		8	
Animalia	Mammalia	Otariidae	1543	<i>Arctocephalus forsteri</i>	New Zealand Fur-seal	V,P		1	
Animalia	Mammalia	Otariidae	1882	<i>Arctocephalus pusillus doriferus</i>	Australian Fur-seal	V,P		1	
Animalia	Mammalia	Balaenidae	1561	<i>Eubalaena australis</i>	Southern Right Whale	E1,P	E	1	
Animalia	Insecta	Petaluridae	1007	<i>Petalura gigantea</i>	Giant Dragonfly	E1		1	
Plantae	Flora	Dilleniaceae	11422	<i>Hibbertia puberula</i>		E1		1	
Plantae	Flora	Elaeocarpaceae	6205	<i>Tetratheca glandulosa</i>		V		1	
Plantae	Flora	Elaeocarpaceae	6206	<i>Tetratheca juncea</i>	Black-eyed Susan	V	V	3	
Plantae	Flora	Ericaceae	7752	<i>Epacris purpurascens var. purpurascens</i>		V		12	
Plantae	Flora	Fabaceae (Mimosoideae)	7229	<i>Acacia gordonii</i>		E1	E	1	
Plantae	Flora	Fabaceae (Mimosoideae)	9672	<i>Acacia terminalis subsp. Terminalis</i>	Sunshine Wattle	E1	E	18	
Fungi	Flora	Hygrophoraceae	F006	<i>Camarophyllopsis kearneyi</i>		E1		1	
Fungi	Flora	Hygrophoraceae	F003	<i>Hygrocybe anomala var. ianthinomarginata</i>		V		1	
Fungi	Flora	Hygrophoraceae	F004	<i>Hygrocybe aurantipes</i>		V		1	
Fungi	Flora	Hygrophoraceae	F001	<i>Hygrocybe austropratensis</i>		E1		1	
Fungi	Flora	Hygrophoraceae	F007	<i>Hygrocybe collucera</i>		E1		1	

Fungi	Flora	Hygrophoraceae	F008	<i>Hygrocybe griseoramosa</i>		E1		1	
Fungi	Flora	Hygrophoraceae	F005	<i>Hygrocybe lanecovens</i>		E1		1	
Fungi	Flora	Hygrophoraceae	F002	<i>Hygrocybe reesia</i>		V		2	
Fungi	Flora	Hygrophoraceae	F015	<i>Hygrocybe rubronivea</i>		V		1	
Plantae	Flora	Lamiaceae	3418	<i>Prostanthera marifolia</i>	Seaforth Mintbush	E4A,3	CE	4	
Plantae	Flora	Myrtaceae	4007	<i>Callistemon linearifolius</i>	Netted Bottle Brush	V,3		2	
Plantae	Flora	Myrtaceae	4067	<i>Eucalyptus camfieldii</i>	Camfield's Stringybark	V	V	2	
Plantae	Flora	Myrtaceae	9720	<i>Eucalyptus fracta</i>	Broken Back Ironbark	V		1	
Plantae	Flora	Myrtaceae	4134	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	V	V	7	
Plantae	Flora	Myrtaceae	4163	<i>Eucalyptus pulverulenta</i>	Silver-leafed Gum	V	V	1	
Plantae	Flora	Myrtaceae	8314	<i>Leptospermum deanei</i>		V	V	2	
Plantae	Flora	Myrtaceae	4248	<i>Melaleuca deanei</i>	Deane's Paperbark	V	V	5	
Plantae	Flora	Myrtaceae	4293	<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	E1	V	6	
Plantae	Flora	Orchidaceae	4464	<i>Genoplesium baueri</i>	Bauer's Midge Orchid	E1,P,2	E	6	
Plantae	Flora	Poaceae	4895	<i>Dichanthium setosum</i>	Bluegrass	V	V	1	
Plantae	Flora	Proteaceae	5458	<i>Persoonia hirsuta</i>	Hairy Geebung	E1,P,3	E	2	
Plantae	Flora	Thymelaeaceae	6965	<i>Pimelea curviflora</i> var. <i>curviflora</i>		V	V	3	

APPENDIX H LIKELIHOOD OF OCCURRENCE TABLE

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
Listed Threatened Species							
Birds							
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE	CE	BioNet	PMST	The species inhabits dry open forest and woodland, particularly Box-Ironbark woodland, and riparian forests of River Sheoak. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within site
<i>Botaurus poiciloptilus</i>	Australasian Bittern		E		PMST	Favours permanent freshwater wetlands with tall, dense vegetation, particularly bullrushes (<i>Typha</i> spp.) and spikerushes (<i>Eleocharis</i> spp.).	Unlikely – suitable habitat absent within site
<i>Calidris canutus</i>	Red Knot, Knot		Mi/E	BioNet	PMST	Mainly inhabit intertidal mudflats, sandflats and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours; sometimes on sandy ocean beaches or shallow pools on exposed wave-cut rock platforms or coral reefs. They are occasionally seen on terrestrial saline wetlands near the coast, such as lakes, lagoons, pools and pans, and recorded on sewage ponds and saltworks. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years .	Unlikely – suitable habitat absent within site
<i>Calidris ferruginea</i>	Curlew Sandpiper	E	Mi/CE	BioNet	PMST	It generally occupies littoral and estuarine habitats, and in New South Wales is mainly found in intertidal mudflats of sheltered coasts. It also occurs in non-tidal swamps, lakes and lagoons on the coast and sometimes inland. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within site
<i>Calidris tenuirostris</i>	Great Knot		Mi/CE		PMST	Occurs within sheltered, coastal habitats containing large, intertidal mudflats or sandflats, including inlets, bays, harbours, estuaries and lagoons. Often recorded on sandy beaches with mudflats nearby, sandy spits and islets and sometimes on exposed reefs or rock platforms.	Unlikely – suitable habitat absent within site
<i>Charadrius leschenaultii</i>	Greater Sand Plover, Large Sand Plover		Mi/V		PMST	The species is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine and inshore reefs, rock platforms, small rocky islands or sand cays on coral reefs .	Unlikely – suitable habitat absent within site
<i>Charadrius mongolus</i>	Lesser Sand Plover, Mongolian Plover		Mi/E		PMST	Almost entirely coastal in NSW, favouring the beaches of sheltered bays, harbours and estuaries with large intertidal sandflats or mudflats; occasionally occurs on sandy beaches, coral reefs and rock platforms .	Unlikely – suitable habitat absent within site
<i>Dasyornis brachypterus</i>	Eastern Bristlebird		E		PMST	Habitat for central and southern populations is characterised by dense, low vegetation including heath and open woodland with a heathy understorey. In northern NSW the habitat occurs in open forest with dense tussocky grass understorey and sparse mid-storey near rainforest ecotone.	Unlikely – suitable habitat absent within site
<i>Diomedea antipodensis</i>	Antipodean Albatross		Mi/V		PMST	The Antipodean Albatross breeds biennially in colonies on ridges, slopes and plateaus of isolated subantarctic islands, usually in vegetation such as grass tussocks. The majority of birds breed on Antipodes Island, with a small number of pairs breeding on Campbell Island. The Antipodean Albatross breeds biennially in colonies on ridges, slopes and plateaus of isolated subantarctic islands, usually in vegetation such as grass tussocks.	Unlikely – site outside of this species known distribution
<i>Diomedea antipodensis gibsoni</i>	Gibson's Albatross		V		PMST	This species is known only to breed on the Adams, Disappointment and Auckland Islands in the subantarctic Auckland Island group. This species regularly occurs off the NSW coast from Green Cape to Newcastle.	Unlikely – site outside of this species known distribution
<i>Diomedea epomophora</i>	Southern Royal Albatross		Mi/V		PMST	Southern royal albatrosses range over the waters off southern Australia at all times of year, but especially between July and October. They have been recorded from Byron Bay in the east to south-western Western Australia. Most records are from the shelf-break areas, especially off western and southern Tasmania and around Victoria.	Unlikely – suitable habitat absent within site

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Diomedea exulans</i>	Wandering Albatross	E	Mi/V	BioNet	PMST	Wandering albatross spend the majority of their time in flight, soaring over the southern oceans. They breed on a number of islands just north of the Antarctic Circle: South Georgia Island (belonging to the UK), Prince Edward and Marion Islands (South Africa), Crozet and Kerguelen Islands (French Southern Territories) and Macquarie Island (Australia). Breeding takes place on exposed ridges and hillocks, amongst open and patchy vegetation. They feed in pelagic, offshore and inshore waters, often at night.. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – site outside of this species known distribution
<i>Diomedea sanfordi</i>	Northern Royal Albatross		Mi/E		PMST	Its habitat includes subantarctic, subtropical, and occasionally Antarctic waters. It occurs where the surface temperature of the water is between 6–20 °C. It is a rare visitor to NSW waters, predominantly visiting southern waters in the winter and early spring period.	Unlikely – site outside of this species known distribution
<i>Grantiella picta</i>	Painted Honeyeater		V		PMST	Inhabits Boree/ Weeping Myall (<i>Acacia pendula</i>), Brigalow (<i>A. harpophylla</i>) and Box-Gum Woodlands and Box-Ironbark Forests. A specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias. Prefers mistletoes of the genus <i>Amyema</i> .	Unlikely – site outside of this species known distribution
<i>Limosa lapponica (baueri & menzibieri)</i>	Bar-tailed Godwit (bau, Western Alaskan Bar-tailed Godwit, Northern Siberian Bar-tailed Godwit		Mi/V/CE		PMST	The bar-tailed godwit (western Alaskan) occurs mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It has also been recorded in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats.	Unlikely – suitable habitat absent within site
<i>Macronectes giganteus</i>	Southern Giant-Petrel, Southern Giant Petrel		Mi/E		PMST	Over summer, the species nests in small colonies amongst open vegetation on Antarctic and subantarctic islands, including Macquarie and Heard Islands and in Australian Antarctic territory.	Unlikely – site outside of this species known distribution
<i>Macronectes halli</i>	Northern Giant Petrel		Mi/V		PMST	Breeding in Australian territory is limited to Macquarie Island and occurs during spring and summer. Adults usually remain near the breeding colonies throughout the year (though some do travel widely) while immature birds make long and poorly known circumpolar and trans-oceanic movements. Hence most birds recorded in NSW coastal waters are immature birds. Northern Giant-Petrels seldom breed in colonies but rather as dispersed pairs, often amidst tussocks in dense vegetation and areas of broken terrain.	Unlikely – site outside of this species known distribution
<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew		Mi/CE	BioNet	PMST	It generally occupies coastal lakes, inlets, bays and estuarine habitats, and in New South Wales is mainly found in intertidal mudflats and sometimes saltmarsh of sheltered coasts (DoEE 2017). This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within site
<i>Pachyptila turtur subantarctica</i>	Fairy Prion (southern)		V		PMST	Breeding is currently known from only from two rock stacks off Macquarie Island. The species as a whole has a circumpolar distribution, and probably frequents subtropical waters during the non-breeding period. It has been recorded breeding on subantarctic and cool temperate islands in the Southern Hemisphere.	Unlikely – suitable habitat absent within site
<i>Rostratula Australis</i>	Australia Painted-snipe, Australian Painted Snipe		E		PMST	Prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber. Nests on the ground amongst tall vegetation, such as grasses, tussocks or reeds. Forages nocturnally on mud-flats and in shallow water.	Unlikely – suitable habitat absent within site
<i>Sternula nereis nereis</i>	Australian Fairy Tern		V		PMST	Fairy Terns utilise a variety of habitats including offshore, estuarine or lacustrine (lake) islands, wetlands, beaches and spits.	Unlikely – suitable habitat absent within site
<i>Thalassarche bulleri</i>	Buller's Albatross, Pacific Albatross		Mi/V		PMST	Buller's Albatross are seen over inshore, offshore and pelagic waters. They appear to congregate over currents where water temperature exceeds 16 °C.	Unlikely – suitable habitat absent within site

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Thalassarche bulleri platei</i>	Northern Buller's Albatross, Pacific Albatross		V		PMST	The species occurs over inshore, offshore and pelagic waters and off the coast of south-east Tasmania. The Pacific Albatross prefers waters of the East Australia Current where sea surface-temperatures are greater than 16.5 °C .	Unlikely – suitable habitat absent within site
<i>Thalassarche cauta cauta</i>	Shy Albatross, Tasmanian Shy Albatross		Mi/V		PMST	This pelagic or ocean-going species inhabits subantarctic and subtropical marine waters, spending the majority of its time at sea. Occasionally the species occurs in continental shelf waters, in bays and harbours .	Unlikely – site outside of this species known distribution
<i>Thalassarche cauta steadi</i>	White-capped Albatross		Mi/V		PMST	Marine species and occurs in subantarctic and subtropical waters. During the non-breeding season, birds have been observed over continental shelves around continents. The species occurs both inshore and enters harbours and bays The species is scarce in pelagic waters. Birds gather to scavenge at commercial fishing grounds .	Unlikely – suitable habitat absent within site
<i>Thalassarche eremita</i>	Chatham Albatross		Mi/E		PMST	Occurs in subantarctic and subtropical waters. It has been noted in shelf-waters around breeding islands, over continental shelves during the non-breeding season, and occurs inshore and offshore. It enters harbours and bays and is scarce in pelagic waters.	Unlikely – suitable habitat absent within site
<i>Thalassarche impavida</i>	Campbell Albatross, Campbell Black-browed Albatross		Mi/V		PMST	The Campbell Albatross is a marine sea bird inhabiting sub-Antarctic and subtropical waters from pelagic to shelf-break water habitats They tolerate sea surface-temperatures from 0–24 °C, but are mainly found in the sub-Antarctic .	Unlikely – suitable habitat absent within site
<i>Thalassarche melanophris</i>	Black-browed Albatross		Mi/V		PMST	Inhabits antarctic, subantarctic, subtropical marine and coastal waters over upwellings and boundaries of currents. Can tolerate water temperatures between 0°C and 24°C. Spends most of its time at sea, breeding on small isolated islands .	Unlikely – site outside of this species known distribution
<i>Thalassarche salvini</i>	Salvin's Albatross		Mi/V		PMST	Marine species occurring in subantarctic and subtropical waters. During the non-breeding season, the species occurs over continental shelves around continents. It occurs both inshore and offshore and enters harbours and bays. Salvin's Albatross is scarce in pelagic waters).	Unlikely – suitable habitat absent within site
<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V		BioNet		Inhabits rainforest and similar closed forests where it forages high in the canopy, eating the fruits of many tree species such as figs and palms. It may also forage in eucalypt or acacia woodland where there are fruit-bearing trees. Part of the population is migratory or nomadic. There are records of single birds flying into lighted windows and lighthouses, indicating that birds travel at night. At least some of the population, particularly young birds, moves south through Sydney, especially in autumn. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years .	Unlikely – The disturbed nature of the site is not preferred by this species and it is unlikely to be dependent on the resources present.
<i>Ixobrychus flavicollis</i>	Black Bittern	V		BioNet		Inhabits both terrestrial and estuarine wetlands, generally in areas of permanent water and dense vegetation. Where permanent water is present, the species may occur in flooded grassland, forest, woodland, rainforest and mangroves. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years .	Unlikely – suitable habitat absent within site.
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	V	Mi	BioNet		Habitats are characterised by the presence of large areas of open water including larger rivers, swamps, lakes, and the sea. Occurs at sites near the sea or sea-shore, such as around bays and inlets, beaches, reefs, lagoons, estuaries and mangroves; and at, or in the vicinity of freshwater swamps, lakes, reservoirs, billabongs and saltmarsh. Terrestrial habitats include coastal dunes, tidal flats, grassland, heathland, woodland, and forest (including rainforest). Breeding habitat consists of mature tall open forest, open forest, tall woodland, and swamp sclerophyll forest close to foraging habitat. Feed mainly on fish and freshwater turtles, but also waterbirds, reptiles, mammals and carrion. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years .	Potential – this wide ranging raptor may fly over the Site area whilst hunting. No potential hunting habitat was present within the Site, the disturbance present and lack of significant canopy trees reduces the site area's potential to provide nesting habitat for this species.

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Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Lophoictinia isura</i>	Square-tailed Kite	V		BioNet		<p>Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses.</p> <p>In arid north-western NSW, has been observed in stony country with a ground cover of chenopods and grasses, open acacia scrub and patches of low open eucalypt woodland.</p> <p>Is a specialist hunter of passerines, especially honeyeaters, and most particularly nestlings, and insects in the tree canopy, picking most prey items from the outer foliage.. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years .</p>	Potential – this wide ranging raptor may fly over the site area whilst hunting. No potential hunting habitat was present within the Site, the disturbance present and lack of significant canopy trees reduces the site area's potential to provide nesting habitat for this species.
<i>Burhinus grallarius</i>	Bush Stone-curlew	E		BioNet		<p>Inhabits open forests and woodlands with a sparse grassy ground layer and fallen timber.</p> <p>Nest on the ground in a scrape or small bare patch. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.</p>	Potential - the species' known distribution includes the site area, and suitable habitat (sparse grassy ground layer) is present within the site.
<i>Haematopus longirostris</i>	Pied Oystercatcher	E		BioNet		<p>Favours intertidal flats of inlets and bays, open beaches and sandbanks.</p> <p>Forages on exposed sand, mud and rock at low tide.</p> <p>Nests mostly on coastal or estuarine beaches although occasionally they use saltmarsh or grassy areas.</p> <p>This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.</p>	Potential - the species' known distribution includes the site, and suitable habitat (rock wall) is present within the site.
<i>Sternula albifrons</i>	Little Tern	E	Mi	BioNet		<p>Almost exclusively coastal, preferring sheltered environments; however may occur several kilometres from the sea in harbours, inlets and rivers (with occasional offshore islands or coral cay records).</p> <p>Nests in small, scattered colonies in low dunes or on sandy beaches just above high tide mark near estuary mouths or adjacent to coastal lakes and islands. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.</p>	Unlikely – suitable habitat absent within site.
<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo	V		BioNet		<p>Inhabits open forest and woodlands of the coast and the Great Dividing Range where stands of sheoak occur. Black Sheoak (<i>Allocasuarina littoralis</i>) and Forest Sheoak (<i>A. torulosa</i>) are important foods. Dependent on large hollow-bearing eucalypts for nest sites. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.</p>	Unlikely – suitable habitat absent within site
<i>Neophema pulchella</i>	Turquoise Parrot	V		BioNet		<p>Lives on the edges of eucalypt woodland adjoining clearings, timbered ridges and creeks in farmland. Nests in tree hollows, logs or posts .</p> <p>This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years .</p>	Unlikely – suitable habitat absent within site
<i>Ninox connivens</i>	Barking Owl	V		BioNet		<p>Inhabits woodland and open forest, including fragmented remnants and partly cleared farmland. It is flexible in its habitat use, and hunting can extend in to closed forest and more open areas. Sometimes able to successfully breed along timbered watercourses in heavily cleared habitats (e.g. western NSW) due to the higher density of prey on these fertile riparian soils .</p> <p>Roost in shaded portions of tree canopies, including tall midstorey trees with dense foliage such as Acacia and Casuarina species. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years .</p>	Unlikely –suitable habitat absent within site
<i>Ninox strenua</i>	Powerful Owl	V		BioNet		<p>The Powerful Owl inhabits a range of vegetation types, from woodland and open sclerophyll forest to tall open wet forest and rainforest.</p> <p>The Powerful Owl requires large tracts of forest or woodland habitat but can occur in fragmented landscapes as well. The species breeds and hunts in open or closed sclerophyll forest or woodlands and occasionally hunts in open habitats. It roosts by day in dense vegetation comprising species such as Turpentine <i>Syncarpia glomulifera</i>, Black She-oak <i>Allocasuarina littoralis</i>, Blackwood <i>Acacia melanoxylon</i>, Rough-barked Apple <i>Angophora floribunda</i>, Cherry Ballart <i>Exocarpus cupressiformis</i> and a number of eucalypt species.</p> <p>Powerful Owls nest in large tree hollows (at least 0.5 m deep), in large eucalypts (diameter at breast height of 80-240 cm) that are at least 150 years old.</p> <p>This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.</p>	Potential – the site area may contain hunting habitat for this species as part of a much larger range, the disturbance present and lack of significant canopy trees reduces the site area's potential to provide nesting habitat for this species.

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Tyto tenebricosa</i>	Sooty Owl	V		BioNet		Occurs in rainforest, including dry rainforest, subtropical and warm temperate rainforest, as well as moist eucalypt forests. Roosts by day in the hollow of a tall forest tree or in heavy vegetation. Nests in very large tree-hollows. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within the site.
<i>Daphoenositta chrysoptera</i>	Varied Sittella	V		BioNet		Inhabits eucalypt forests and woodlands, especially those containing rough-barked species and mature smooth-barked gums with dead branches, mallee and Acacia woodland. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within the site.
<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	V		BioNet		Primarily inhabit dry, open eucalypt forests and woodlands, including mallee associations, with an open or sparse understorey of eucalypt saplings, acacias and other shrubs, and ground-cover of grasses or sedges and fallen woody debris. It has also been recorded in shrublands, heathlands and very occasionally in moist forest or rainforest. Also found in farmland, usually at the edges of forest or woodland. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within the site.
<i>Petroica boodang</i>	Scarlet Robin	V		BioNet		The Scarlet Robin lives in dry eucalypt forests and woodlands. The understorey is usually open and grassy with few scattered shrubs. This species lives in both mature and regrowth vegetation. It occasionally occurs in mallee or wet forest communities, or in wetlands and tea-tree swamps. Scarlet Robin habitat usually contains abundant logs and fallen timber: these are important components of its habitat. The Scarlet Robin breeds on ridges, hills and foothills of the western slopes, the Great Dividing Range and eastern coastal regions; this species is occasionally found up to 1000 metres in altitude. The Scarlet Robin is primarily a resident in forests and woodlands, but some adults and young birds disperse to more open habitats after breeding.	Unlikely – suitable habitat absent within the site.
<i>Anous stolidus</i>	Common Noddy		Mi		PMST	During the breeding season, the Common Noddy usually occurs on or near islands, on rocky islets and stacks with precipitous cliffs, or on shoals or cays of coral or sand. When not at the nest, individuals will remain close to the nest, foraging in the surrounding waters. Birds may nest in bushes, saltbush, or other low vegetation. During the non-breeding period, the species occurs in groups throughout the pelagic zone.	Unlikely – suitable habitat absent from site.
<i>Apus pacificus</i>	Fork-tailed Swift		Mi	BioNet	PMST	In NSW, the Fork-tailed Swift is recorded in all regions. They mostly occur in the airspace over inland plains but sometimes above foothills or in coastal areas. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site (aerial species).
<i>Ardenna carneipes</i>	Flesh-footed Shearwater, Fleshy-footed Shearwater	V	Mi		PMST	Marine. Nest on Lord Howe Island in forests on sandy soils from Ned's Beach to Clear Place, with smaller colonies below Transit Hill and at Old Settlement Beach.	Unlikely – preferred habitat absent from site.
<i>Calonectris leucomelas</i>	Streaked Shearwater		Mi		PMST	Usually shearwaters only visit land to breed. Short-tailed shearwaters breed on islands along the eastern and southern coastlines of Australia, from the central coast of NSW to Western Australia.	Unlikely – suitable habitat absent from site.
<i>Fregata minor</i>	Great Frigatebird, Greater Frigatebird		Mi		PMST	Over tropical seas, occasionally inshore shelf waters.	Unlikely – suitable habitat absent from site.
<i>Sternula albifrons</i>	Little Tern	E	Mi	BioNet	PMST	Almost exclusively coastal, preferring sheltered environments; however may occur several kilometres from the sea in harbours, inlets and rivers (with occasional offshore islands or coral cay records). Nests in small, scattered colonies in low dunes or on sandy beaches just above high tide mark near estuary mouths or adjacent to coastal lakes and islands. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site.

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Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Cuculus optatus</i>	Horsfield's Cuckoo		Mi		PMST	The Horsfield's Bronze-Cuckoo is found in many wooded habitats (such as open and dry woodland and forest) with a range of understoreys from grasses to shrubs or heath.	Unlikely –suitable habitat absent within site
<i>Monarcha melanopsis</i>	Black-faced Monarch		Mi		PMST	The Black-faced Monarch mainly occurs in rainforest ecosystems, including semi-deciduous vine-thickets, complex notophyll vine-forest, tropical (mesophyll) rainforest, subtropical (notophyll) rainforest, mesophyll (broadleaf) thicket/shrubland, warm temperate rainforest, dry (monsoon) rainforest and (occasionally) cool temperate rainforest.	Unlikely –suitable habitat absent from site.
<i>Monarcha trivirgatus</i>	Spectacled Monarch		Mi		PMST	The Spectacled Monarch prefers thick understorey in rainforests, wet gullies and waterside vegetation, as well as mangroves.	Unlikely –suitable habitat absent within site
<i>Motacilla flava</i>	Yellow Wagtail		Mi		PMST	Occurs in short marsh and bare ground; swamp margins, sewerage, ponds, saltmarsh, playing fields, airfields, ploughed land and town land.	Unlikely –suitable habitat absent within site
<i>Myiagra cyanoleuca</i>	Satin Flycatcher		Mi		PMST	Satin Flycatchers inhabit heavily vegetated gullies in eucalypt-dominated forests and taller woodlands, and on migration, occur in coastal forests, woodlands, mangroves and drier woodlands and open forests.	Unlikely –suitable habitat absent within site
<i>Rhipidura rufifrons</i>	Rufous Fantail		Mi		PMST	Inhabits undergrowth of rainforest/wetter eucalypt forest/gullies; parks, mangroves and watercourses.	Unlikely –suitable habitat absent within site
<i>Actitis hypoleucos</i>	Common Sandpiper		Mi	BioNet	PMST	Prefers fringes of swamps, dams and nearby marshy areas where there is a cover of grasses, lignum, low scrub or open timber. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site
<i>Arenaria interpres</i>	Ruddy Turnstone		Mi	BioNet	PMST	The Ruddy Turnstone is mainly found on coastal regions with exposed rock coast lines or coral reefs. It also lives near platforms and shelves, often with shallow tidal pools and rocky, shingle or gravel beaches. It can, however, be found on sand, coral or shell beaches, shoals, cays and dry ridges of sand or coral. It has occasionally been sighted in estuaries, harbours, bays and coastal lagoons, among low saltmarsh or on exposed beds of seagrass, around sewage ponds and on mudflats. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within site
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper		Mi	BioNet	PMST	The Sharp-tailed Sandpiper prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. This includes lagoons, swamps, lakes and pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, salt pans and hypersaline salt lakes inland. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site
<i>Calidris melanotos</i>	Pectoral Sandpiper		Mi		PMST	The Pectoral Sandpiper prefers shallow fresh to saline wetlands. The species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.	Unlikely – suitable habitat absent from site.
<i>Calidris ruficollis</i>	Red-necked Stint		Mi	BioNet	PMST	The Red-necked Stint is mostly found in coastal areas, including in sheltered inlets, bays, lagoons and estuaries with intertidal mudflats, often near spits, islets and banks and, sometimes, on protected sandy or coralline shores. Occasionally they have been recorded on exposed or ocean beaches, and sometimes on stony or rocky shores, reefs or shoals. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site.
<i>Charadrius bicinctus</i>	Double-banded Plover		Mi		PMST	The Double-banded Plover is found on coastal beaches, mudflats, sewage farms, river banks, fields, dunes, upland tussock grasses and shingle.	Unlikely –suitable habitat absent from site.
<i>Gallinago hardwickii</i>	Latham's Snipe		Mi		PMST	Latham's Snipe occurs in permanent and ephemeral wetlands up to 2000 m above sea-level. They usually inhabit open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around bogs and other water bodies).	Unlikely –suitable habitat absent from site.

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Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Gallinago megala</i>	Swinhoe's Snipe		Mi		PMST	During the non-breeding season Swinhoe's Snipe occurs at the edges of wetlands, such as wet paddy fields, swamps and freshwater streams. The species is also known to occur in grasslands, drier cultivated areas (including crops of rapeseed and wheat) and market gardens. Habitat specific to Australia includes the dense clumps of grass and rushes round the edges of fresh and brackish wetlands. This includes swamps, billabongs, river pools, small streams and sewage ponds. They are also found in drying claypans and inundated plains pitted with crab holes.	Unlikely – outside species known distribution.
<i>Gallinago stenura</i>	Pin-tailed Snipe		Mi		PMST	During non-breeding period the Pin-tailed Snipe occurs most often in or at the edges of shallow freshwater swamps, ponds and lakes with emergent, sparse to dense cover of grass/sedge or other vegetation. The species is also found in drier, more open wetlands such as claypans in more arid parts of species' range. It is also commonly seen at sewage ponds; not normally in saline or inter-tidal wetlands.	Unlikely – outside species known distribution.
<i>Limosa limosa</i>	Black-tailed Godwit	V	Mi		PMST	The Black-tailed Godwit is commonly found in sheltered bays, estuaries and lagoons with large intertidal mudflats or sandflats, or spits and banks of mud, sand or shell-grit; occasionally recorded on rocky coasts or coral islets. It is also found in shallow and sparsely vegetated, near-coastal, wetlands; such as saltmarsh, saltflats, river pools, swamps, lagoons and floodplains. There are a few inland records, around shallow, freshwater and saline lakes, swamps, dams and bore-overflows. They also use lagoons in sewage farms and saltworks.	Unlikely – outside species known distribution.
<i>Numenius minutus</i>	Little Curlew, Little Whimbrel		Mi	BioNet	PMST	The Little Curlew is most often found feeding in short, dry grassland and sedgeland, including dry floodplains and blacksoil plains, which have scattered, shallow freshwater pools or areas seasonally inundated. Open woodlands with a grassy or burnt understorey, dry saltmarshes, coastal swamps, mudflats or sandflats of estuaries or beaches on sheltered coasts, mown lawns, gardens, recreational areas, ovals, racecourses and verges of roads and airstrips are also used. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site
<i>Numenius phaeopus</i>	Whimbrel		Mi		PMST	The Whimbrel is often found on the intertidal mudflats of sheltered coasts.	Unlikely - suitable habitat absent within site.
<i>Pandion haliaetus</i>	Osprey		Mi		PMST	Eastern Ospreys occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia They require extensive areas of open fresh, brackish or saline water for foraging.	Unlikely –suitable habitat absent from site.
<i>Philomachus pugnax</i>	Ruff		Mi		PMST	In Australia the Ruff is found on generally fresh, brackish or saline wetlands with exposed mudflats at the edges. It is found in terrestrial wetlands including lakes, swamps, pools, lagoons, tidal rivers, swampy fields and floodlands.	Unlikely –suitable habitat absent within site
<i>Pluvialis fulva</i>	Pacific Golden Plover		Mi	BioNet	PMST	Pacific Golden Plovers usually occur on beaches, mudflats and sandflats (sometimes in vegetation such as mangroves, low saltmarsh such as Sarcocornia, or beds of seagrass) in sheltered areas including harbours, estuaries and lagoons, and also in evaporation ponds in saltworks. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years..	Unlikely – suitable habitat absent from site.
<i>Tringa brevipes</i>	Grey-tailed Tattler		Mi	BioNet	PMST	The Grey-tailed Tattler is often found on sheltered coasts with reefs and rock platforms or with intertidal mudflats. It can also be found at intertidal rocky, coral or stony reefs as well as platforms and islets that are exposed at low tide. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site.
<i>Tringa nebularia</i>	Common Greenshank		Mi		PMST	The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. Habitats include embayments, harbours, river estuaries, deltas and lagoons and are recorded less often in round tidal pools, rock-flats and rock platforms.	Unlikely –suitable habitat absent within site
<i>Tringa stagnatilis</i>	Marsh Sandpiper		Mi		PMST	The Marsh Sandpiper lives in permanent or ephemeral wetlands of varying salinity, including swamps, lagoons, billabongs, saltpans, saltmarshes, estuaries, pools on inundated floodplains, and intertidal mudflats and also regularly at sewage farms and saltworks.	Unlikely – suitable habitat absent from site.

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Phaethon lepturus</i>	White-tailed Tropicbird		Mi	BioNet		Tropicbirds are predominantly pelagic species, rarely coming to shore except to breed. The white-tailed tropicbird forages in warm waters and over long distances, moving up to 1500 kilometres from breeding sites. It feeds on fish and cephalopods by plunge-diving. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site.
<i>Hirundapus caudacutus</i>	White-throated Needletail		Mi	BioNet		In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. Because they are aerial, it has been stated that conventional habitat descriptions are inapplicable, but there are, nevertheless, certain preferences exhibited by the species. Although they occur over most types of habitat, they are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland. They also commonly occur over heathland, but less often over treeless areas, such as grassland or swamps. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site (aerial species).
<i>Ardenna pacificus</i>	Wedge-tailed Shearwater		Mi	BioNet		The Wedge-tailed Shearwater is a pelagic, marine bird known from tropical and subtropical waters. The species tolerates a range of surface-temperatures and salinities, but is most abundant where temperatures are greater than 21 °C and salinity is greater than 34.6 ‰. In tropical zones the species may feed over cool nutrient-rich waters. The species has been recorded in offshore waters of eastern Victoria and southern NSW, mostly over continental slope with sea-surface temperatures of 13.9–24.4 °C and usually off the continental shelf in north-west Australia. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within site
<i>Ardea ibis</i>	Cattle Egret		Mi	BioNet		The Cattle Egret occurs in tropical and temperate grasslands, wooded lands and terrestrial wetlands. The Cattle Egret often forages away from water on low lying grasslands, improved pastures and croplands. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely - suitable habitat absent within site
<i>Egretta sacra</i>	Eastern Reef Egret		Mi	BioNet		The Eastern Reef Egret lives on beaches, rocky shores, tidal rivers and inlets, mangroves, and exposed coral reefs. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent within site
<i>Erythrotriorchis radiatus</i>	Red Goshawk	CE	V	BioNet		Red Goshawks inhabit open woodland and forest, preferring a mosaic of vegetation types, a large population of birds as a source of food, and permanent water, and are often found in riparian habitats along or near watercourses or wetlands. In NSW, preferred habitats include mixed subtropical rainforest, Melaleuca swamp forest and riparian Eucalyptus forest of coastal rivers. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely - suitable habitat absent within site.
<i>Stercorarius pomarinus</i>	Pomarine Jaeger		Mi	BioNet		During Migration, wanders tropical and subtropical seas. Occurs in Australian coastal water between October and May. Most common along the edge of continental shelf, scarce closer to shore and only rarely seen in harbours and estuaries. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely - suitable habitat absent within site.
<i>Hydroprogne caspia</i>	Caspian Tern		Mi	BioNet		The Caspian Tern is mostly found in sheltered coastal embayments (harbours, lagoons, inlets, bays, estuaries and river deltas) and those with sandy or muddy margins are preferred. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Potential - The species may 'fly-over' the site
<i>Sterna hirundo</i>	Common Tern		Mi	BioNet		Common Terns are marine, pelagic and coastal. In Australia, they are recorded in all marine zones, but are commonly observed in near-coastal waters, both on ocean beaches, platforms and headlands and in sheltered waters, such as bays, harbours and estuaries with muddy, sandy or rocky shores. Occasionally they are recorded in coastal and near-coastal wetlands, either saline or freshwater, including lagoons, rivers, lakes,	Potential - The species may 'fly-over' the site,

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
						swamps and saltworks. Sometimes they occur in mangroves or saltmarsh and, in bad weather, in coastal sand-dunes or coastal embayments. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	
<i>Glossopsitta pusilla</i>	Little Lorikeet	V		BioNet		Forages primarily in the canopy of open Eucalyptus forest and woodland, yet also finds food in Angophora, Melaleuca and other tree species. Riparian habitats are particularly used, due to higher soil fertility and hence greater productivity. Roosts in treetops, often distant from feeding areas. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent from site.
<i>Lathamus discolor</i>	Swift Parrot	E	CE	BioNet	PMST	On the mainland they occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent from site.
<i>Fregatta grallaria grallaria</i>	White-bellied Storm-Petrel (Tasman Sea), Whitebellied Storm-Petrel (Australasian)		V		PMST	The White-bellied Storm-Petrel occurs across sub-tropical and tropical waters in the Tasman Sea, Coral Sea and, possibly, the central Pacific Ocean. In the non-breeding season, it reaches and forages over near-shore waters along the continental shelf of mainland Australia. It breeds, in Australian territory, on offshore islets and rocks in the Lord Howe Island group.	Unlikely –suitable habitat absent from site.
<i>Neophema chrysogaster</i>	Orange-bellied Parrot	CE	CE		PMST	Orange-bellied Parrots are seen almost exclusively in coastal and sub-coastal areas, preferring peninsulas and islands. Saltmarshes, littoral (shore) heathlands and low scrublands are preferred habitats as well as grassy areas, which can include golf courses.	Unlikely – suitable habitat absent from site area.
<i>Pterodroma leucoptera leucoptera</i>	Gould's Petrel, Australian Gould's Petrel	V	E		PMST	Breeds on both Cabbage Tree Island, 1.4 km offshore from Port Stephens and on nearby Boondelbah island. The range and feeding areas of non-breeding petrels are unknown.	Unlikely –suitable habitat absent from site.
<i>Pterodroma neglecta neglecta</i>	Kermadec Petrel (western)	V	V		PMST	Marine species. Breeds on islands across the South Pacific. In Australia it breeds on Ball's Pyramid and Phillip Island (near Norfolk Island). Vagrant birds occur in coastal NSW waters, particularly after storm events.	Unlikely –suitable habitat absent from site.
Frogs							
<i>Heleioporus australiacus</i>	Giant Burrowing Frog	V	V		PMST	Found in heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based. Breeding habitat of this species is generally soaks or pools within first or second order streams	Unlikely –suitable habitat absent within site
<i>Litoria aurea</i>	Green and Golden Bell Frog	E	V	BioNet	PMST	Inhabits marshes, dams and stream-sides, particularly those containing bullrushes (<i>Typha</i> spp.) or spikerushes (<i>Eleocharis</i> spp.). Optimum habitat includes water-bodies that are unshaded, free of predatory fish such as Plague Minnow (<i>Gambusia holbrooki</i>), have a grassy area nearby and diurnal sheltering sites available. Some sites, particularly in the Greater Sydney region occur in highly disturbed areas. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site
<i>Pseudophryne australis</i>	Red-crowned Toadlet	V		BioNet		Occurs in open forests, mostly on Hawkesbury and Narrabeen Sandstones. Inhabits periodically wet drainage lines below sandstone ridges that often have shale lenses or cappings. Shelters under rocks and amongst masses of dense vegetation or thick piles of leaf litter. Breeding congregations occur in dense vegetation and debris beside ephemeral creeks and gutters. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
Reptiles							
<i>Hoplocephalus bungaroides</i>	Broad-headed Snake		V		PMST	Shelters in rock crevices and under flat sandstone rocks on exposed cliff edges during autumn, winter and spring. Moves from the sandstone rocks to shelters in crevices or hollows in large trees within 500m of escarpments in summer.	Unlikely –suitable habitat absent within site
Mammals							
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat, Large Pied Bat	V	V		PMST	Roosts in caves (near their entrances), crevices in cliffs, old mine workings and in the disused, bottle-shaped mud nests of the Fairy Martin (<i>Petrochelidon ariel</i>), frequenting low to mid-elevation dry open forest and woodland close to these features. Found in well-timbered areas containing gullies.	Unlikely –suitable habitat absent within site
<i>Dasyurus maculatus maculatus</i>	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (south-eastern mainland population)	V	E	BioNet	PMST	Recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. Individual animals use hollow-bearing trees, fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site.
<i>Isoodon obesulus obesulus</i>	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)		E		PMST	They are generally only found in heath or open forest with a heathy understorey on sandy or friable soils.	Unlikely –suitable habitat absent within site.
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby		V		PMST	Occupy rocky escarpments, outcrops and cliffs with a preference for complex structures with fissures, caves and ledges, often facing north.	Unlikely – site outside of this species known distribution
<i>Phascolarctos cinereus</i>	Koala		V		PMST	Inhabit eucalypt woodlands and forests.	Unlikely –suitable habitat absent within site
<i>Pseudomys novaehollandiae</i>	New Holland Mouse, Pookila		V		PMST	The New Holland Mouse has been found from coastal areas and up to 100 km inland on sandstone country The species has been recorded from sea level up to around 900 m above sea level.	Unlikely – site outside of this species known distribution
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V	BioNet	PMST	Occur in subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Potential –foraging habitat present within site
<i>Perameles nasuta</i>	Long-nosed Bandicoot population in inner western Sydney	E		BioNet		Shelter mostly under older houses and buildings. Forage in parkland and back-yards. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	V		BioNet		Found in a broad range of habitats from rainforest through sclerophyll (including Box-Ironbark) forest and woodland to heath. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	V		BioNet		Roosts singly or in groups of up to six, in tree hollows and buildings; in treeless areas they are known to utilise mammal burrows. Forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Potential – limited foraging and roosting habitat present within site

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	V		BioNet		Occur in dry sclerophyll forest, woodland, swamp forests and mangrove forests east of the Great Dividing Range. Roost mainly in tree hollows but will also roost under bark or in man-made structures. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Potential – potential roosting habitat present within site
<i>Miniopterus australis</i>	Little Bentwing-bat	V		BioNet		Moist eucalypt forest, rainforest, vine thicket, wet and dry sclerophyll forest, Melaleuca swamps, dense coastal forests and banksia scrub. Generally found in well-timbered areas. Little Bentwing-bats roost in caves, tunnels, tree hollows, abandoned mines, stormwater drains, culverts, bridges and sometimes buildings during the day, and at night forage for small insects beneath the canopy of densely vegetated habitats. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Potential – potential roosting habitat present within site
<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	V		BioNet		Caves are the primary roosting habitat, but also use derelict mines, storm-water tunnels, buildings and other man-made structures. Hunt in forested areas. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Potential – potential roosting habitat present within site
<i>Myotis macropus</i>	Southern Myotis	V		BioNet		Generally roost in groups of 10 - 15 close to water in caves, mine shafts, hollow-bearing trees, storm water channels, buildings, under bridges and in dense foliage. Forage over streams and pools catching insects and small fish by raking their feet across the water surface. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Potential – potential roosting habitat present within site
Insects							
<i>Petalura gigantea</i>	Giant Dragonfly	E		BioNet		Live in permanent swamps and bogs with some free water and open vegetation. Adults spend most of their time settled on low vegetation on or adjacent to the swamp. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent within site
Plants							
<i>Acacia bynoeana</i>	Bynoe's Wattle, Tiny Wattle	E	V		PMST	Occurs in heath or dry sclerophyll forest on sandy soils. Seems to prefer open, sometimes slightly disturbed sites such as trail margins, edges of roadside spoil mounds and in recently burnt patches. Associated overstorey species include Red Bloodwood, Scribbly Gum, Parramatta Red Gum, Saw Banksia and Narrow-leaved Apple.	Unlikely –suitable habitat absent within site
<i>Acacia pubescens</i>	Downy Wattle, Hairy Stemmed Wattle	V	V		PMST	Occurs on alluviums, shales and at the intergrade between shales and sandstones. The soils are characteristically gravelly soils, often with ironstone. Occurs in open woodland and forest, in a variety of plant communities, including Cooks River/Castlereagh Ironbark Forest, Shale/Gravel Transition Forest and Cumberland Plain Woodland.	Unlikely – commonly associated soil type does not occur on site
<i>Acacia terminalis</i> subsp. <i>terminalis</i> MS	Sunshine Wattle	E	E	BioNet	PMST	Coastal scrub and dry sclerophyll woodland on sandy soils. Habitat is generally sparse and scattered. Most areas of habitat or potential habitat are small and isolated. Most sites are highly modified or disturbed due to surrounding urban development. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely –suitable habitat absent from site
<i>Caladenia tessellata</i>	Thick-lipped Spider-orchid, Daddy Long-legs	E	V		PMST	Generally found in grassy sclerophyll woodland on clay loam or sandy soils, though the population near Braidwood is in low woodland with stony soil.	Unlikely –suitable habitat absent from site
<i>Cryptostylis hunteriana</i>	Leafless Tongue-orchid	V	V		PMST	Does not appear to have well defined habitat preferences and is known from a range of communities, including swamp-heath and woodland. The larger populations typically occur in woodland dominated by Scribbly Gum (<i>Eucalyptus sclerophylla</i>), Silvertop Ash (<i>E. sieberi</i>), Red Bloodwood (<i>Corymbia gummifera</i>) and Black Sheoak (<i>Allocasuarina littoralis</i>); appears to prefer open areas in the understorey of this community and is often found in association with the Large Tongue Orchid (<i>C. subulata</i>) and the Tartan Tongue Orchid (<i>C. erecta</i>).	Unlikely –suitable habitat absent from site

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Genoplesium baueri</i>	Yellow Gnat-orchid, Bauer's Midge Orchid	E	E	BioNet	PMST	Grows in dry sclerophyll forest and moss gardens over sandstone. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site
<i>Melaleuca biconvexa</i>	Biconvex Paperbark	V	V		PMST	Biconvex Paperbark generally grows in damp places, often near streams or low-lying areas on alluvial soils of low slopes or sheltered aspects.	Unlikely – suitable habitat absent from site
<i>Melaleuca deanei</i>	Deane's Paperbark	V	V	BioNet		The species occurs mostly in ridgetop woodland, with only 5% of sites in heath on sandstone. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site
<i>Pelargonium sp. Striatellum</i>	Omeo Stork's-bill	E	E		PMST	It has a narrow habitat that is usually just above the high-water level of irregularly inundated or ephemeral lakes, in the transition zone between surrounding grasslands or pasture and the wetland or aquatic communities. It sometimes colonises exposed lake beds during dry periods.	Unlikely – site outside of this species known distribution
<i>Persoonia hirsuta</i>	Hairy Geebung, Hairy Persoonia	E	E	BioNet	PMST	The Hairy Geebung is found in sandy soils in dry sclerophyll open forest, woodland and heath on sandstone. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site
<i>Pimelea curviflora var. curviflora</i>		V	V	BioNet	PMST	Occurs on shale/lateritic soils over sandstone and shale/sandstone transition soils on ridgetops and upper slopes amongst woodlands. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – commonly associated soil type does not occur on site
<i>Syzygium paniculatum</i>	Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry	E	V	BioNet	PMST	On the south coast the Magenta Lilly Pilly occurs on grey soils over sandstone, restricted mainly to remnant stands of littoral (coastal) rainforest. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site
<i>Thesium australe</i>	Austral Toadflax, Toadflax				PMST	Occurs in grassland on coastal headlands or grassland and grassy woodland away from the coast. Often found in association with Kangaroo Grass (<i>Themeda australis</i>).	Unlikely – site outside of this species known distribution
<i>Tetradlea glandulosa</i>		V		BioNet		Associated with shale-sandstone transition habitat where shale-cappings occur over sandstone, with associated soil landscapes such as Lucas Heights, Gynea, Lambert and Faulconbridge. Topographically, the plant occupies ridgetops, upper-slopes and to a lesser extent mid-slope sandstone benches. Soils are generally shallow, consisting of a yellow, clayey/sandy loam. Stony lateritic fragments are also common in the soil profile on many of these ridgetops. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – commonly associated geology absent from site
<i>Tetradlea juncea</i>	Black-eyed Susan	V	V	BioNet		It is usually found in low open forest/woodland with a mixed shrub understorey and grassy groundcover. However, it has also been recorded in heathland and moist forest. The majority of populations occur on low nutrient soils associated with the Awaba Soil Landscape. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – site outside of this species known distribution
<i>Epacris purpurascens var. purpurascens</i>		V		BioNet		Found in a range of habitat types, most of which have a strong shale soil influence. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – commonly associated soil type does not occur on site
<i>Prostanthera marifolia</i>	Seaforth Mintbush	CE	CE	BioNet		Occurs in localised patches in or in close proximity to the endangered Duffys Forest ecological community. Located on deeply weathered clay-loam soils associated with ironstone and scattered shale lenses, a soil type which only occurs on ridge tops and has been extensively urbanised.	Unlikely – suitable habitat absent from site

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
						This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years (OEH 2018)	
<i>Callistemon linearifolius</i>	Netted Bottle Brush	V		BioNet		Recorded from the Georges River to Hawkesbury River in the Sydney area, and north to the Nelson Bay area of NSW. Grows in dry sclerophyll forest on the coast and adjacent ranges. This species has been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site
<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	V	V	BioNet		Typically grows in dry grassy woodland, on shallow soils of slopes and ridges. Found primarily on infertile soils derived from granite or metasedimentary rock. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – site outside of this species known distribution
<i>Eucalyptus pulverulenta</i>	Silver-leaved Gum	V	V	BioNet		Grows in shallow soils as an understorey plant in open forest, typically dominated by Brittle Gum (<i>Eucalyptus mannifera</i>), Red Stringybark (<i>E. macrorhynca</i>), Broad-leaved Peppermint (<i>E. dives</i>), Silvertop Ash (<i>E. sieberi</i>) and Apple Box (<i>E. bridgesiana</i>) (OEH 2018). This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – site outside of this species known distribution
<i>Leptospermum deanei</i>		V	V	BioNet		Woodland on lower hill slopes or near creeks. Sandy alluvial soil or sand over sandstone. Occurs in Riparian Scrub - e.g. <i>Tristaniopsis laurina</i> , <i>Baechea myrtifolia</i> ; Woodland - e.g. <i>Eucalyptus haemstoma</i> ; and Open Forest - e.g. <i>Angophora costata</i> , <i>Leptospermum trinervium</i> , <i>Banksia ericifolia</i> . This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site
<i>Hibbertia puberula</i>		E		BioNet		Occurs on sandy soil often associated with sandstone, or on clay. Habitats are typically dry sclerophyll woodland communities, although heaths are also occupied. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site
<i>Acacia gordonii</i>		E	E	BioNet		Restricted to the north-west of Sydney, it has a disjunct distribution occurring in the lower Blue Mountains in the west, and in the Maroota/Glenorie area in the east. Grows in dry sclerophyll forest and heathlands amongst or within rock platforms on sandstone outcrops. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – outside of species known distribution
<i>Eucalyptus camfieldii</i>	Camfield's Stringybark	V	V	BioNet		Restricted distribution in a narrow band with the most northerly records in the Raymond Terrace area south to Waterfall. Poor coastal country in shallow sandy soils overlying Hawkesbury sandstone. Coastal heath mostly on exposed sandy ridges. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – suitable habitat absent from site
<i>Eucalyptus fracta</i>	Broken Back Ironbark					Confined largely to State Forest. Locally common but restricted to the northern Broken Back Range near Cessnock, NSW. The dominant tree in a narrow band along the upper edge of a sandstone escarpment. Occurs in dry eucalypt woodland in shallow soils. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – outside of species known distribution
<i>Dichanthium setosum</i>	Bluegrass	V	V	BioNet		Bluegrass occurs on the New England Tablelands, North West Slopes and Plains and the Central Western Slopes of NSW, extending to northern Queensland. Associated with heavy basaltic black soils and red-brown loams with clay subsoil. This species has not been recorded within the NSW BioNet Database within 10km of the subject site in the past 10 years.	Unlikely – outside of species known distribution

Listed Threatened Ecological Communities

Identification		Status		Database		Assessment	
Species Name	Common Name	BC Act	EPBC Act	BioNet	PMST	Habitat	Potential to Occur
<i>Coastal Swamp Oak (Casuarina glauca)</i> <i>Forest of New South Wales and South East Queensland ecological community</i>			E		PMST	This community is found on the coastal floodplains of NSW. It has a dense to sparse tree layer in which <i>Casuarina glauca</i> (swamp oak) is the dominant species northwards from Bermagui.	Unlikely – habitat absent from site
<i>Coastal Upland Swamp in the Sydney Basin Bioregion</i>		E	E		PMST	Coastal Upland Swamps occur primarily on impermeable sandstone plateaux with shallow groundwater aquifers in the headwaters and impeded drainage lines of streams, and on sandstone benches with abundant seepage moisture. The Coastal Upland Swamp is generally associated with soils that are acidic and vary from yellow to grey mineral sandy loams with a shallow organic horizon to highly organic spongy black peats with pallid subsoils.	Unlikely – commonly associated soil type does not occur on site
<i>Castlereagh Scribbly Gum Woodland in the Sydney Basin Bioregion</i>		V	E		PMST	Occurs almost exclusively on soils derived from Tertiary alluvium, or on sites located on adjoining shale or Holocene alluvium.	Unlikely – site outside of this communities known distribution
<i>Cooks River/Castlereagh Ironbark Forest in the Sydney Basin Bioregion</i>		E	CE		PMST	Has a very restricted natural distribution and mainly occurs on clay soils derived from the deposits of ancient river systems (alluvium), or on shale soils of the Wianamatta Shales.	Unlikely – site outside of this communities known distribution
<i>Eastern Suburbs Banksia Scrub in the Sydney Basin Bioregion</i>		CE	E		PMST	Occurs on disjunct patches of nutrient poor aeolian (wind blown) dune sand.	Unlikely – commonly associated soil type does not occur on site
<i>Posidonia australis seagrass meadows of the Manning-Hawkesbury ecoregion</i>			E			The ecological community is the assemblage of plants, animals and micro-organisms associated with seagrass meadows dominated by <i>Posidonia australis</i> occurring in the warm temperate Manning Shelf and Hawkesbury Shelf bioregions on the east coast of Australia.	Unlikely – suitable habitat absent from site
<i>Shale Sandstone Transition Forest in the Sydney Basin Bioregion</i>		CE	CE		PMST	Occurs at the edges of the Cumberland Plain, where clay soils from the shale rock intergrade with earthy and sandy soils from sandstone, or where shale caps overlay sandstone.	Unlikely – commonly associated geology does not occur on site.
<i>Subtropical and Temperate Coastal Saltmarsh</i>			V		PMST	The physical environment for the ecological community is coastal areas under regular or intermittent tidal influence. In southern latitudes saltmarsh is often the main vegetation-type in the intertidal zone and commonly occurs in association with estuaries.	Unlikely – suitable habitat absent from site
<i>Turpentine-Ironbark Forest of the Sydney Basin Bioregion</i>		E	CE		PMST	Open forest, with dominant canopy trees including Turpentine <i>Syncarpia glomulifera</i> , Grey Gum <i>Eucalyptus punctata</i> , Grey Ironbark <i>E. paniculata</i> and Thin-leaved Stringybark <i>E. eugenoides</i> . Occurs close to the shale/sandstone boundary on the more fertile shale influenced soils, in higher rainfall areas on the higher altitude margins of the Cumberland Plain, and on the shale ridge caps of sandstone plateaus.	Unlikely – suitable habitat absent from site
<i>Western Sydney Dry Rainforest and Moist Woodland on Shale</i>			CE		PMST	The ecological community has a highly restricted distribution in the Sydney Basin bioregion in New South Wales. It is confined to sheltered slopes and gullies on steeply sloping, rugged topography mostly in the Cumberland Plain sub-region. The ecological community is generally limited to elevations below 300 metres above sea level (asl) in gullies, sheltered slopes and rugged terrain. The soils on which the ecological community occurs are almost exclusively clay soils derived from Wianamatta Group shales.	Unlikely – suitable habitat absent from site

Definitions of BC and EPBC Acts: CE - Critically Endangered; E - Endangered; V - Vulnerable; Mi - Migratory; X - Presumed extinct

References:

Department of the Environment (2019). Species Profile and Threats Database, Department of the Environment, Canberra. Available from: <http://www.environment.gov.au/sprat>.

Office of Environment and Heritage (2019) Threatened Biodiversity Profile Search, Office of Environment and Heritage, NSW. Available from: <https://www.environment.nsw.gov.au/threatenedspeciesapp/>

MydigitalEarth (2014). The Michael Morcombe eGuide to Australian Birds (Version 1.4.4). [Mobile application software] Retrieved from: <http://www.michaelmorcombe.com.au/>

APPENDIX I

FLORA SPECIES LIST

Species Name	Common Name
<i>Ficus rubiginosa</i>	Port Jackson Fig, Rusty Fig
<i>Nephrolepis cordifolia</i>	Fishbone Fern
<i>Histiopteris incisa</i>	Bat's wing fern, Oak fern
<i>Tetragonia tetragonioides</i>	New Zealand spinach, Native spinach
<i>Imperata cylindrica</i>	Blady grass
<i>Livistona australis</i>	Cabbage tree palm
<i>Conzya bonariensis</i>	Flaxleaf Fleabane
<i>Lepidium bonariense</i>	
<i>Oxalis articulata</i>	
<i>Solanum nigrum</i>	Black-berry Nightshade
<i>Sonchus oleraceus</i>	Common Sowthistle
<i>Olea europea</i>	Common Olive
<i>Plantago lanceolata</i>	Lamb's tongues, Plantain
<i>Ficus pumila</i>	Creeping Fig
<i>Gnaphalium sp.</i>	
<i>Bidens pilosa L.</i>	Cobblers Pegs, Pitch-forks, Teasers
<i>Lantana camara</i>	Lantana
<i>Triadica sebifera</i>	Chinese tallowwood
<i>Parietaria judaicia</i>	Asthma weed
<i>Conzya sp.</i>	
<i>Polycarpon tetraphyllum</i>	Four leave allseed
<i>Senecio sp.</i>	
<i>Ageratina adenophora</i>	Crofton Weed

APPENDIX J

USER GUIDE HANDBOOK

J USER GUIDE HANDBOOK

J.1 Objectives

This Heritage Handbook is *Appendix J* of the Snapper Island CMP and has been prepared as a standalone handbook that can be extracted from the main document for those responsible for the continuing care of this historically important place. It presents heritage principles to align with the best practice Australian heritage guidelines, the Burra Charter (Australia ICOMOS 2013), maintenance protocols, recommended inspection frequencies and some basic inspection techniques. This is followed by a tabulated report on ERM's maintenance inspection findings and a program of recommended works.

Conservation Dos and Don'ts applicable to the care of this significant site are also presented to provide guidance for tradespeople, maintenance supervisors and building tenants. Adopting and applying these guidelines should ensure the historic place remains well cared for and in its current good condition with little or no impact on its heritage values. The 2013 Burra Charter is accessible at <http://australia.icomos.org/publications/charters/> for ease of reference.

J.2 Heritage Values

J.2.1 Heritage Status

The Site is currently included on the CHL for historical, associative, aesthetic and social heritage values. The citations for these listings are provided at *Appendix A* of the CMP for ease of reference.

J.2.2 Statement of Significance

The Snapper Island Statement of Significance is provided below for context.

Snapper Island, comprising the original sandstone area, fore and aft areas of made ground, a range of utilitarian buildings and maritime structures, is historically important as the primary expression of the Navy League UK (NSW Branch). The Navy League UK (NSW Branch) was established at Drummoyne in 1921 by Len Forsythe, who saw the need to establish a voluntary training scheme for young boys, as naval cadets. The Sea Cadet movement is believed to be one of the oldest youth movements in the English-speaking world. The Snapper Island facility was officially opened on 26 November 1932 by Sir Charles Cox, on behalf of the Minister for Defence, as a living memorial to HMAS Sydney. HMAS Sydney, the first Royal Australian Navy ship to sink an enemy warship, the Emden, had been an inspiration to Forsythe. Snapper Island was the headquarters of Sydney's naval cadet groups and the Navy League from 1932 to 1977, and as such provided a voluntary step towards recruitment in the Australian Navy. Snapper Island has remained empty since 2007.

Today, Snapper Island represents a unique landscape element within the former naval core of Sydney Harbour. The utilitarian buildings, constructed by the Navy League Cadets, retain their original layout and provide a tangible link to the training ethos implemented by Forsythe. The form of the island, with its land modifications, is a rare and interesting element, which inspires public interest and increases its aesthetic values.

J.3 Dos and Don'ts

The following Dos and Don'ts are intended to guide activities affecting the Site, and outline advice regarding appropriate and inappropriate maintenance materials and techniques, which may be considered for future works.

J.3.1 Dos and Don'ts – General

<input checked="" type="checkbox"/>	<p>Do: Do check the conservation management documents and consult the CMP before proceeding with any maintenance works.</p>	<input checked="" type="checkbox"/>	<p>Don't: Do not proceed with any maintenance works without being fully informed of the conservation issues and potential risks of not following the recommended processes.</p>
<p>WHY? The heritage management documents are an important tool in the management of historic properties.</p>			
<input checked="" type="checkbox"/>	<p>Do: Do apply Burra Charter principles. In particular:</p> <ul style="list-style-type: none"> – Do understand significance when making decisions about changing the historic fabric. – Take a cautious approach and change as much as is necessary and as little as possible. – Do carry out all work in a logical order. – Do prepare records of the work undertaken. 	<input checked="" type="checkbox"/>	<p>Don't: Do not proceed with work without an understanding of the principles and practices established by the Burra Charter, which is the recognised heritage industry best practice in Australia.</p>
<p>WHY? The conservation of historic building must be based on a thorough understanding of heritage values and the correct conservation approach.</p>			
<input checked="" type="checkbox"/>	<p>Do: Do undertake a thorough investigation of proposed changes to heritage fabric to identify the potential for any impact on heritage values. If any doubt remains, seek the advice of a heritage specialist.</p>	<input checked="" type="checkbox"/>	<p>Don't : Do not undertake works where there is an unknown risk to heritage fabric that may lead to irreversible damage.</p>
<p>WHY? It is important not to make changes that irreversibly damage historic properties.</p>			
<input checked="" type="checkbox"/>	<p>Do: Do ensure that significant views to important historic buildings are retained.</p>	<input checked="" type="checkbox"/>	<p>Don't: Do not construct new buildings in locations that may impact on significant views.</p>
<p>WHY? The aesthetic values of the Site can potentially be impacted by poorly designed and positioned new buildings.</p>			
<input checked="" type="checkbox"/>	<p>Do: Do understand the physical fabric of the place as this in itself tells the story of the place's history and historical significance.</p>	<input checked="" type="checkbox"/>	<p>Don't: Do not attempt to repair or conceal every knock or dent in the historic fabric as evidence of the use of a historic structure can be an important part of its history and contributes to its "patina" or quality of age.</p>
<p>WHY? The fabric of a historic building tells its story and embodies the story of its occupants over time.</p>			
<input checked="" type="checkbox"/>	<p>Do: Do ensure historic buildings have a compatible use.</p>	<input checked="" type="checkbox"/>	<p>Don't: Do not introduce uses into historic buildings that require changes to original layouts or that may put their security at risk.</p>
<p>WHY? Unoccupied buildings attract unauthorised access by vandals and remove them from annual recurrent maintenance cycles leading to the loss of their heritage values.</p>			
<input checked="" type="checkbox"/>	<p>Do: Do only repair as much of the historic fabric as is necessary rather than total replacement.</p>	<input checked="" type="checkbox"/>	<p>Don't: Do not replace existing elements with modern profiles as the significance of historic structures is linked to their traditional detailing.</p>
<p>WHY? The more that is removed and replaced on a historic building, the more its integrity and consequently its heritage value is reduced.</p>			
<input checked="" type="checkbox"/>	<p>Do: Do carefully piece in new work respecting the original fabric. Original and early building elements tell us about past construction techniques and styles and are an irreplaceable resource.</p>	<input checked="" type="checkbox"/>	<p>Don't: Do not remove evidence of original or features such as paint colour schemes and brackets. Leave the evidence and work around it.</p>

WHY? The more that is removed and replaced on a historic building, the more its integrity and consequently its heritage value is reduced

<input checked="" type="checkbox"/>	Do: Do ensure termite or pest inspections are regularly undertaken and any activity treated by a licensed pest inspector.	<input checked="" type="checkbox"/>	Don't: Do not miss regular termite inspections.
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WHY? Termites can wreak havoc in a heritage building in a short time.

<input checked="" type="checkbox"/>	Do: Do replace damaged glazing to match the original thickness and type of drawn glass where it is safe to do so.	<input checked="" type="checkbox"/>	Don't: Do not use plate, float, tinted or laminated glass in doors and windows unless a safety issue is apparent.
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WHY? Safety glass is double the thickness of original glass and requires rebate depths to be increased.

<input checked="" type="checkbox"/>	Do: Do retain original and early fittings and fixtures if these survive.	<input checked="" type="checkbox"/>	Don't: Do not remove or replace original door and window furniture, light switches, power switches or light fittings where these are present.
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WHY? The significance of historic buildings is linked to their original fittings.

<input checked="" type="checkbox"/>	Do: Do repair historic materials with the same or similar materials – “like with like”. If the same material is no longer available or unsuitable, seek the most compatible option.	<input checked="" type="checkbox"/>	Don't: Do not use dissimilar materials for repair of historic buildings.
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WHY? The introduction of a modern material into historic fabric may cause long term damage.

<input checked="" type="checkbox"/>	Do: Do retain original planning and construction and heritage values embodied in a place's historic fabric.	<input checked="" type="checkbox"/>	Don't: Do not remove evidence of original planning, construction systems, door and window furniture, or services (e.g. Closed off doorways, redundant door furniture or light fittings). Leave the evidence and work around it.
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WHY? Evidence of past building layout and technologies can tell us how a place was used.

<input checked="" type="checkbox"/>	Do: Do maintain all fixings and hardware in clean and operative condition.	<input checked="" type="checkbox"/>	Don't: Do not bypass operating heritage features such as double hung window mechanisms.
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WHY? Continued use will ensure regular care whereas redundancy may lead to removal and potential impact on heritage values.

<input checked="" type="checkbox"/>	Do: Do retain historic building elements on site during any conservation processes.	<input checked="" type="checkbox"/>	Don't: Do not remove historic building elements from site unless absolutely necessary. If removal is required ensure there is a process in place to ensure the physical care and security of the remained element is maintained.
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WHY? Historic building elements can be damaged in transit, or lost or stolen during repair works.

<input checked="" type="checkbox"/>	Do: Do keep historic buildings clean internally and externally.	<input checked="" type="checkbox"/>	Don't: Do not avoid cleaning historic buildings as this can accelerate decay.
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WHY? Well cared for fabric will decay more gradually.

<input checked="" type="checkbox"/>	Do: Do replace missing elements to historic buildings.	<input checked="" type="checkbox"/>	Don't: Do not allow elements to deteriorate and break.
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WHY? The retention of integrity supports the protection of heritage values.

<input checked="" type="checkbox"/>	Do: Do keep unpainted materials such as brick and stone unpainted.	<input checked="" type="checkbox"/>	Don't: Do not paint elements that have not been previously painted.
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WHY? Painting can change the performance of the material and also can impact on a place's aesthetic values.

☑	Do: Repaint painted elements with appropriate blends. This may involve additional investigation or consultation to determine the best alternative.	☒	Don't: Don't paint elements with modern acrylic paints unless this is an appropriate alternative to the material to be painted.
Why? Painting with inappropriate blends can change the performance of the material and lead to accelerated deterioration.			

☑	Do: Do have an understanding of significant fabric of an element prior to undertaking any work.	☒	Don't: Don't damage or remove significant fabric.
Why? The physical fabric of the element is important as it tells the story of the architect's intent.			

J.3.2 Dos and Don'ts – Roofs and Rainwater Goods

☑	Do: Do inspect the condition of the roofs every year for minor problems such as lifting of flashings, loose fixings, and damp roof timbers internally.	☒	Don't: Do not ignore minor problems, as they can lead to larger and more costly problems if left unattended.
WHY? The care of the roof on any building is vitally important especially for a historic building as unattended leaking can put rare and fragile interiors at risk.			

☑	Do: Do ensure that roofs, gutters and downpipes are regularly painted using a paint system that is consistent, if stable, with the earlier coatings.	☒	Don't: Do not allow failed paintwork to expose metal elements.
WHY? Painting protects metal roofing and materials and extends their life.			

☑	Do: Do ensure vegetation growing behind the rainwater pipes or underneath or behind the gutters is cut back or removed altogether.	☒	Don't: Do not allow vegetation growth to impact on the fabric of historic buildings.
WHY? Vegetation can help trap moisture against the rainwater goods and speed up their deterioration. Growing creepers can dislodge or damage gutters and pipes.			

☑	Do: Do be proactive and check externally in wet weather for places where the wall of the building is getting saturated. This is a sign that the rainwater system is leaking or blocked. In dry weather, there will be stains or marks left where water has been seeping into the wall.	☒	Don't: Do not ignore potential leaking.
WHY? Rain leaking into the wall speeds up the deterioration any linings, can cause rot in internal timberwork, and can damage internal decoration and fittings.			

☑	Do: Do replace existing rainwater goods with galvanised steel to match the existing profile.	☒	Don't: Do not introduce new materials or profiles.
WHY? Incompatible metals can cause a reaction with other metals in the system, for example zincalume with galvanised steel.			

☑	Do: Do regularly clear gutters and downpipes.	☒	Don't: Do not allow leaf litter or bird droppings to accumulate on roofs of the building.
WHY? Blockage of the rainwater disposal system can cause internal flooding and damage historic fabric.			

J.3.3 Dos and Don'ts – Maintenance and Repair of Structural Timber

<input checked="" type="checkbox"/>	Do: Do retain original timber members and detailing. Consider splicing in new sections of matching or similar species or strengthen original sections with "sister" members or metal plating.	<input checked="" type="checkbox"/>	Don't: Do not discard original timber members without considering retention options.
WHY? The more that is removed and replaced on a historic building, the more its integrity and consequently its heritage value is reduced.			

<input checked="" type="checkbox"/>	Do: Do install replacement timber elements if required with a matching profile and species. Where species is no longer available select a timber with similar characteristics.	<input checked="" type="checkbox"/>	Don't: Do not discard original timber members without considering retention options.
WHY? The more that is removed and replaced on a historic building, the more its integrity and consequently its heritage value is reduced.			

<input checked="" type="checkbox"/>	Do: Do retain original construction detailing when making repairs.	<input checked="" type="checkbox"/>	Don't: Do not introduce new detailing that is inconsistent with the original detail.
WHY? The more that is removed, replaced or changed on a historic building, the more its integrity and consequently its heritage value is reduced.			

J.3.4 Dos and Don'ts – Maintenance and Repair of Corrugated Galvanised Iron and Metal Work

<input checked="" type="checkbox"/>	Do: Keep roofing, rainwater goods and exposed CGI clean	<input checked="" type="checkbox"/>	Don't: Allow dirt, grime or debris to remain on roofs or against walls.
Why? Dirt and other debris can accelerate the depletion of the zinc coating on CGI panels, leading to loss of protection and deterioration of fabric.			

<input checked="" type="checkbox"/>	Do: Consider patching smaller holes in CGI panels using appropriate materials, such as lead soldering or silicone resin.	<input checked="" type="checkbox"/>	Don't: Don't patch with incompatible materials, or attempt to patch larger holes which will show obvious signs of disturbance.
Why? Patches can extend the life of a panel and may reduce the need to replace; however, use of appropriate materials is essential to ensuring longevity.			

<input checked="" type="checkbox"/>	Do: Consider the profile and visual impact of replacement panels when undertaking repair/replacement works.	<input checked="" type="checkbox"/>	Don't: Replace panels with alternate materials which are not in keeping with the aesthetic value, or with incompatible materials.
Why? Replacement panels need to have similar materials performance and be in keeping with the aesthetic values of the place.			

J.3.5 Dos and Don'ts – Maintenance and Repair of Brick and Stonework

<input checked="" type="checkbox"/>	Do: Regularly inspect stonework and brick pillars for signs of damage, salt attack and instability.	<input checked="" type="checkbox"/>	Don't: Don't allow stonework and brick to be continually attacked by salt, rising damp or other deteriorating contaminants.
WHY? Brick and stonework required specialist conservation skills to repair. As such, it is easier and more cost effective to undertake preventative maintenance.			

<input checked="" type="checkbox"/>	Do: Obtain similar and compatible materials to undertake repairs of stonework and brick elements.	<input checked="" type="checkbox"/>	Don't: Do not replace stonework or brick elements with modern materials which do not have similar material performance
WHY? Material performance is important in maintaining a place in good condition. This can be compromised by use of incompatible materials.			

<input checked="" type="checkbox"/>	Do: Do install appropriate drainage against buildings.	<input checked="" type="checkbox"/>	Don't: Do not have hard concrete surfaces abutting buildings.
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WHY? Concrete against masonry or stone building elements can increase the potential for rising damp.

J.3.6 Dos and Don'ts – Landscape

☑	Do: Carry out annual arborist inspections of the Cabbage Trees and undertake trimming where recommended for the health of the Tree.	☒	Don't: Undertake any work on the Cabbage Trees without guidance from an arborist.
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WHY? The Cabbage Trees requires specialist care to support their healthy growth to reach its maximum life span.

☑	Do: Continue regular grounds maintenance of the gardens bed and grassed areas.	☒	Don't: Allow vegetation to become overgrown and compromise the built structures.
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WHY? The gardens and grassed areas can become overgrown and lead to vermin infestation and damage to built structures. This can be avoided through regular gardening and landscaping work.

☑	Do: Undertake regular inspections of the sea walls to assess damage and need for repairs.	☒	Don't: Don't allow the sea walls to deteriorate beyond repair.
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WHY? The seawalls are an important part of the history of the island, relating directly to the development of the unique shape and layout. The seawalls need to be maintained to protect these values.

J.4 Unforeseen Discoveries

It is relatively unlikely that the sub-surface areas of site contain items of archaeological interest that may be discovered during works on the buildings, given the extent of sub-surface disturbance involved in the construction of the Site. However, the buildings themselves do provide some potential for unforeseen discovery of archaeological items.

The Indigenous heritage analysis of the Site (see *Appendix B* and *Appendix D* of the CMP) has determined that the Site has low Aboriginal archaeological potential. If potential archaeological items are found during site works, the following procedure should be implemented:

2. Cease work in the immediate area;
3. Notify the Building Manager and the owner;
4. Photograph the item in situ;
5. Inspect the item with the owner's Heritage Advisor and determine if consultation is required and if the item can be safely moved for further examination and works can continue;
6. Prepare a brief report documenting the item's location, including in situ photographs, and recommendations for management and future storage;
7. If the item cannot be moved without further archaeological excavation and recording, engage a suitably qualified archaeologist to record and assess the item. Determine if adjacent works need to be amended to protect the item in consultation with the owner and relevant Commonwealth and State officers as necessary; and
8. Implement the guidance of the owner's Heritage Advisor and Commonwealth and State, including ongoing requirements for the item's protection as required.

J.5 Maintenance Protocols

This section provides maintenance protocols to guide regular inspections, Catch up Maintenance Schedule, Cyclical Preventative Maintenance Inspection Schedule and Planned Maintenance Works that ensures heritage values are conserved.

The Site has not been subject to regular, effective maintenance, which has contributed to its poor condition overall.

J.5.1 Reasons for Maintenance

The desirable standard of maintenance depends on the intensity of use and climatic conditions. A policy of preventative maintenance work is less expensive in every way. Neglecting maintenance leads to decay and may lead to costly repair or the building replacement cycle being the only viable option.

A clear understanding of the building materials, construction type and historical development, and as a result the likely problems that may be encountered, assists with the anticipation and appropriate maintenance and repair. Maintenance is defined by the Burra Charter as the continuous protective care of the fabric, contents and setting of a place. Preventative Maintenance is carried out to prevent an item failing or wearing out by providing systematic inspection, detection and prevention of damage or failure, and is usually programmed. If carried out properly, preventative maintenance will reduce the probability of decay. This contrasts with corrective maintenance, whereby damaged or deteriorating material is replaced or repaired. Preventative maintenance can not only reduce, or even avoid, the need for repairs later; it will prevent the loss of original fabric and is cost-effective. Corrective maintenance is disruptive and costly in both significant fabric and financial terms.

Regular inspections and preventative maintenance thus form the basis of the most cost effective approach to the conservation of buildings and items of heritage significance. While some heritage buildings and items have materials that may require specialised care, the majority of preventative maintenance is standard housekeeping that can be undertaken as part of programmed maintenance activities for all assets.

Regular inspection and preventative maintenance activities can contribute to extending the life of an asset and reduce the whole of life costs associated with using the building. The need for major conservation work is most commonly the result of insufficient inspection and maintenance. The cost benefits of developing and implementing an inspection and preventative maintenance regime is outlined in graph below (*Figure 6.4*).

Continuation of existing uses and seeking new or adaptive re-use of heritage items also plays a key role in conserving heritage values by ensuring maintenance issues are identified early and supporting justification for funding works for ongoing care.

Preventive maintenance costs markedly less than repairing extensive damage or building failures

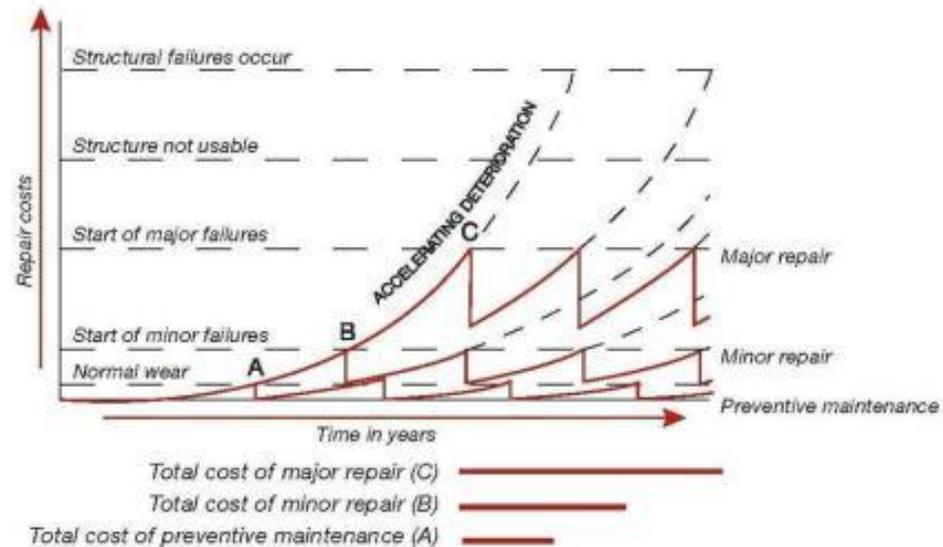


Diagram from *Preventive Maintenance of Buildings*, Van Nostrand Reinhold, New York, 1991.

Figure 0.1 Preventative Maintenance Costs Diagram

Source: NSW Heritage Office 2004: 3)

J.5.2 Regular Inspection

Regular annual inspections of Snapper Island should be undertaken by the land owner/manager. These inspections are important as part of the ongoing care of the heritage values and fabric of the buildings and the associated elements on the island. Additional guidance for these inspections is provided below.

Maintenance and examination of the Site should ideally be tackled by routines of six monthly, annual and five yearly inspections, followed by brief reports. The inspections should be undertaken by the Property Manager and a heritage practitioner with knowledge of historic buildings and conservation of building materials and methods. These should be integrated into annual inspections.

Examination of the fabric of the buildings and their surrounds should be conducted systematically by circulating around each building externally and internally in a clockwise direction. Examiners should use their senses to observe and note each building and surrounding environment condition and defects.

The checklist provided below in *Section 6.5.3.2* is an indication of what needs to be considered for Snapper Island to ensure issues that may have an impact on heritage values are mitigated. This checklist should also be integrated into the owner's inspection checklist.

J.5.3 Maintenance Plans

This section presents prioritised implementation plans comprising specific work tasks to manage the heritage values of the Site and individually significant features. These works should be integrated into the Finance and PSP maintenance plans, minor capital expenditure programs or capital expenditure programs.

The maintenance plans are prioritised according to the risk framework and divided into the following topics:

- Catch Up Maintenance;
- Cyclical Preventative Maintenance Schedule; and

- Planned Works.

J.5.3.1 Catch Up Maintenance

The following section summarises faults observed during the December 2018 survey, with minor amendments based on additional visits in 2019 and 2020, general housekeeping and maintenance issues and provides advice on how these issues should be rectified. These items are summarised in Table 6.3.

Table 0.1 Catch Up Maintenance and Repairs

Location	Priority	Fault	Recommendation	Photograph
Building 2 – Guard House				
All internal spaces	Low Complete within 2 years.	Cleanliness of the spaces to be improved.	Deep clean to be undertaken in all internal spaces to remove accumulated dust and grime to establish base maintenance level. Removal of refuse and broken furniture.	
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	ERM 2020
Buildings 4 and 5 – Generator Room and Women’s Toilet				
Generator Room and Women’s toilet.	Medium Complete within 12 months.	Asbestos material to be removed.	Isolation and removal of asbestos material within structure, prior to cleaning and maintenance inspection.	
	High	Sealing of structures	Internal spaces to be sealed (with bird mesh or similar) to prevent egress by Silver Gulls and reduce available nesting space.	
				ERM 2020
Building 6 – Boatshed and Workshop				
Boatshed Timbers	High Complete within 6 months.	Timbers failing due to marine weathering and wave action.	Additional engineering assessment of structure to guide repair and replacement should be undertaken and recommendations should be implemented. The structure is integral to the significance of the island and should be retained.	
				ERM 2020

Location	Priority	Fault	Recommendation	Photograph
Building 8 - Gymnasium				
Gymnasium	Medium Complete within 12 months.	Foundation, floor and interior spaces in poor condition.	Engineering assessment of sub floor to guide repair and replacement. Repair and replacement within the gymnasium to be undertaken to allow for use of the space. Removal of miscellaneous refuse and debris.	
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	ERM 2020
Building 9 – J. Payne Memorial Building				
Former Sick Bay	High Complete within 6 months.	Damage to floor.	Engineering assessment of sub floor to guide repair and replacement. Floor to be repaired and reinstated. This process will limit access of animals and water/contaminants into the space.	
Stairs	Medium Complete within 12 months.	Stairs missing.	Stairs to be reinstated, to allow easy access to the upper level. Include assessment of the viability of the structure.	
All internal spaces	Low Complete within 2 years.	Cleanliness of the spaces to be improved.	Deep clean to be undertaken in all internal spaces to remove accumulated dust and grime to establish base maintenance level. Removal of refuse and broken furniture.	
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	ERM 2018
Building 10 – Main Deck				

Location	Priority	Fault	Recommendation	Photograph
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	 <p data-bbox="1241 472 1358 501">ERM 2018</p>
External Doors	High Complete within 6 months.	External doors not all closed/secured	Repairs should be made to external doors to ensure birds and other animals cannot access the internal spaces and increase security.	 <p data-bbox="1241 934 1358 963">ERM 2018</p>
North-west corner room	Medium Complete within 12 months.	Water damage to plaster panelling.	Investigate source of water damage and repair, conduct inspection for additional damage in surrounding panels. Replace damaged panel with like material.	 <p data-bbox="1241 1263 1358 1292">ERM 2018</p>
All internal spaces	Medium Complete within 12 months.	Cleanliness of the spaces is low, animal activity has had detrimental impact throughout.	Deep clean to be undertaken in all internal spaces to remove accumulated dust, grime and animal droppings. Additional inspection to be undertaken to establish maintenance base level and determine if any additional urgent repairs required. Removal of refuse and broken furniture.	 <p data-bbox="1241 1592 1358 1621">ERM 2018</p>

Location	Priority	Fault	Recommendation	Photograph
North end, central room	Low Complete within 2 years.	Damaged wall panelling.	Remove tape, repair damaged panelling and repaint along with cyclical maintenance schedule.	 ERM 2018

Building 14 – Officer's Cottage

Throughout Officer's Cottage	Moderate Complete within 2 years.	Water damage to be repaired	Internal finishes, such as flooring and timber cladding, should be repaired to previous standard.	 ERM 2020
	Low Complete within 2 years.	Cleaning and removal of refuse.	Deep clean and additional inspection to be undertaken to establish maintenance base level Removal of refuse and furniture.	
All internal spaces	High Complete within 6 months.	Rodent baits to be replaced.	Check/replace all rodent baits and traps to limit potential for infestation of buildings.	
All internal spaces	High	Internal water damaged to be repaired.	Repair/replace water damaged panelling/flooring with like-for-like materials.	No image available.

Exterior spaces

Upper deck and lower deck	High Complete within 6 months.	Vegetation overgrown and unmanaged.	General vegetation management/removal to be undertaken. Slashing, weeding and preventative spraying.	 ERM 2018
Walkways and gantries	High Complete within 6 months.	Timber walkways badly degraded and unsafe for use.	Timber walkways to be repaired/replaced. Degraded and broken timbers to be removed from the island and disposed of appropriately.	 ERM 2018

Location	Priority	Fault	Recommendation	Photograph
Upper deck and lower deck	MHigh Complete within 6 months.	General refuse dumping	Refuse, miscellaneous items and unusable building materials to be removed and disposed of appropriately.	 <p>ERM 2018</p>

J.5.3.2 Cyclical Preventative Maintenance Schedule

The following checklist is an indication of what needs to be considered for the Site to ensure issues that may have an impact on heritage values are mitigated. The following should also be integrated into the owner's inspection checklist.

Six month cyclical maintenance plan

- check plant growth over island and prune/mow where necessary;
- monitor animal/vermin activity and place additional traps/baits where necessary;
- inspect termite activity and treat where necessary;
- check external windows and doors for damage and repair as necessary;
- check for graffiti/other signs that the island has been illegally accessed;
- check rainwater goods to ensure they are free of leaves and other debris; and
- conduct basic cleaning to ensure condition does not continue to deteriorate.

Annual cyclical maintenance plan

- Check the condition of stairs, seawalls and retaining walls;
- check the condition of plantings and vegetation;
- check condition of all directional and interpretive signage (where available);
- check condition and integrity of all contributory elements of significance identified in Table 4.3;
- check and clear stormwater pits and drains;
- inspect roofs (outside and inside);
- check glazing. Clean windows and painted surrounds;
- check opening and closing of all doors and windows and ease and lubricate as required; and
- clean light fittings and change bulbs or fluorescent tubes.

5 yearly cyclical maintenance plan

Every five years the heritage practitioner should make a full report especially noting any structural defects that should be kept under observation and the cyclical maintenance plan should be updated, drawing attention to any defects that should be kept under observation or where further study might be required. Proposed actions should be prioritised and divided into the following categories and recorded in a log book:

- small items (basically good housekeeping);
- should building upgrades occur, requirement for repairs to mechanical, electrical, plumbing and drainage services;

- a rolling program of long term preventive maintenance carried out year by year; and
- major items of conservation such as roofing, walls, windows, doors and floor coverings and services.

The scope of a typical five yearly inspection would be consistent with the list of items set out in the annual inspection.

J.5.3.3 Planned Works

At this stage, there are no planned works for Snapper Island.

The statutory CMP should be prepared to reflect any planned works as they arise.

J.6.4 Reporting Protocols

J.6.4.1 Objectives

The objectives of this section of the report are to outline ways in which changes to the building are tracked, and ensure this CMP and associated action plans, implementation plans and maintenance plans are regularly reviewed and updated.

J.6.4.2 Reporting

All substantial maintenance and alterations need to be reported. These records should be centrally managed according to Harbour Trust Protocols.

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