

MANAGEMENT PLAN

Mosman Drill Hall Precinct





Table of Contents

1. Introduction	7
2. Aims of this Plan.....	11
3. Planning Framework	13
4. Relationship with the Headland Park Design Framework.....	22
5. Site Description and History.....	30
6. Heritage Values	39
7. Site Analysis.....	46
8. Outcomes	58
9. Future Actions	77
Appendix A: Table of Figures	80
Appendix B: Acknowledgements – Images.....	81
Appendix C: Related Studies	82
Appendix D: Commonwealth Heritage Listings	84



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The Harbour Trust acknowledges the traditional owners of this land the Borogegal people and pay our respect to elders past and present.

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This Management Plan was adopted by the Harbour Trust on XXXX and it came into force on that date.

Schedule of Amendments

The Mosman Drill Hall Management Plan was adopted by the Harbour Trust on 24 May 2006 and came into force on that date. Subsequently, the Management Plan has been amended as follows:

Amendment 1 – Adopted and came into force on xxxxx:

The plan has been amended to provide for:

- Improved coordination of the management of the adjoining Drill Hall/Rawson Park sport and recreation precincts;
- Lighting and night time use of the outdoor netball courts for training purposes; and
- Updates to relevant plans, strategies, site analyses and descriptions to reflect their current status.



1. INTRODUCTION



1. Introduction

Section 1 sets out the requirement for and the purpose of this Management Plan and provides an introduction to the land to which this Management Plan applies.

On 21st August 2003 the Minister for the Environment and Heritage approved a Comprehensive Plan for the seven harbour sites managed by the Sydney Harbour Federation Trust. The plan, which was prepared in accordance with the requirements of the *Sydney Harbour Federation Trust Act 2001*, sets out the Harbour Trust's vision for the harbour sites under its control.

A requirement of the Harbour Trust's Comprehensive Plan is that more detailed management plans are prepared for specific precincts, places or buildings. In addition to this the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* also requires the Harbour Trust to make plans to protect and manage the Commonwealth Heritage values of Commonwealth Heritage Places that it owns. The Mosman Drill Hall precinct is identified on the Commonwealth Heritage List as one of these places.

Accordingly, the purpose of this Management Plan is to guide the outcomes proposed in the Harbour Trust's Comprehensive Plan and to satisfy the requirements of Schedule 7A of the EPBC Regulations, 2000.

The Comprehensive Plan proposes the creation of a Headland Park that integrates Middle Head, Georges Heights and Chowder Bay. The Headland Park will unify all of the elements along the Middle Head ridgeline, from Rawson Park to Middle Head.

The vision for the park is a place where the area's rich natural and cultural heritage, including its early aboriginal and military occupation will be protected and interpreted and where access will be provided to areas that had long been inaccessible to most people.

Much of the Comprehensive Plan's vision for the Headland Park has now been achieved.

The Harbour Trust's continuing goals for the Headland Park are to ensure that:

- The natural and cultural assets of Middle Head, Georges Heights and Chowder Bay are conserved;
- Bushland is protected and maintained;
- A network of walking tracks is maintained that links the various former military precincts and other places of interest; and
- Existing facilities are adaptively reused for appropriate educational, community, recreational and commercial uses.

The Mosman Drill Hall precinct forms an important historic area within the proposed Headland Park. The Harbour Trust's Comprehensive Plan proposed outcomes for the precinct that have been mostly achieved, including:

- Conservation and adaptive reuse of the Drill Hall;
- The former lawn netball courts in the adjoining Rawson Park (under the care, control and management of Mosman Council) have been relocated to the Mosman Drill Hall precinct and upgraded as 'all-weather courts; and

- An indoor sports building has been constructed, with its design prepared in consultation with the local community.

The restoration of the precinct, and construction of new facilities was completed by Mosman Council in 2011, in accordance with this Management Plan. Mosman Council has leased the site until 2031, and is responsible for the day-to-day management of the precinct.

The Drill Hall Precinct, together with the adjoining Rawson Park, is managed by Mosman Council as a vibrant sport and recreation precinct for the local community.

1.1. Commencement Date

This plan was adopted by the Harbour Trust on 24 May 2006 and came into force on that date. Subsequent amendments are listed in a schedule following the title page.

1.2. Land to which the Management Plan Applies

The land covered by the Management Plan is shown by broken black edging on the plan at **Figure 1**. All of the land is included within Lot 2 DP 541799 and is in the ownership of the Sydney Harbour Federation Trust.

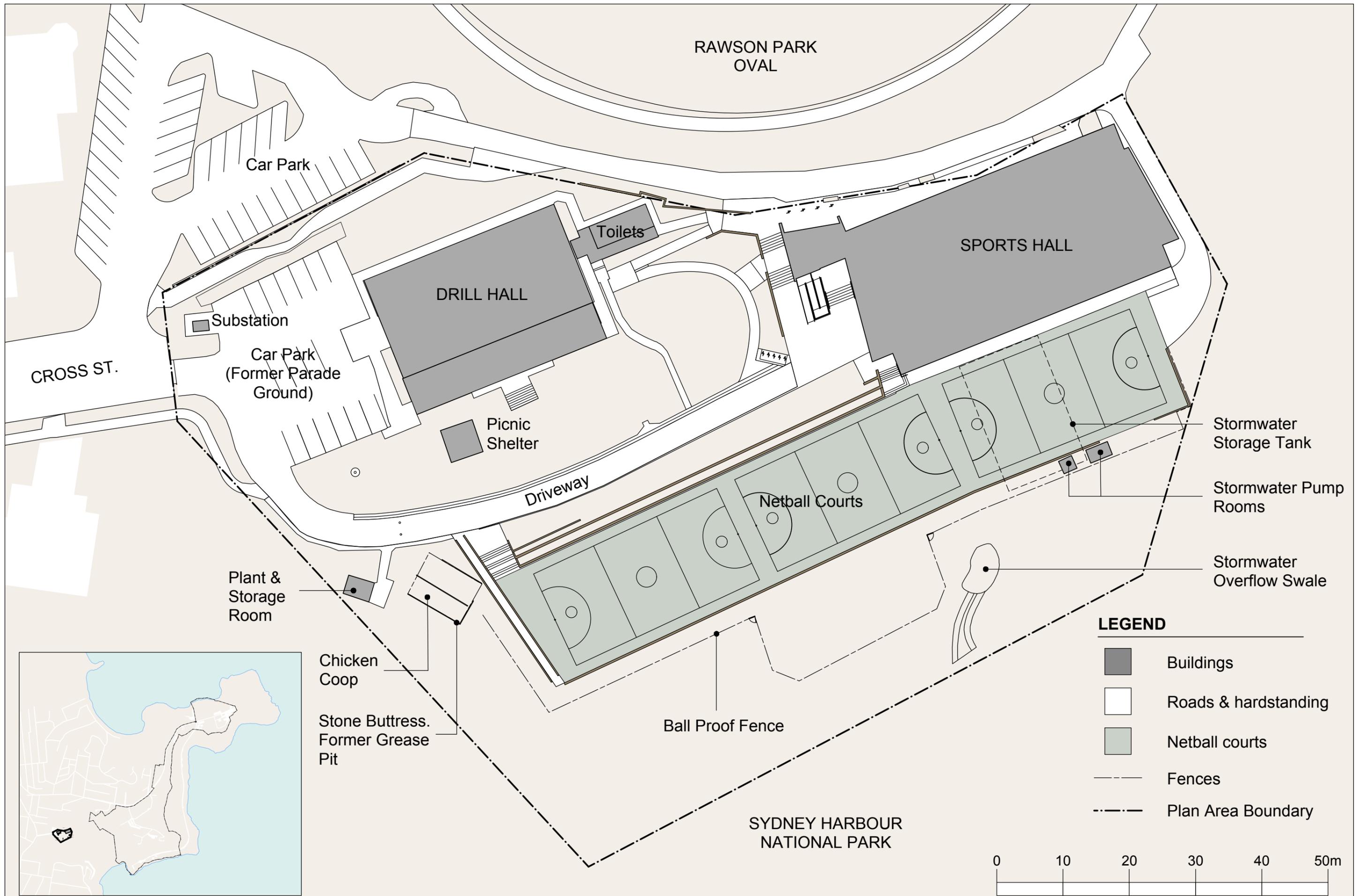


Fig.01 - Management Plan Area





2. AIMS OF THIS PLAN



2. Aims of this Plan

Section 2 outlines the aims of this Management Plan.

The aim of this Management Plan is to:

- Conserve and interpret the Commonwealth Heritage values of the Mosman Drill Hall precinct relating to its military occupation;
- Maximise public access;
- Continue the use of the former Drill Hall for appropriate uses;
- Continue the use of the community sports training facility comprising outdoor hard-surfaced training courts and an indoor sports building; and
- Integrate the precinct with adjoining lands as part of a unified Headland Park.

In doing this it also aims to:

- Be consistent with Commonwealth Heritage Management Principles;
- Conserve and interpret the whole site as an historic precinct;

- Assist the conservation of the historic fabric of the Drill Hall by ensuring that its adaptive reuse remains consistent with the recommendations of the Conservation Management Plan (CMP);
- Provide opportunities and site interpretation for visitors to understand and appreciate the totality of the site's heritage;
- Encourage uses and activities that promote the use of sustainable modes of transport and ensure that traffic generated by the site's re-use has a minimal impact on the surrounding residential areas;
- Provide visitor facilities and amenities including parking and walking tracks;
- Realise the potential for easy access including access for the disabled;
- Maintain bushland in accordance with the Bushfire Management Plan, while retaining the sense of a 'green' gateway to Sydney Harbour;
- Enhance views to and from the precinct;
- Appropriately manage any remnant site contamination and hazardous materials;
- Protect adjacent bushland from the spread of *Phytophthora cinnamomi*;
- Improve the quality of stormwater runoff; and
- Apply the principles of Ecologically Sustainable Development (ESD).



3. PLANNING FRAMEWORK



3. Planning Framework

Section 3 outlines the planning framework that will guide the future use of the Mosman Drill Hall Precinct.

3.1. Sydney Harbour Federation Trust Act 2001

The objects of the Harbour Trust are set by the *Sydney Harbour Federation Trust Act 2001* (SHFT Act), which are to:

- *Ensure that management of Trust land contributes to enhancing the amenity of the Sydney Harbour region*
- *Protect, conserve and interpret the environmental and heritage values of Trust land*
- *Maximise public access to Trust land*
- *Establish and manage suitable Trust land as a park on behalf of the Commonwealth as the national government*
- *Co-operate with other Commonwealth bodies that have a connection with any harbour land in managing that land*
- *Co-operate with New South Wales, affected councils and the community in furthering the above objects.*

The SHFT Act defines land that is vested in the Harbour Trust as ‘Trust land’ and surrounding land as ‘Harbour Land’. The SHFT Act requires the Harbour Trust to prepare a Plan (the Comprehensive Plan) for Trust land which may also cover Harbour land. The Comprehensive Plan, prepared in 2003, recognises the strategic value in its lands by allowing the Harbour Trust to take an holistic approach to its planning through the development of objectives,

policies and outcomes to be implemented across its sites. This Management Plan furthers these objects.

3.2. Harbour Trust Comprehensive Plan

This Management Plan is the middle level of a three tiered comprehensive planning system developed to guide the future of the Harbour Trust’s lands. The other levels are:

- The Harbour Trust’s Comprehensive Plan – this is an overarching plan that provides the strategic direction and planning context for all of the management plans; and
- Specific projects or *actions* – *actions* are defined in the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and are similar to the concept of *development* in the NSW planning legislation.

This Management Plan describes specific outcomes for the Mosman Drill Hall precinct. It interprets the Harbour Trust’s Comprehensive Plan and guides its implementation by providing more explicit detail about the way the site and Drill Hall are to be used and conserved.

This Management Plan has to be interpreted in conjunction with the Harbour Trust’s Comprehensive Plan, in particular the *Outcomes* identified in *Part 7* of the Harbour Trust’s Comprehensive Plan and the *Objectives and Policies* in *Part 3*.

The *Outcomes* diagram in *Part 7* of the Harbour Trust’s Comprehensive Plan for Middle Head, Georges Heights and Chowder Bay is reproduced at **Figure 2**.

The *Objectives and Policies* most relevant to this Management Plan are those relating to the conservation of cultural heritage and of the natural environment, access, the adaptive reuse of buildings, design approach, new buildings, transport management, water quality and catchment protection, bushcare, bushfire management, open space and recreation, sporting facilities, and contamination. These *Objectives and Policies* were addressed during the assessment of the site and are discussed in more detail in the relevant sections of this plan.

3.3. Harbour Trust Management Plans

Harbour Trust Management Plans are site specific plans that refine and detail the site objectives and outcomes established in the Comprehensive Plan. They identify desired outcomes, suitable land uses, and how a site's environmental and heritage values should be protected and interpreted. This Management Plan is to be read in conjunction with the SHFT Act and Comprehensive Plan, in particular the Outcomes identified in Part 7 (See **Figure 2**), and the Objectives and Policies in Part 3 of the Comprehensive Plan.

This Management Plan is the sixth to be prepared by the Harbour Trust for land within the Mosman Local Government Area. All of the Management Plans must be consistent with each other as well as any other plans for neighbouring lands.

3.4. Related Harbour Trust Policies and Guidelines

There are a number of overarching Policies and Guidelines foreshadowed in the Harbour Trust's Comprehensive Plan that will

be developed over the lifetime of the Harbour Trust and that will also guide the development of the Headland Park. Current relevant policies are:

- The *Threat Abatement Plan for Phytophthora cinnamomi disease in natural ecosystems* prepared by the Australian Department of Environment and Heritage, 2018;
- The Harbour Trust's *draft Phytophthora Root-Rot Management Strategy and Best Practice Procedures for Bush Regeneration Activities*;
- The Harbour Trust's *Reconciliation Action Plan*;
- The Harbour Trust's *Corporate Plan*;
- The Harbour Trust's *Leasing Policy*;
- The Harbour Trust's Rental Subsidy Policy for Contributory and Delivery Partners; and
- The *Harbour Trust's draft Access Policy*.

This Management Plan has to be interpreted having regard for these policies.

3.5. Environment Protection and Biodiversity Conservation Act 1999

All '*actions*' on Harbour Trust land, undertaken by either the Harbour Trust or on behalf of the Harbour Trust, are controlled by the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* (EPBC Act) as amended.

Section 26 of the EPBC Act protects all aspects of the environment on Trust land from actions taken either on the Harbour Trust's land or on adjoining land that may have a significant impact on it, while

Section 28 protects the environment from any actions of the Harbour Trust that may have a significant impact. The environment is defined to include:

- (a) ecosystems and their constituent parts, including people and communities; and
- (b) natural and physical resources; and
- (c) the qualities and characteristics of locations, places and areas; and
- (d) heritage values of places; and
- (e) the social, economic and cultural aspects of the matters mentioned in (a), (b) or (c) above

Section 341ZC of the Act requires the Harbour Trust to have regard for the Commonwealth Heritage values of a place before it takes an action and to minimise the impact that the action might have on those values. The *Commonwealth Heritage Values* section of this Plan describes the values of the site.

3.6. Assessment of Actions

The Harbour Trust is the planning authority for Harbour Trust lands and assesses actions in accordance with the SHFT Act, Comprehensive Plan and EPBC Act.

The Harbour Trust will consult with the community about significant proposals. In some exceptional circumstances, proposed actions that are considered to potentially have a significant impact on the environment or heritage values will also be referred to the Commonwealth Minister for the Environment for further assessment and approval under the EPBC Act.

3.7. State Legislation

The *Sydney Harbour Federation Trust Act, 2001* specifically excludes any land owned by the Harbour Trust from the operations of state planning law. This includes State Policies (SEPPs) and Regional Environmental Plans (REPs) prepared by the State Government and Local Environmental Plans (LEPs) prepared by councils.

Notwithstanding this the Harbour Trust has prepared this plan so that it is consistent with both State and local plans. The relevant statutory plans are:

North District Plan

In 2018, the Greater Sydney Commission released a District Plan for Greater Sydney's North District. The North District includes a significant part of Sydney north of the Harbour, including the Mosman Drill Precinct and surrounding suburbs. The District Plan is a plan to manage the next 20 years of growth as part of a 40-year vision for Greater Sydney. It is a guide for implementing the *Greater Sydney Region Plan, A Metropolis of Three Cities* at a district level and is described as "a bridge between regional and local planning".

Of particular relevance to the Mosman Drill Hall Precinct, the District Plan includes priorities related to delivering Sydney's "Green Grid" of parks and open spaces, ensuring services and infrastructure meet communities' changing needs and fostering healthy, creative, culturally rich and socially connected communities. This occurs through the promotion of healthy and active lifestyles, and fostering use of sport, recreation and community facilities. The Harbour Trust's sites at Headland Park are identified as part of the Great Coastal Walk, which aligns with the Harbour Trust's aim of

maximising public access to its sites, and creating a network of paths that is integrated with adjoining lands.

[Sydney Regional Environmental Plan \(Sydney Harbour Catchment\) 2005](#)

This SREP applies to the whole of Sydney Harbour's waterways, the foreshores and entire harbour catchment. It provides a framework for future planning, development and management of the waterway, heritage items, islands, wetland protection areas and foreshores of Sydney Harbour. Under the SREP, the Mosman Drill Hall Precinct is included in the catchment area of Sydney Harbour. The planning principles of the SREP relevant to the site include:

- the appreciation of the role of Sydney Harbour in the history of Aboriginal and European settlement,
- the recognition and conservation of the heritage significance of particular heritage items in and around Sydney Harbour,
- the conservation of the significant fabric, settings, relics and views associated with the heritage significance of heritage items, and
- development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour.

[State Environmental Planning Policy \(Coastal Management\) 2018](#)

The Coastal Management State Environmental Planning Policy (Coastal Management SEPP) establishes the strategic land use planning framework for managing NSW's coastal areas. The framework responds to existing and emerging coastal challenges

and opportunities, with the aim of having thriving and resilient communities living and working on a healthy coast now and into the future. It supports implementation of the management objectives set out in the Coastal Management Act 2016 (NSW).

The Coastal Management SEPP seeks to better equip coastal communities to plan for and effectively respond to coastal challenges such as major storms, coastal erosion and climate change impacts, through better strategic planning around coastal development and emergency management. Its aims include managing development in the coastal zone, protecting the environmental assets of the coast and establishing a framework for land use planning to guide decision-making. It does this by establishing controls to ensure development in the coastal zone does not increase risk of coastal hazards.

[Plans made under the Rural Fires Act 1997](#)

There are two sub-plans of the NSW State Bush Fire Plan made under the *Rural Fires Act 1997* that apply to the Mosman local government area, including the Harbour Trust's land and the adjoining Sydney Harbour National Park. The *Manly, Mosman, North Sydney District Bush Fire Risk Management Plan 2017-2022* deals with strategies to minimise bush fire risk such as hazard reduction. The *Manly/Mosman/North Sydney Bush Fire Management Committee Operations Coordination Plan* (approved under Section 52 of the Rural Fires Act 1997 on 30 November 2015) deals with the operational and management issues. Evacuation routes are determined under Local Emergency Disaster Plans.

In 2004, the NSW National Parks and Wildlife Service prepared a Fire Management Plan (FMP) for Sydney Harbour and Botany Bay National Parks. The aims of the FMP include the protection of life and property, coordination of fire management with other agencies, and management of fire regimes.

There is also a Bush Fire Prone Land Map prepared under Section 146(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) that was approved by the NSW Rural Fire Service in 2015. This map identifies the site as within a designated bushfire prone area, surrounded by areas of bush fire prone vegetation. Particular developments proposed on bush fire prone lands can trigger the need to conform to the requirements of *Planning for Bushfire Protection 2006* guidelines under the EP&A Act.

Section 63(2) of the *Rural Fires Act 1997* refers to the duty of public authorities and owners and occupiers of land to prevent the occurrence of bushfires on its land and to minimise the danger of the spread of bushfire on, or from that land. In 2016, consultants prepared a draft Bushfire Management Plan on behalf of the Harbour Trust for its sites at Middle Head, Georges Heights and Chowder Bay. This is discussed in greater detail elsewhere in this Plan. The Harbour Trust will also cooperate with other agencies in the implementation of plans prepared under the *Rural Fires Act 1997*.

Mosman Local Environmental Plan 2012

The Mosman Drill Hall precinct is located within the Mosman Local Government Area. The Mosman Drill Hall precinct is zoned *SP 2 Infrastructure (Sydney Harbour Federation Trust)* under Mosman LEP 2012. The objectives of this zone are to provide for

infrastructure and related uses, and to prevent development that is not compatible with or may detract from development that is ordinarily related to that purpose, which in this case is development by or on behalf of the Harbour Trust.

3.8. Plans Prepared for Neighbouring Lands

Plans and policies prepared by neighbouring land managers provide a context for this Management Plan. The following are particularly relevant.

Sydney Harbour National Park Management Plan 2012

The Mosman Drill Hall precinct adjoins the Sydney Harbour National Park. In 2012, the National Parks and Wildlife Service (NPWS) prepared a Management Plan that applies to the whole of the Sydney Harbour National Park including Headland Park. Sydney Harbour National Park adjacent to the Drill Hall Precinct forms part of NPWS's "Middle Head" Precinct.

The Management Plan outlines general and specific objectives for the National Park with the overall strategy for the Park being the protection, and where necessary, restoration of the Park's natural vegetation, and the maintenance and adaptive reuse of important historic places.

High priority projects, that are relevant to the Drill Hall Precinct include the upgrading and formalisation of walking tracks as part of the Sydney Harbour Scenic Walk, enhancing bushland health including preparation of a weed control program and treatment of the root rot virus (*Phytophthora cinnamomi*), preparation of a fire

management plan, and celebrating and nurturing contemporary and traditional Aboriginal culture with partner organisations.

Plan of Management for Rawson Park and Surrounds 2001

The precinct adjoins the southwestern edge of Rawson Park. In 2001 Mosman Council commissioned Gutteridge Haskins and Davey Pty Ltd (now GHD Pty Ltd) to prepare a plan of management for Rawson Park and Surrounds.

The Rawson Park plan of management recognises the need to successfully combine the varied recreational and community uses with the opportunity to appreciate the environmental, cultural and historic values of the park. Community consultation established that major changes in the management and use of the park were undesirable and that future uses should be determined in accordance with the heritage significance of Rawson Park.

The Rawson Park plan identifies the Mosman Drill Hall precinct as a possible location for complementary recreation facilities such as an improved netball facility. The plan also states that if alternative facilities are developed, the existing netball courts in Rawson Park should be removed and rehabilitated in accordance with a detailed landscape master plan. These works were completed in 2011.

Mosman Open Space Recreational Needs Assessment 2015

In 2015, Mosman Council adopted a Recreational Needs Assessment. The assessment, prepared by @leisure, examined the current provision and use of outdoor recreational facilities in Mosman, to assist Council with planning for development,

improvement and maintenance of future recreation facilities over the following 10 years.

The assessment noted that Mosman has 220 ha of open space that is owned or managed by Council or Crown agencies. Council manage 32 open spaces with a recreation function covering an area of over 17 ha. There are a further 31 ha of bushland areas managed by Council. The assessment acknowledges the quality of public open space and that the general public domain contributes significantly to the health and wellbeing of residents and visitors. Moreover, it found this quality is enhanced by harbour views, the presence of historic features, mature trees and vegetation, and the quality of adjacent residential areas.

The assessment also notes the sportsgrounds and water space in Mosman are at or near capacity. As a result, numerous actions are recommended to improve the capacity of existing facilities including better managing utilisation, improving the quality of existing facilities, and identifying opportunities to create additional facilities in Mosman.

The assessment notes although the facilities in the precinct are well used, in particular the Drill Hall, indoor and outdoor courts, there is potential to enhance their utilisation. The Assessment recommends the capacity of the existing facilities in the Drill Hall Precinct could be enhanced through:

- Modifying the outdoor netball courts to facilitate use by sports such as basketball, futsal and tennis;
- Allowing facilities to be used casually, as well as for scheduled bookings; and

- Removing the current limitations on use of the outdoor courts by permitting competitions and training under lights.

The Plan provides for the outdoor courts to be used for a range of sports, and proposes the introduction of conditions that would allow the outdoor courts be used in the evenings for training purposes.

Mosman Bicycle Plan 2014-2019

Mosman Council has developed a Bicycle Plan for the period 2014-2019. It contains a program of works over the following five years and aims to improve cycling amenity in Mosman. The plan establishes priorities for infrastructure projects, bicycle parking, education and signage as well as current and future on-road and off-road cycling paths including a route along Cross Street, around Rawson Park, and on towards Georges Heights.



Note: Buildings shown as yellow in the Mosman Drill Hall precinct were demolished in 2003

Fig.02 - The Trust's Comprehensive Plan - Outcomes



4. RELATIONSHIP WITH THE HEADLAND PARK DESIGN FRAMEWORK



4. Relationship with the Headland Park Design Framework

Section 4 sets out the relationship between the Mosman Drill Hall Precinct and the Headland Park Design Framework.

There are six former Defence bases at Middle Head, Georges Heights and Chowder Bay. The transformation of these bases into a unified area of parkland requires consideration of all of the elements that make up the public domain. It also needs to satisfy expectations about public access to and enjoyment of the site, the conservation of its natural and cultural heritage and its integration with the harbour, the foreshore and the local neighbourhood.

The development of the design framework and the design treatment of each of its elements must be drawn from the heritage values and characteristics of the lands, rather than imposing an arbitrary new “design statement”.

The design framework for the Headland Park is shown at **Figure 5**. It identifies all of the elements that make up the public domain, how they need to work together as a network of spaces and the principles that will guide their detailed design development within each of the Management Plan areas.

The elements of the public domain comprise:

- Precincts – areas with distinct characteristics by virtue of land uses or physical factors such as topography, building scale and form;
- Streets and Paths – the network of routes that provide access to and through the site for all modes – walking, cycling, public transport and private motor vehicles;
- Entries - to a precinct or significant public places;
- Significant Public Places – the destinations, the spaces used for gatherings, relaxation, ceremony or cultural or sporting activity;
- Landmarks – places, structures or natural features of public interest;
- Edges – the boundaries between precincts, the borders to parks and gardens, dramatic level changes, the interfaces between buildings and the public domain.

4.1. Precincts

The terrain and its relationship to the harbour is the first and most fundamental consideration for all of these elements. It is the terrain that has given rise to the historic uses and it is its relationship to the harbour that makes these lands special.

The early fortifications located at the escarpment and the associated defence facilities on the knolls form identifiable precincts. These precincts include:

- The Mosman Drill Hall and its parkland setting adjoining Rawson Park;
- The former World War I Hospital precinct on the highest knoll at Georges Heights;
- The former Gunners’ Barracks (Officers’ Mess) and fortifications at Georges Head;

- The fortifications, sheds and barrack buildings at the spur terminating the Georges Heights plateau, before the ridge drops to Middle Head;
- The Middle Head barracks; and
- The cluster of buildings on the rock ledges at Chowder Bay.

Generally, these precincts have an institutional – parkland character, with the buildings forming small-scale, civic spaces.

The open spaces on the saddles of the undulating plateau and the steep slopes also create distinct precincts. These include:

- The steep, wooded slopes below the escarpment;
- The plateau which is generally characterised by coastal heath and exposed rock ledges; and
- The institutional parkland areas of the former bases.

The Headland Park will form a succession of spaces from hill tops with a sense of openness and height above all the surrounding land – such as at the cairn at Rawson Park, through to more enclosed areas in the saddles and valleys and to places along escarpment edges. As the plateau narrows and winds towards the headland, these spatial experiences will vary – as the views into Middle Harbour unfold and gain equal prominence to the views to the outer harbour and the ocean.

The site forms a distinct parcel of land as it is separate from the Harbour Trust’s other lands in Mosman and sits between the dense bushland of Sydney Harbour National Park and the formal open space of Rawson Park. This, combined with the site’s relatively small area, and the simple coherence of the space it occupies, creates a clearly identifiable precinct within the Headland Park. This plan

addresses the site’s location between bushland and the sporting oval, by providing for a mix of bushland and sporting facilities, in addition to the continued use of the Drill Hall for community and recreation purposes. This is discussed further in the *Outcomes* section.

The parkland setting of the Drill Hall contributes to the appreciation of this significant heritage building and maintaining this character has been a central consideration in the planning for the site.

Avoidance of any adverse impacts on this harbour landscape is a particularly important objective of the design approach for this site. The natural setting of the site is to be protected and enhanced, and any the sports building, constructed in 2011, was designed to minimise its intrusion on the landscape, and the heritage values of the Drill Hall and its setting.



Figure 3: 2002 – Front elevation of the Mosman Drill Hall
Part of the former parade ground is shown in the foreground. The hall was originally clad with corrugated iron that was fixed horizontally.



Figure 4: 2018 – Front elevation of the Mosman Drill Hall
Showing former parade ground repurposed for at-grade carparking



LEGEND

- Forts
 - ∠ Outlook
 - ▨ Parking
 - Continuous Path easy access
 - Able bodied path
 - - - Minor path
 - ▨ Accessible Picnic
 - ▨ Significant Places
 - Road
 - - - Rock Ledges
- Links with surrounding path network to be investigated and implemented with NPWS and Mosman Council

Fig.05 - Design Framework



Figure 6: 2005 – The deviation of the former military road, the avenue of poplars and the precinct’s park-like landscape.

Rawson Park, managed by Mosman Council, acts as a link between the site and the other Trust lands in Mosman. The Harbour Trust will work with Mosman Council and the NSW National Parks and Wildlife Service to achieve the vision of an integrated series of open spaces forming the Headland Park.



Figure 7: 2018 – The deviation of the former military road, with the indoor sports centre and netball courts in the background.

4.2. Streets and Paths

The access network needs to provide clear and convenient access to and through the Headland Park. Each of the elements of the network will be designed to reflect its role and function, and the desire to create an unfolding sequence of experiences in response to the environment it passes through. The network consists of the following elements, as shown in **Figure 5:**

- The approach roads adjoining and leading into the park – Middle Head Road, Chowder Bay Road and Suakin Drive;
- Internal streets and laneways within each precinct (within the former bases);
- A major pathway circuit that provides access for people with all levels of mobility and that links the significant public places, features and landmarks, the entry roads, car parks and local neighbourhood;
- A minor pathway network providing more variety, intimacy and seclusion, and access for able-bodied walkers to limited areas within the bushland; and
- The car parks and bus set down areas.

As a general principle, cycling should not take place on walking paths, however cycling will be encouraged where it is safe and appropriate. To facilitate this, the Harbour Trust will consider designating some paths as shared pathways. An example of this is the existing path from Georges Heights which links with Mosman Council’s bicycle path through Rawson Park which connects Balmoral Beach with Athol Wharf.

The Mosman Drill Hall precinct is located on part of the former Military Reserve Road, the route of which has been interpreted in the Harbour Trust’s design approach. The former Military Road, which formed the northern boundary of the site until the 1930s, was deviated to form the Drill Hall driveway in the 1930s, due to the creation of Rawson Oval. The driveway will continue to be used as a pathway for pedestrians, and access for emergency and service vehicles, while providing access from the site to the Rawson Park cairn, and then on to the Headland Park – see **Figure 7**.

4.3. Entries

There will continue to be numerous “Entry Points” to ensure that access opportunities are maximised and dispersed. This also accommodates people arriving from many different directions and by different modes of travel and avoids concentrations of visitors.

Entries in the public domain will not usually be built structures. Rather, they will continue to be spaces that serve as an entry and do not need to be given strong emphasis.

Given the location of the site at the westernmost point of the Headland Park, interpretative signage will assist visitors in their orientation and appreciation of the Headland Park as a whole.

4.4. Significant Public Places

The Headland Park will have a range of public spaces offering a diversity of activities. These will include:

- Passive recreational areas for picnics and social relaxation;
- Areas for community sporting activities;
- Places of contemplation within a bushland setting or on the escarpment with spectacular views; and
- Small civic spaces defined by former defence buildings for community gatherings or simply watching the passers by.

They will form a series of experiences connected by the main pathway network. All of these spaces are located and chosen to enhance an understanding and appreciation of the natural environment and the succession of historical uses.

The understanding of the role that the Drill Hall played in the nation's defence will continue to be conveyed through the appropriate use of the building and preservation of its setting, and by the paths that link the site to the Harbour Trust's other former defence sites in Mosman. The Parade Ground in front of the Drill Hall will retain its open character and dimensions.

4.5. Landmarks

Within each of the precincts, there are significant features that relate to the history or the natural beauty of the place. They are often beautiful or unusual structures, buildings or natural features that provide the focus in public places or points of interest along the way. The setting of these features will be designed to assist in a greater understanding and appreciation of their significance and the Headland Park as a whole.

The Drill Hall is the focal point of the precinct. The building will be conserved and adaptively reused, and its setting preserved.

4.6. Edges

The precinct has three distinct edges formed by its interface with the Sydney Harbour National Park, Rawson Park Oval, and residences in Cross Street. With respect to the Sydney Harbour National Park, the primary consideration is the protection and enhancement of the downslope bushland by effective stormwater management and bush regeneration.

Revegetating the southern edge of the precinct has reinforced the relationship with the adjoining National Park, while the training courts complement the sporting use of Rawson Park. The new sports building has been designed to reference the Rawson Park grandstand, and its height minimised to reduce its visual intrusiveness.

Active uses within the precinct will continue to be located towards the eastern end of the precinct. This is to respect the Drill Hall's setting and to minimise visual and noise intrusion on nearby residents.



5. SITE DESCRIPTION AND HISTORY

5. Site Description and History

Section 5 describes the history and environment of the Mosman Drill Hall Precinct and the surrounding lands.

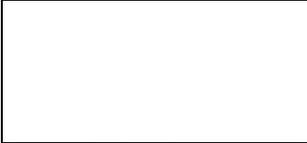
5.1. Mosman Drill Hall Precinct

	<p>The Mosman Drill Hall Precinct is approximately 1ha and is located on the ridge of Middle Head, one of the three headlands that define the entrance to Sydney Harbour.</p>
	<p>The site sits directly upslope from Chowder Bay and is positioned at the end of Cross Street, Mosman, a no-through residential street that provides the only vehicular access to the site.</p>
	<p>The site contains the historically significant Mosman Drill Hall with an attached amenities block; a modern indoor sports centre; and three outdoor netball courts. A number of demountable military buildings were removed by Defence in 2003.</p>

	<p>The former Parade Ground is located in front of the Drill Hall and provides carparking for users of the Precinct.</p>
	<p>A central roadway follows the alignment of the diverted former military road. It provides access through the site for pedestrians and occasionally emergency and service vehicles.</p>
	<p>The site also contains remnant features such as the stone buttressed grease pit, stone retaining wall, building foundations and cultural plantings.</p>
	<p>The site has an open grassed landscape fringed by bushland along its southern edge; an avenue of poplars lines the former military road. Its elevated position offers views across to the southern side of the harbour.</p>

5.2. Surrounding Lands

	<p>The site is at the westernmost point of Headland Park, and as such forms one of the entry points to the Park for pedestrians and cyclists.</p>
	<p>Vehicular access is via Cross Street, a wide, tree-lined street serving local residences, the Drill Hall Precinct and Rawson Park.</p>
	<p>To the immediate north is Rawson Park, which contains popular local sporting facilities. The key features of the Park are its sports oval and spectator pavilion; the Scotland-Australia cairn; the Anderson Memorial; a reserve used for exercising of dogs; and a 37-space car park.</p>

	<p>To the north of Rawson Park is the Bradley Bushland; Rawson Park Tennis Centre; and Mosman Croquet Club.</p>
	<p>Sydney Harbour National Park encloses the southern half of the site, which acts to significantly screen the site from the harbour and forms an impressive bushland backdrop to the land.</p>

The potential impacts of increased traffic visiting the site and noise and light impacts have been considered and are addressed in this Management Plan.

5.3. Site History

The Mosman Drill Hall precinct is recognised as being of great heritage significance. Its significance is derived from its:

- Aboriginal usage, including its proximity to Bungaree’s Farm at nearby Georges Heights/Middle Head;
- Role in the Harbour Defence system since 1871, when part of the Military Road connecting Bradleys Head and Middle Head was constructed on the northern edge of the site (and subsequently re-routed through the site); and
- Possession of one of the earliest Commonwealth Drill Halls erected in NSW to enable the military training of the Citizens’ Military Forces.

Aboriginal Heritage

The language group of indigenous people living in the vicinity of the Drill Hall Precinct is thought to be part of the *Guringai (Kuringai)*, and the clan group the *Borogegal*, with the area between Bradleys Head and Middle Head recorded as "*Taliangy*".

While archaeological surveys of the Harbour Trust’s land in the Drill Hall Precinct have not found any Aboriginal sites or objects on the surface, evidence of Aboriginal occupation has been identified elsewhere in the Headland Park – these sites are registered with the NSW National Parks and Wildlife Service, (see further discussion in the Section 6.3 ‘Archaeological Assessments’).

European Occupation

The Mosman Drill Hall Precinct was dedicated for defence purposes as part of the larger Middle Head and Georges Heights defence site, which was strategically placed to defend the approaches to Sydney Harbour. The military road that originally defined the northern edge of the precinct, allowing heavy artillery to be transported to Middle Head and Georges Heights, was completed in 1871. The Phases of Development of the Precinct are depicted in **Figure 9**.

1884-1914

The Mosman Drill Hall was erected in 1913 as one of five new Drill Halls in Sydney, and was one of the earliest erected in NSW by the Commonwealth Government to enable the military training of the Citizens Forces.

In 1913, the Drill Hall was erected adjacent to the original military road alignment. A separate ablutions block was erected to the east of the Drill Hall in early 1914. The early military use of the building is unclear as is the use of the site for drill purposes, although everything appears to have been completed for use by August 1914, when war was declared.

1914–1918

Drill Halls were an important part of the mobilisation of troops as well as for recruitment and the training of militia, permanent troops and volunteer forces. Little is known of the physical changes, functions or historical associations during this period.

1918-1939

Following the end of World War 1 in 1918, drill halls were classified as part of the Commonwealth property, for possible disposal or leasing. The Mosman Drill Hall was included in 1923 as part of the review of Army property. A specification for general repairs was prepared by 1924, indicating that the Mosman Drill Hall was to be retained by the Department of Defence.

Rawson Park Oval was developed by council in 1926 and this is thought to have led to the rerouting of the military road from the north of the Drill Hall site to the south of the Drill Hall (along the existing roadway through the precinct).



Figure 8: c1940 – The Mosman Detachment of the Australian Electrical and Mechanical Engineers (AEME).
On parade in front of the Mosman Drill Hall.

1939-1945

By mid-1939, the Mosman Drill Hall precinct was occupied by the 17th Infantry Battalion. In May 1941 the recently formed 62 Searchlight Company based its main headquarters at the site.

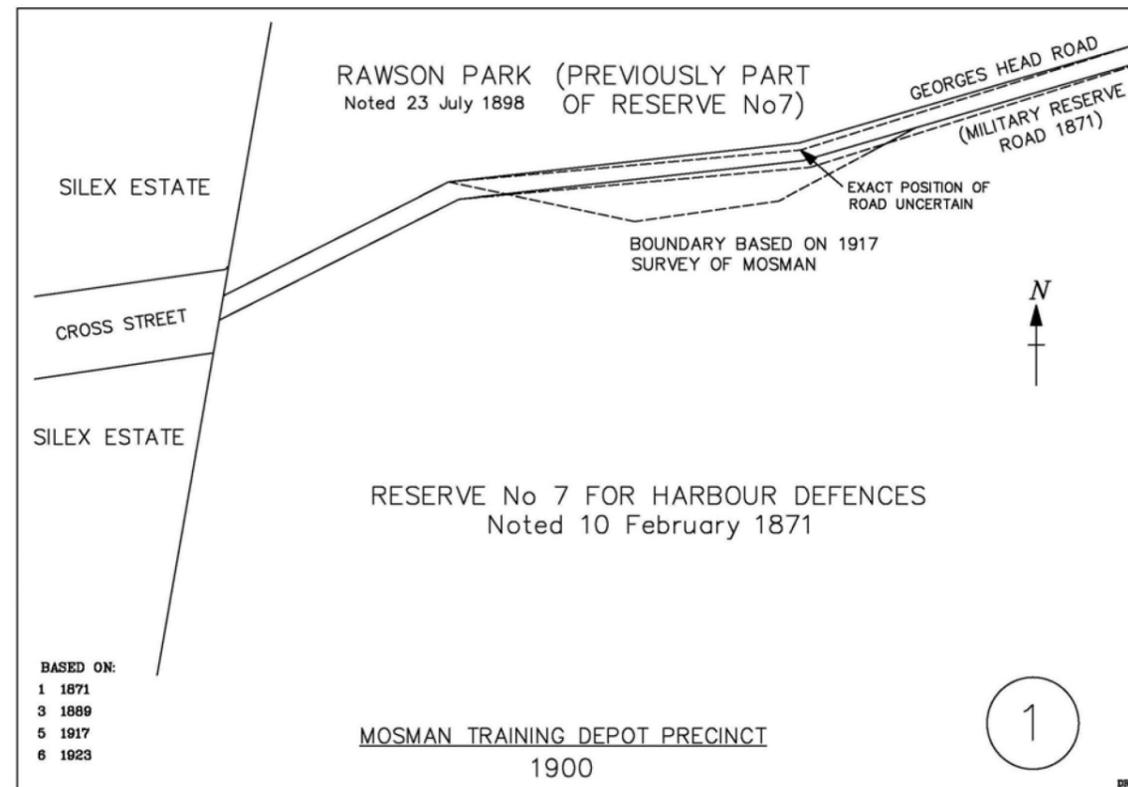
In 1942 nine tents and a corrugated galvanised iron shed (possibly a mess hall) were located below the road to the southeast of the Drill Hall. These were later replaced with three timber framed, corrugated galvanised iron clad P-type standard design huts.

A small corrugated galvanised iron shed was erected near the southeast corner of the Drill Hall. At the southwest corner of the Drill Hall a stone retaining wall was erected to increase the area available at the entrance to the site.

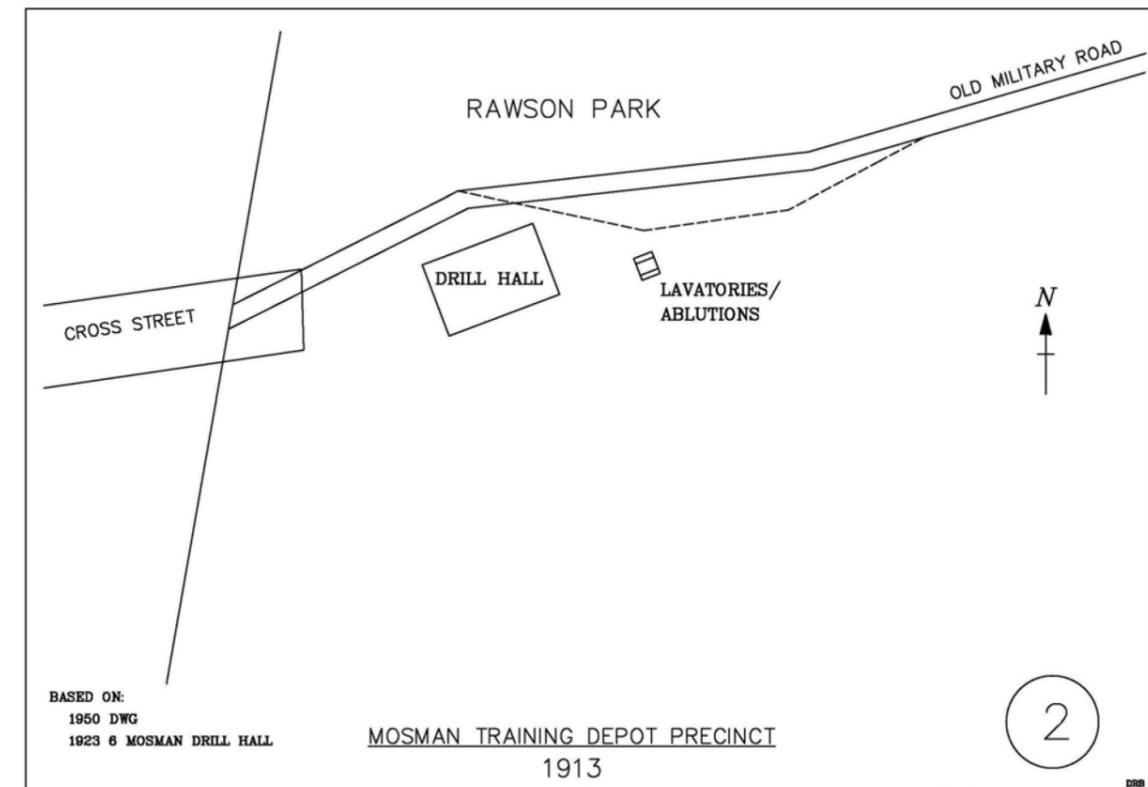
1945-2001

Following WW2 the Mosman Drill Hall precinct was home to a number of units. Between 1955 and 1960, the site was the base for the First Air Support Signal Unit. From 1960, the 17th Battalion training depot was located here before the precinct became the Headquarters 8th (Infantry) Brigade in 1982.

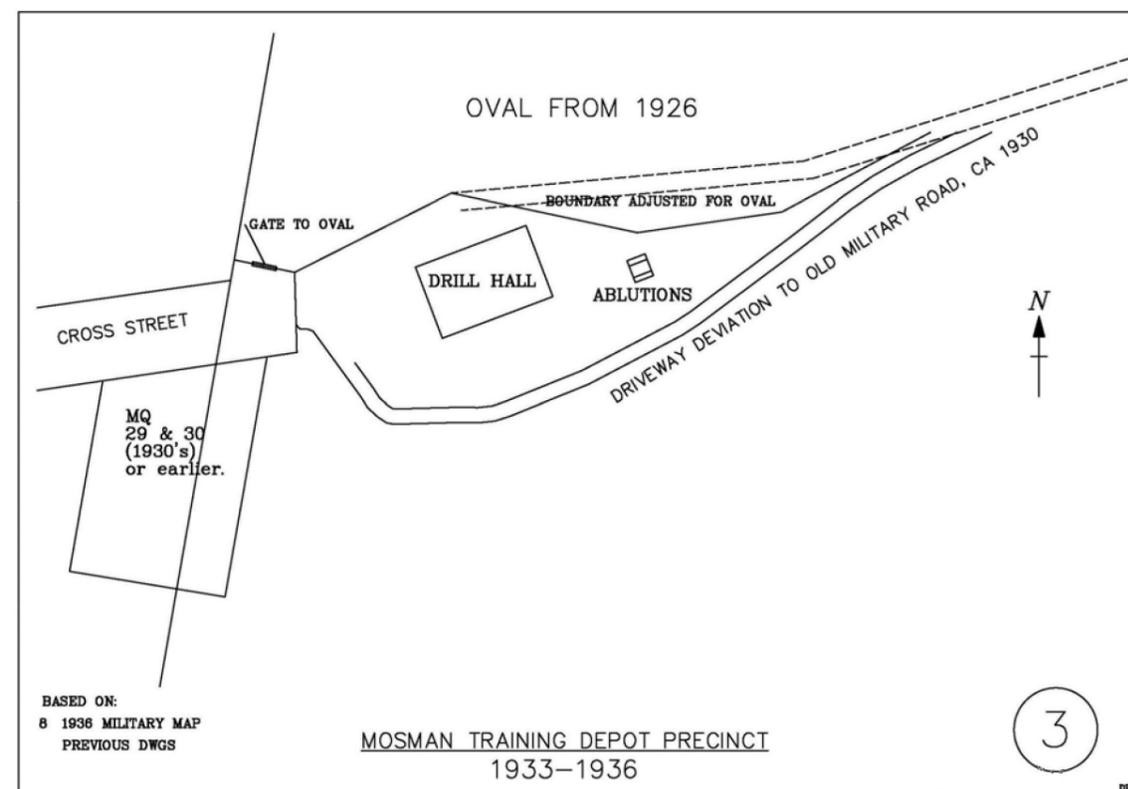
1900



1913



1926



1943

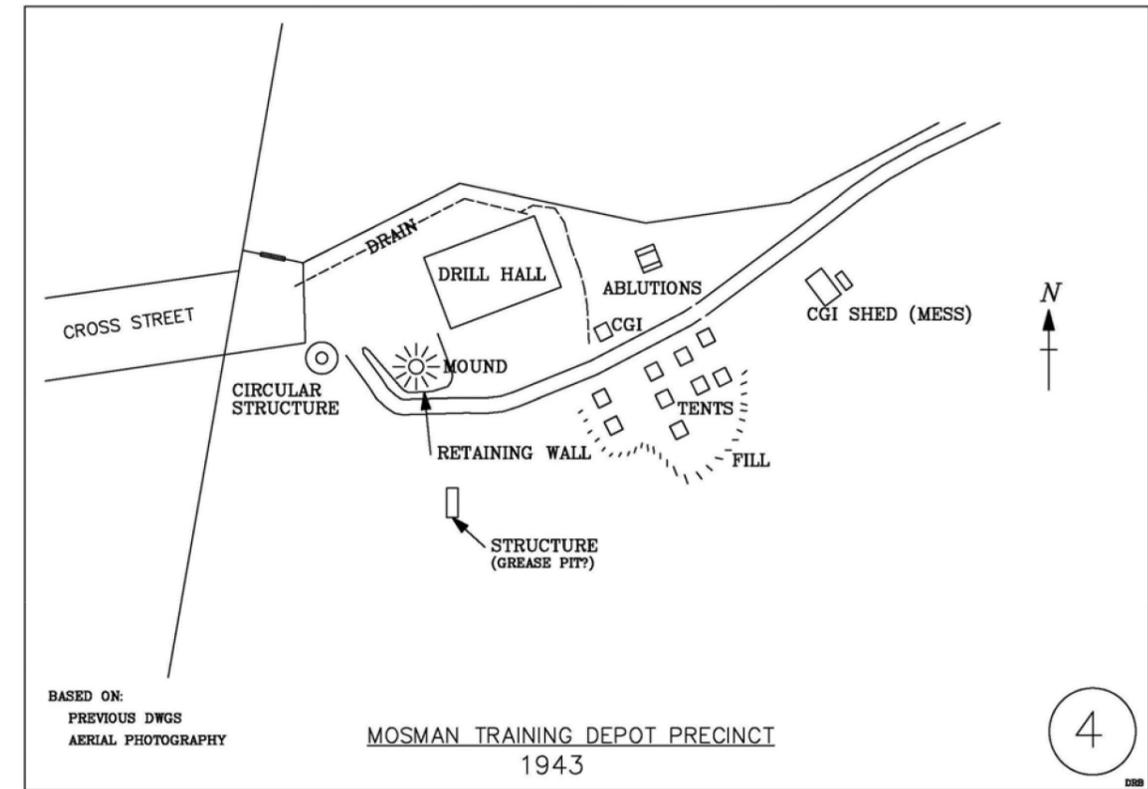
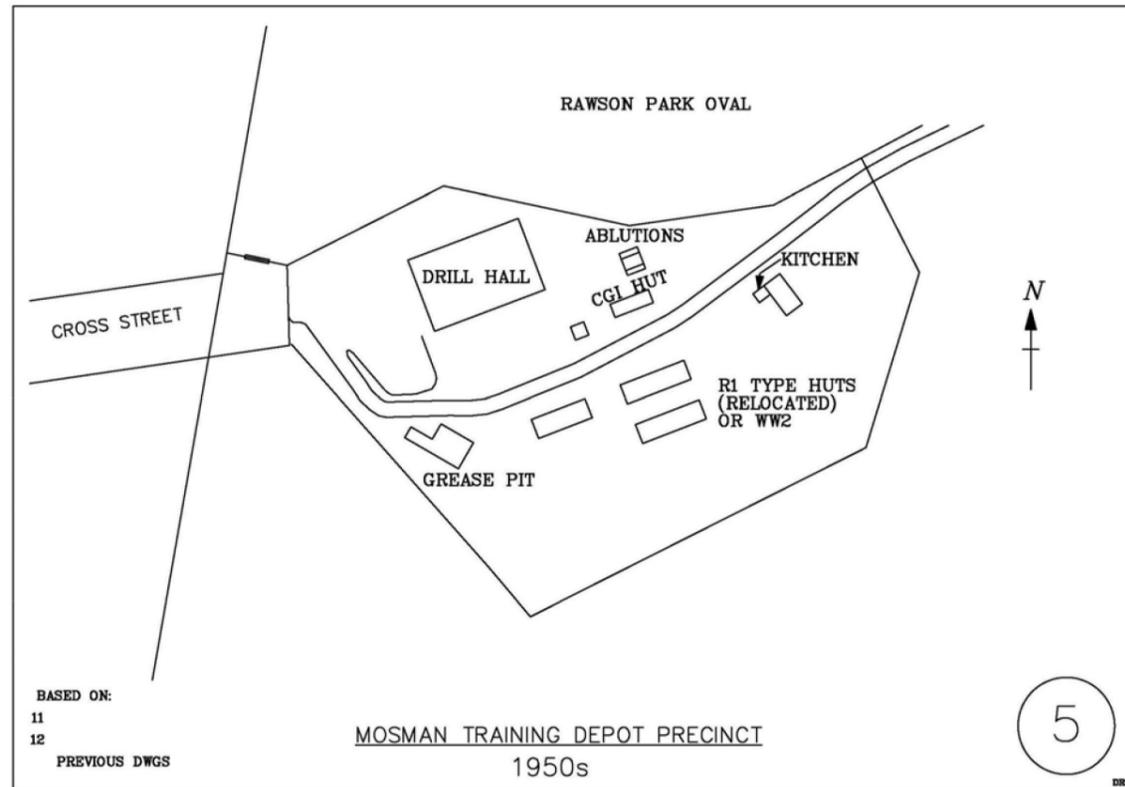


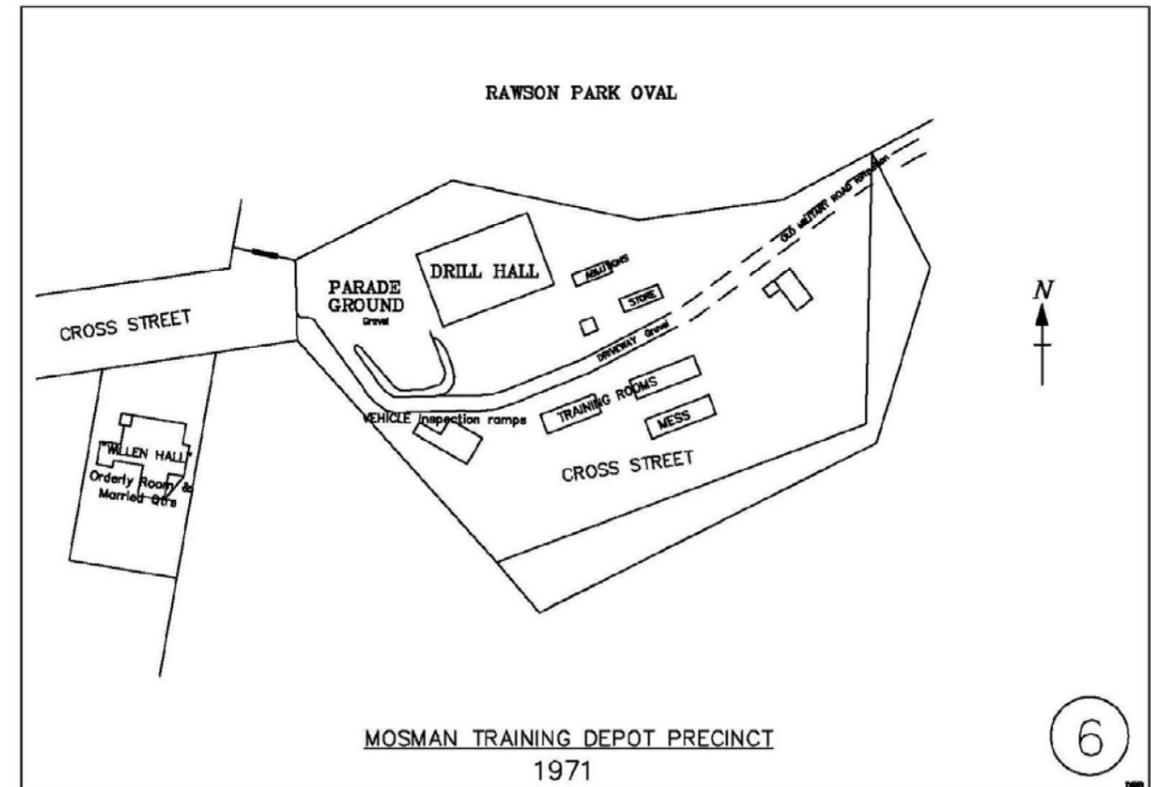
Fig.9 - Phases of Development



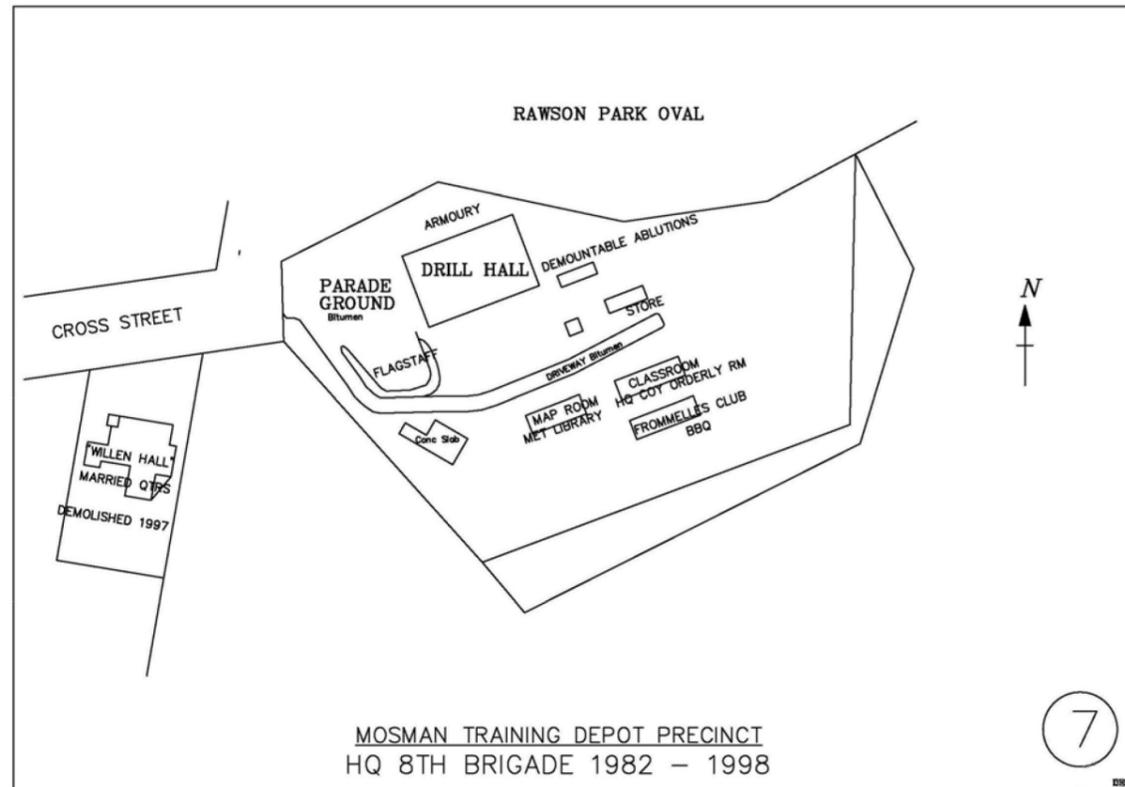
1950s



1971



1982-1998



Current Layout

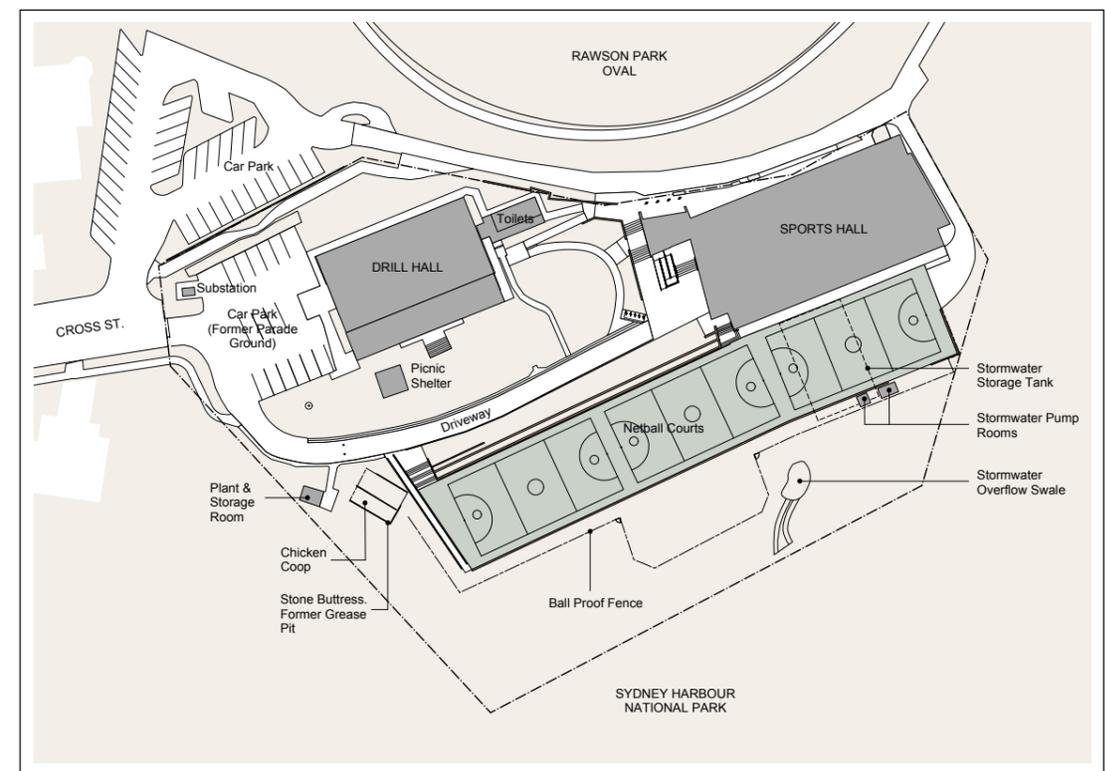


Fig.9 - Phases of Development





Figure 10: 1988 – Mosman Drill Hall, HQ 8th (Infantry) Brigade. Recruit induction and instructor evaluation.

Developments in the early post war years included the construction of a fourth corrugated galvanised iron-clad hut. In the 1960s the mess hall and ablutions block were removed and the Drill Hall was reclad with vertically mounted Spandek profile galvanised steel sheeting. The floor of the Drill Hall was concreted for vehicular use, and several small rooms were erected in the hall, including a kitchen, at unknown dates. A large metal-clad shed was constructed on the level area to the north of the building in 1996 and used as an armory for storage of Styer weaponry. Between October and December 1998 the HQ 8th Infantry Brigade vacated the Drill Hall and relocated to Timor Barracks, Dundas, which offered newer buildings and more efficient operational facilities.

2001-Present: Public Parkland on the Headland

Following the departure of Defence from Georges Heights, Middle Head and Chowder Bay in the late 1990s, the former Defence lands were vested in the Sydney Harbour Federation Trust in 2001 to become Headland Park. The Harbour Trust has progressively opened up the lands to the public through the construction of walking tracks, parks and car parks and the renewal and repair of services, decontamination of lands and the restoration of buildings.

In 2006, the Harbour Trust agreed to lease the Drill Hall precinct to Mosman Council for a 25-year period, on the basis that Council would implement the Management Plan's vision for the place.

Public access to the Drill Hall Precinct has been significantly improved in recent years through the construction of new sport and recreation facilities and removal of redundant military-era demountable structures.

By 2011, the historic Drill Hall had been adapted for community and recreational activities. Hard-surface courts were constructed, replacing grass courts in the nearby Rawson Park; the parade ground was reconfigured to create a 16-space carpark.

A new sports hall has been built for sports such as netball, basketball and futsal. The facility is named for Professor Marie Bashir, a long-term resident of Mosman and former Governor of NSW.



Figure 11: Northern elevation, Mosman Marie Bashir Sports Centre and deviation of former military road

In recent years, Mosman Council and the Harbour Trust have completed a network of bicycle and pedestrian paths to connect Cross Street and Rawson Park to Dominion Crescent and Georges Heights Oval.

The Mosman Drill Hall Precinct has been transformed from a closed military facility to a vital hub for sport and recreation that benefits the people of Mosman and the wider community.



6. HERITAGE VALUES



6. Heritage Values

Section 6 describes the heritage values of the Mosman Drill Hall Precinct.

6.1. Heritage Listings and Commonwealth Heritage Values

The Commonwealth Heritage List, established under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), comprises natural, Indigenous and historic heritage places which are either entirely within a Commonwealth area, or outside the Australian jurisdiction and owned or leased by the Commonwealth or a Commonwealth Authority; and which the Minister is satisfied have one or more Commonwealth Heritage values.

The Mosman Drill Hall precinct is listed as “The Headquarters 8th Brigade Precinct”, Historic Place No.105574 on the Commonwealth Heritage List (Place File No. 1/13/026/0031).



Figure 12: 1990 – HQ 8th (Infantry) Brigade at the Mosman Drill Hall site preparing for ‘Exercise Silent Shadow’. At the time this photograph was taken, the 1930 Military road deviation was unsealed. The building to the right is one of the WW2 P-type huts that were demolished in 2003.

The site is also part of the “Middle Head and Georges Heights defence site”, listed on the *Commonwealth Heritage List* as Historic Place No. 105541.

The former military road and Cross Street are reminders of the single military road system from Mosman to Middle Head and Georges Heights, which developed from 1870 onwards. The road’s significance is described in “Military Road Framework-Defence Site”

(Commonwealth Heritage Place No. 105572). Cross Street and the Drill Hall Precinct are excluded from registered Place No. 105572.

Summary Statements of Significance for each of the above-mentioned Commonwealth Heritage Places are on the Australian Heritage Database – www.environment.gov.au, and are reproduced at Appendix D.

It should be noted that these statements pre-date the establishment of the conservation and restoration works that have been completed at Headland Park, under the stewardship of the Harbour Trust. The Harbour Trust will liaise with the Commonwealth Department of the Environment and Energy regarding the need to update the Statements of Significance to reflect current site conditions.

The EPBC Act regulates all actions relating to Commonwealth Heritage Places. These controls are described in Section 3 of this Plan.

The Mosman Drill Hall precinct is also listed on Schedule 5 (Environmental Heritage) of Mosman LEP 2012. No items are listed on the NSW State Heritage Register.

6.2. Conservation Management Plan

The EPBC Act provides that a place has Commonwealth Heritage value if it meets one of the criteria prescribed in the Regulations.

In February 2005, the Harbour Trust engaged Simpson and Dawbin to prepare a Conservation Management Plan (CMP) for the Mosman Drill Hall Precinct. The CMP provided priorities for conservation works for the Hall and Precinct, and guidance for future use of the site.

The following statement of significance is contained in the CMP. The statement demonstrates that the site meets several of the criteria specified in the EPBC Regulations, 2000, which are provided in Appendix D of this Plan.

The Mosman Drill Hall is a rare surviving example of a once numerous military facility in the suburbs of major cities and country towns throughout Australia.

Embodied in the fabric of the building it is possible to interpret the pattern of military training and recruitment of citizen forces and regular army personnel dating from the mobilisation prior to World War 1 through to the training of National Service conscripts after World War 2 and for Vietnam.

This building is rare in Australia as a drill hall retaining intact fabric and setting, and continuity of use for its original purpose from 1913 until 1998.

The Drill Hall is a representative and intact example of a Type 2 Drill Hall produced by the Commonwealth Architect's Office as part of a program of standardised facilities throughout Australia designed for economy and speed of construction. This building is unusual in the use of steel framing as a departure from the standard Type 2 design with timber framing and posts embedded in the ground

The high profile location at Cross Street is characteristic for drill halls, close to and visible to centres of population with the objective of encouraging community participation in military training.

The primary sources of significance for the place are:

1. The historical significance of the Mosman Drill Hall precinct is closely related to the development of the larger Middle Head / Georges Heights defence site. This is evidenced by the existing driveway that follows the alignment of the former military road which used to link the defence sites. The role of the Drill Hall was essentially the recruitment and training of troops, who would then be deployed to bases elsewhere in Australia or to serve their country in times of conflict. The history of the building and the site also traces the history and activities of the various military units that trained and served there, including the 17th and 18th Battalion; 8th Brigade; and Signals and Searchlight Units. *(Criterion a)*

2. The spectacular location of the site on a ridge top with views across the harbour and its surroundings of native bushland and established landscape of Rawson Park create a setting of high aesthetic significance and scenic value. The Drill Hall is unpretentious with no aspirations or architectural embellishment, however it expresses a robust and utilitarian character, consistent with its origins as a military facility constructed within severe time and cost constraints. Military discipline and ritual symbolism are reflected in the order and austerity of the place. *(Criterion e)*
3. The site remains a tangible link with the volunteer contribution of the citizen soldiers during the inception of military forces of an emerging nation. The history of the Drill Hall has traced the development of the Citizens Military Forces and National Service training in response to the nation's defence in times of war. Many members of the Mosman community were recruited to the military and undertook training at this site. *(Criterion g)*
4. The construction of the Drill Hall is important in demonstrating past building methods. The riveted steel framing and the simple composite assembly of the trusses reflects the availability of materials and technology of the period. This building was the only example of steel framing in a 'Type 2' Drill Hall, otherwise the use of corrugated iron cladding and the 100' by 50' floor plan plus annex was representative of this building type. *(Criterion f)*
5. The Drill Hall has become a rare example of its type in recent years and has survived the progressive demolition of

Drill Halls throughout Australia but especially in city areas under pressure of real estate development. Mosman is the only 'Type 2' Drill Hall remaining in NSW, and is one of the few buildings in any location to have retained its form and setting relatively intact. *(Criterion b)*

6. The Drill Hall is a representative example of a 'Type-2' Drill Hall design of 1913. In spite of individual variations in structure and layout, the Drill Hall retains the essential features of this once common military training facility which formerly existed in a number of Sydney suburban locations and country centres *(Criterion d)*.

6.3. Archaeological Assessments

In June 2004 the Sydney Harbour Federation Trust commissioned the Australian Museum to carry out an Archaeological Survey of Sydney Harbour Federation Trust Land at Middle Head, Georges Heights and Chowder Bay.

The results for the Mosman Drill Hall precinct showed no Aboriginal sites or objects on the surface and that the disturbance to the site made it highly unlikely that any Aboriginal material was present. The report recommends that no further survey work is necessary or warranted. However, due to the possible existence of sub-surface remains, where future earthworks occur, monitoring and detailed recording should be conducted by a qualified archaeologist.

The Simpson Dawbin Conservation Management Plan identifies several items with potential for archaeological investigation. These include the:

- Stone Buttressed Wall (grease pit and ramps)
- Bank to south of Parade Ground
- Mound to the south of Drill Hall
- Pits, footings and steps in the area of former buildings.

Any works at the Precinct must be undertaken in accordance with the archaeological principles outlined in the NSW Heritage Office Archaeological Guidelines.



Figure 13: 1992 - HQ 8th (Infantry) Brigade, Regimental 'Dining-in night' at the Fromelles Club.

The Fromelles Club was located in one of the three WW2 P-type huts sited in the grounds of the Mosman Drill Hall. It was demolished in 2003.



Figure 14: 2018 – interpretation of former Fromelles Club

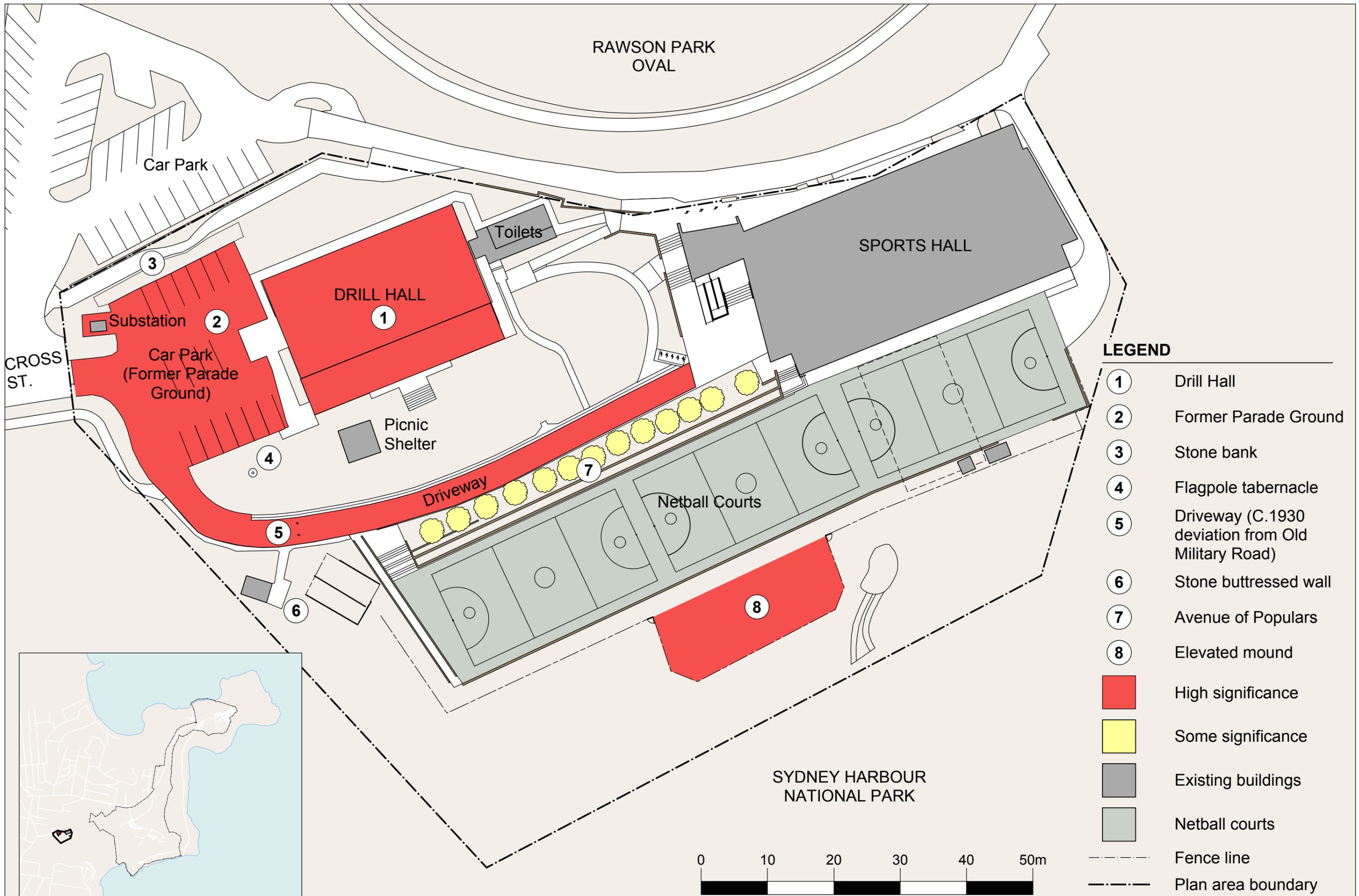


Fig.14 - Cultural Heritage Analysis





7. SITE ANALYSIS



7. Site Analysis

Section 7 provides an analysis of the site's environment and issues.

7.1. Landscape Character

The Drill Hall and more recently constructed indoor sports centre are the dominant features of the site. Three hard-surface netball courts have been benched into the landscape, sympathetically aligned with the former military road deviation.

Remnant elements such as the former parade ground (now used as a car park), former building pads, walls and the avenue of mature Poplars are unique landscape elements that give a visual link to the past history and uses - see **Figure 15**. Its setting on the ridgeline of Middle Head, with its proximity to Rawson Park Oval and Sydney Harbour National Park lends a unique and special ambience to the site. Materials used within the Drill Hall and its landscape include stone, concrete, soft-fall paving, asphalt and corrugated steel. Undeveloped areas are characterised by open lawn fringed by bushland along the site's southern edge.

7.2. Bushland and Natural Values

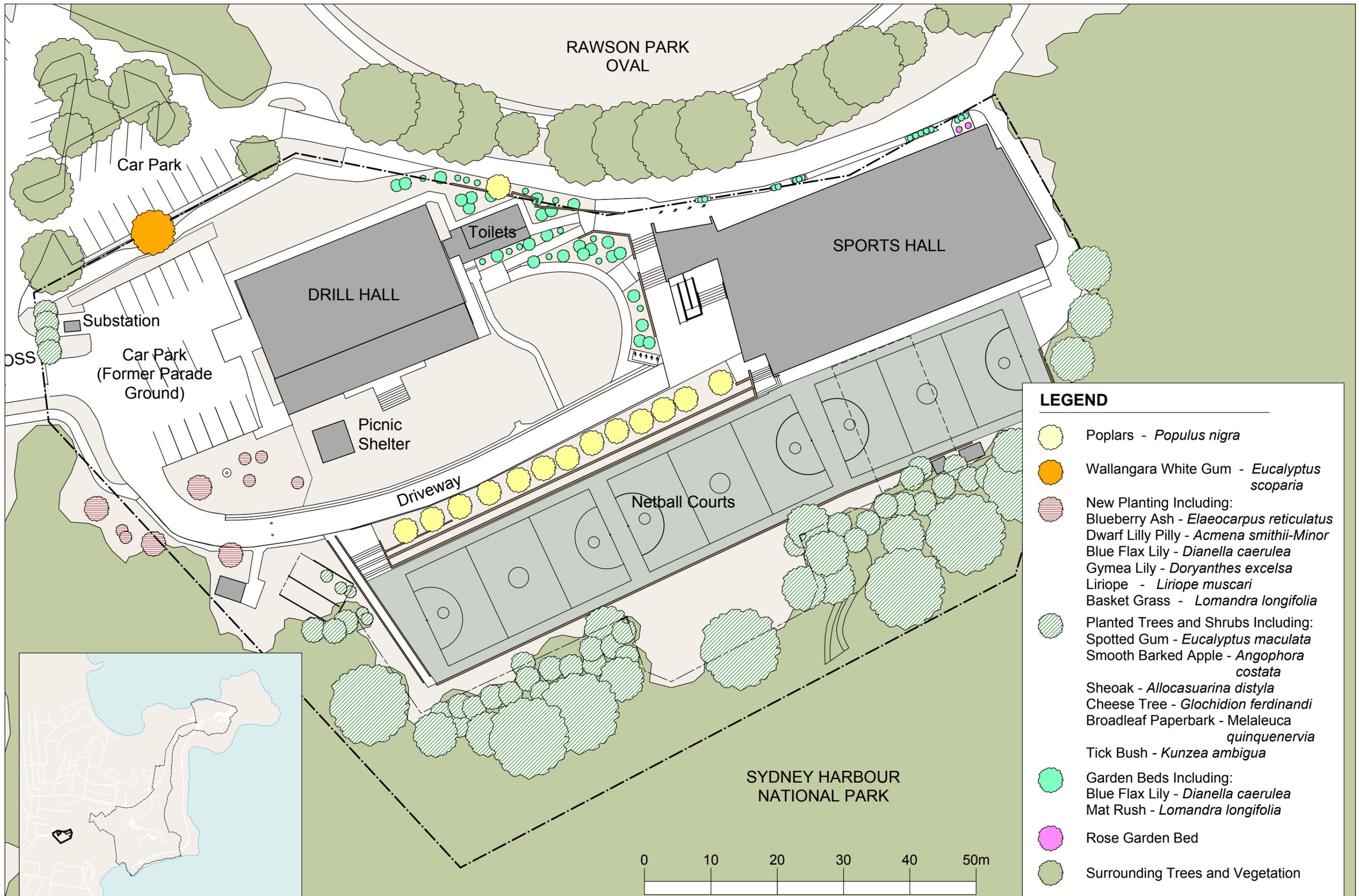
The Mosman Drill Hall Precinct retains very few natural values due to a long history of modification and disturbance.

The site contains a number of introduced and native species, most notably a distinctive avenue of *Populus nigra* (Poplar) along the military road deviation. The *Populus nigra* and *Pinus sp.* are identified as having some heritage significance. None of the species

identified within the site are classified as endangered. The Harbour Trust is mindful of the site's proximity to the neighbouring National Park and the natural values it contains.

In April 2003 the Sydney Harbour Federation Trust commissioned Conacher Travers Environmental Consultants to conduct a Flora Study of Sydney Harbour Federation Trust's land and Sydney Harbour National Park at Middle Head / Georges Heights. The study area did not cover the Mosman Drill Hall precinct or that part of the National Park directly adjoining the site. However the survey did look at bushland to the south of the former No.1 Commando Complex which is likely to be of a very similar composition to that found in the vicinity of the site.

The bushland in the adjacent Sydney Harbour National Park found here is predominantly *Kunzea / Monotoca / Allocasurina distyla / Banksia integrifolia* Closed Scrub. The structure is of closed scrub with a canopy cover of 80% and a height ranging from 6-8m where *Allocasurina* dominates; and from 5-12m where *Angophora* dominates. Exotic weed invasion is highest along margins surrounding disturbed areas.



In May 2001 the Sydney Harbour Federation Trust commissioned Conacher Travers Environmental Consultants to conduct a Fauna Study of similar areas covered in the subsequent Middle Head / Georges Heights Flora Study. While the study did not directly cover the bushland to the south of the site, there were a number of findings and recommendations that would very likely apply to this area. The management options that were proposed to enhance fauna habitat in the area included:

- Investigation of an appropriate fire regime for the area with an inter-fire interval of 6-7 years;
- Management of the hydrology to reduce the amount of disturbance and pollution of drainage lines on and leading into the bushland areas;
- Construction of nest boxes due to lack of available hollows for species such as Powerful Owls and Glossy Black Cockatoos;
- Regenerating native bush on the site; and
- Instigate exclusion and trapping programs for feral animals such as foxes, rabbits and feral cats.

7.3. *Phytophthora cinnamomi*

Dieback related to the root-rot fungus *Phytophthora cinnamomi* has been listed as a key threatening process under the *Environment Protection and Biodiversity Conservation Act 1999* and Department of Environment has prepared a *Threat Abatement Plan* to guide actions by Commonwealth agencies to prevent the spread of this disease and to limit its effects on vulnerable or endangered native species.

Sampling and analysis carried out on Harbour Trust and National Park lands at Georges Heights and Middle Head have confirmed the presence of *Phytophthora cinnamomi* in this landscape. As such, it is possible that the pathogen is present in the precinct although no site specific sampling has been carried out to date. Should *Phytophthora* be present, the presence of well maintained vegetation (grass) cover will adequately limit any potential spread of the pathogen that may occur due to erosion or foot contact.

However, in accordance with its *Phytophthora* Management Strategy, site specific testing will be carried out prior to any significant disturbance of the site. Results of this testing will be used to develop a site-specific risk based management strategy to minimise the introduction or spread of *Phytophthora* at the precinct.

7.4. Bushfire Risk

In 2016, Travers Bushfire and Environmental Consultants prepared a Draft Bushfire Management Plan (BMP) for Headland Park. It describes the recommended strategies for the Harbour Trust to implement to meet its fire management obligations up to 2021.

The Draft Plan identifies three types of fire management zones to avoid risk to life, property (capital assets) or the environment:

- Asset Protection Zones (APZ) – these zone are used to protect human life, property and highly valued public assets and values;
- Strategic Fire Advantage Zones (SFAZ) – these zones provide strategic areas of fire protection advantage which will reduce

the speed and intensity of bushfire and reduce the potential for spot fire development. They are also used in the containment of wildfires to existing management boundaries; and

- Land Management Zones (LMZ) – these zones are used to conserve biodiversity and protect cultural and historic heritage.

In relation to the Drill Hall Precinct, the Draft BMP recommends that the existing APZ, which includes the outdoor netball courts, be extended into the adjoining bushland to reduce bushfire risk to the precinct’s buildings.

The Draft BMP identifies a program for a mosaic fire regime across Headland Park, to reduce the risk of unplanned wildfire and to promote biodiversity. This program will be implemented in collaboration with NPWS and NSW Fire and Rescue. Recent burns include those at the ‘Cobblers Track’ LMZ in 2014 and the ‘Middle Head Road’ LMZ in 2016.

NPWS maintains the bushland south of the Drill Hall Precinct in accordance with the Fire Management Plan for the Sydney Harbour and Botany Bay (La Perouse Precinct) National Parks.

The BMP will be regularly reviewed on an ongoing basis to ensure its recommendations reflect current site conditions.

7.5. Stormwater

Stormwater management at the site is particularly important due to its proximity to Sydney Harbour National Park.

In 2004, Storm Consulting Pty Ltd prepared a stormwater management plan for the Georges Heights, Chowder Bay and Middle Head areas. The purpose of this was to identify the stormwater issues on the sites, and to establish objectives and a plan of implementation for stormwater management practices to deal with these issues.

The historical use of the Mosman Drill Hall precinct for military purposes had significant impacts on the site hydrology and pollution levels. As a result, the main objectives of the stormwater plan were to protect and enhance the existing environment by means of water sensitive design principles such as source controls, conveyance controls and discharge controls.

Initially, some of the stormwater runoff from Cross Street and Rawson Park drained through and across the precinct before discharging through a number of outlets to Sydney Harbour National Park. Studies showed this runoff could have contained potential pollutants such as litter, sediment, heavy metals, hydrocarbons, and nutrients from fertilisers and organic matter, which in turn discharged into the National Park, resulting in large areas of weed growth occurring along the precinct’s southern boundary.

In 2007, Mosman Council commissioned Storm Consulting to design a stormwater reuse scheme to significantly reduce the use of potable water at the precinct. The reuse scheme involved works to reduce runoff from the site including upgrading the drainage system network throughout the precinct with new pits, pipes, a gross pollutant trap and vegetated swales as well as installation of a 500kL stormwater storage tank under the easternmost outdoor netball

court. Collected water is reticulated through the precinct and adjacent Rawson Park and is used for irrigation and toilet flushing.

7.6. Site Contamination

In 1999, PPK – Environment and Infrastructure, was engaged to conduct a two-stage contamination assessment and geotechnical study of Defence lands to be transferred to the Harbour Trust, including the Mosman Drill Hall precinct. The purpose of this assessment was to provide information regarding contamination on the lands so that the potential uses and initial requirements and costs for remediation could be determined.

The site's Defence use was generally limited to training, administration, minor vehicle maintenance and fuel and chemical storage. Based on these uses, PPK identified the following potential sources of contamination:

- A small pad near the south-western boundary of the site was used for vehicle servicing, greasing and lubrication. Potential contaminants associated with this activity are petroleum hydrocarbons, Polycyclic Aromatic Hydrocarbons (PAHs) and heavy metals.
- A former incinerator located at the north-eastern corner of the site may have provided ash or other wastes that were subsequently disposed to land. Potential contaminants include PAHs, heavy metals, petroleum hydrocarbons, or other unknown chemicals.
- The garden shed that was formerly located to the north of the Drill Hall was used to store fuels, oils, paints and solvents.

Potential contaminants are petroleum hydrocarbons, PAHs, heavy metals and Volatile Halogenated Compounds (VHCs).

- Fill that may have been brought and placed on the site could potentially contain contaminants including heavy metals, PAHs, petroleum hydrocarbons, PCBs, asbestos or other unknown chemicals.
- Existing or former building footprints, where pesticides may have been used for termite control, or where lead paint or asbestos building materials may have discharged to soils. Potential contaminants are pesticides, lead and asbestos.

Sampling and analysis carried out by PPK confirmed elevated concentrations of PAHs and metals (arsenic, cadmium, lead and zinc) in soils, exceeding EPA-endorsed guidelines. Metals marginally exceeded guidelines, indicating potential toxicity to plants. PAHs exceeded soil quality guidelines applicable for use of the site as 'parklands and open space' and may require remediation prior to the site's use for these purposes. PPK recommended that this comprise of removal and disposal of the identified 'PAH hotspots'. The report also recommended that further investigation and validation be carried out beneath structures that are demolished or removed.

In 2003, Defence carried out works on the site which consisted of:

- Removal of demountable buildings;
- Excavation and offsite disposal of surface soils containing building rubble and debris within the footprints of these buildings, and restoration of these areas with clean imported topsoil and re-turfing;
- Excavation and disposal of fill within the retaining walls of the vehicle servicing area;

- Removal of office partitioning within the Drill Hall; and
- Removal and disposal of minor rubbish and wastes on the site.

In July 2004 the Harbour Trust commissioned a non-statutory audit of the precinct under the *Contaminated Land Management Act 1997*. The audit, undertaken by Environ Australia provides an independent review of what investigation or remediation remains necessary before the land is suitable for parkland/ open space use. In summary:

- The auditor agreed that where buildings are demolished or removed, investigation and validation for potential contaminants is to be carried out within the building footprints.
- The auditor considered that the ‘hot spot’ removal strategy proposed by PPK was not an appropriate remedial approach, due to the limited PAH data. It was recommended that further assessment of soils containing elevated PAHs be carried out to adequately characterise their nature and extent, and remediation if necessary based on these results.

A hazardous materials (asbestos and lead paint) audit of buildings was also recommended, however this was carried out in 2002, as discussed in the following section.

In response to the audit, in 2006 the Harbour Trust commissioned URS Australia Pty Ltd (URS) to undertake a *Supplementary (Phase II) Environmental Site Assessment* that documents the requirement and scope for remediation.

Works carried out by Mosman Council in 2007 and 2008 included the removal of subsurface contaminants and replacement with Virgin Excavated Natural Material (VENM). In 2007, URS provided

their final *Sampling, Analytical and Quality Plan for the Remediation and Validation Works at Drill Hall Common*. This report recommended the most appropriate method for the site’s remediation; the works were overseen by URS to ensure they were consistent with the recommended approach.

In 2008, URS completed a Draft *Environmental Management Plan* (EMP) for the Precinct. The EMP provides a summary of the contamination status of the Precinct and outlines appropriate management and control measures to be implemented during future use of, and works to the site.

7.7. Hazardous Materials

In June 2002, Hibbs & Associates carried out a hazardous materials survey of buildings and structures remaining within the precinct. For the purposes of this survey, ‘hazardous materials’ included asbestos products, synthetic mineral fibre (SMF) materials, lead based paint systems, electrical components containing the class of compounds known as polychlorinated biphenyls (PCBs) and stored dangerous goods and chemicals. This survey identified:

- Asbestos cement materials present in many locations of the then existing buildings, including the Drill Hall. Generally, the identified asbestos materials were noted to be in a stable condition and do not present a significant asbestos related health risk;
- Synthetic Mineral Fibre (SMF) batt insulation beneath the metal roofs of the former demountable buildings;
- PCB capacitors in the light fittings in the Drill Hall; and

- Lead based paint systems in a number of localised areas of most buildings, most notably on external timberwork. These paint films were noted to show signs of peeling and deterioration.

Asbestos and SMF materials associated with and underneath the former demountable buildings were removed when the Department of Defence demolished these buildings in 2003.

Conservation works to the Drill Hall, together with construction of the outdoor netball courts and indoor sports courts, have resulted in the removal of hazardous materials and contamination from the Precinct.

In 2008, ENVIRON Australia prepared a site audit report for Mosman Council. The report certifies that the site has been remediated to a level suitable for use as a park, recreational open space and playing field, subject to compliance with an Environmental Management Plan prepared for the site by URS Australia in 2008.

7.8. Services

In March 2002 PPK Consulting undertook a detailed survey in order to establish the extent and condition of site services. The study looked at water, fire services, electricity, telecommunications, sewerage, stormwater, gas and fuel services.

Site services were upgraded during construction of the new indoor sports centre and upgrades to the Drill Hall. Works included:

- A new electrical substation at the entrance to the precinct;
- A stand-alone fire booster assembly to provide a secure supply of fire-fighting water to the precinct; and

- Photovoltaic panels on the roof of the sports centre (to provide 66% of the power needs for the centre).

7.9. Compliance with the National Construction Code

Specialist building consultants provided advice regarding compliance of the buildings with the National Construction Code (formerly the Building Code of Australia) and public spaces in the Mosman Drill Hall Precinct.

The matters for which each building was assessed included:

- Fire Compartmentation
- Fire Resistance
- Protection of Openings
- Occupant Egress
- Access for Disabled Persons
- Fire Safety Protection Services
- Sanitary Facilities

Works have been certified to meet the needs of identified users, including children and mobility-impaired persons.

7.10. Transport Management

Walking, Cycling and Public Transport

The Precinct is well-connected to the local network of walking and cycling paths. Bicycle parking facilities are provided within the precinct. A number of public bus routes provide regular services in the nearby locality, including the M30, 247, 244 and 238 routes.

Private vehicles - Traffic and Parking

In 2018, the Harbour Trust commissioned GTA Consultants Pty Ltd to prepare a Transport Impact Assessment for the Drill Hall precinct. GTA investigated existing traffic and parking conditions in the precinct and surrounding area, and considered the implications of introducing lighting of the three outdoor courts. To inform its investigation, GTA conducted traffic counts, parking surveys, and interview surveys of users of the outdoor courts, in late July-early August 2018.

GTA found that existing traffic volumes on Cross Street and Bradleys Head Road are within the capacity limits identified by NSW Roads and Maritime Services. GTA's survey found that 98% of outdoor court users travelled to the site by car. Of these users, some were simply dropped-off/picked-up, while 61% parked for the duration of the training session. Based on the interview survey results, current bookings for the courts, and typical usage patterns observed for similar facilities elsewhere, GTA conservatively estimated that the three courts combined would generate an additional 72 vehicles per hour on weeknight evenings. GTA found that this additional traffic could be accommodated on the surrounding street network.

GTA examined the use of both the Drill Hall car park and the Rawson Oval car park, which due to their close proximity effectively function as a single car park. These car parks are able to be used interchangeably by visitors of either Rawson Park (such as for sports and dog-walking), or the Drill Hall precinct (such as for sports, or out-of-school-hours [OOSH] care). At the time, these combined car parks had a total parking capacity of 56 spaces, while there are a further 30 spaces on Cross Street. Demand for these spaces was found to peak on weekday afternoons between 3 pm – 6 pm; and

on weekends in the morning between 9 am – 10 am, and again in the afternoon between 2 pm – 5 pm. Demand in the evening falls after these times: on weekdays this can be attributed to the closure of OOSH at 6 pm, and outdoor netball training ceasing at 5.30 pm, as winter darkness falls. This is an important consideration, as the lighting of the outdoor courts would not generate additional parking during these existing peak times. Rather, it would generate additional parking demand at later times, when capacity has been freed up in the car parks. GTA estimated that each court would generate a combined demand of 30 spaces per hour for all three courts. However, as departures and arrivals for training sessions overlap, GTA expects there to be short periods where the courts would generate demand for 60 parking spaces.

GTA recommended a range of measures to improve traffic and parking conditions. These measures would address not only the potential additional traffic/parking in the evening, but also existing conditions. GTA identified the important role that Mosman Council has in coordinating activities at the Drill Hall/Rawson Park, to improve traffic/parking outcomes. The most effective tool for achieving this will be through careful scheduling of activities to stagger the start/finishing times of multiple activities to avoid acute spikes in parking demand. Improving such outcomes is critical to improving the functionality of these facilities, and to protecting the amenity of local residents. This coordination role by Council is discussed in more detail in Section 8.1, and the management measures are outlined in Section 8.7.

In 2019, Council implemented some of the measures recommended by GTA. This resulted in the loss of five car parking spaces, while two new motorcycle spaces were provided.

7.11. Acoustic Impact

In 2018, the Harbour Trust commissioned Benbow Environmental Pty Ltd to undertake a Noise Impact Assessment of the Mosman Drill Hall Precinct. As part of this study, a detailed noise survey of the area was undertaken. This included attended and unattended noise monitoring at 15 potentially affected receivers in the vicinity of the Drill Hall Precinct and Rawson Oval over a two-week period in July 2018.

Results of noise monitoring found sources of noise included traffic (in particular cars travelling to/from Rawson Oval and the Drill Hall Precinct), children playing outside the Drill Hall, slamming of car doors, and aircraft.

Benbow Environmental modelled five noise-generating scenarios to measure potential noise impacts associated with use of the Mosman Drill Hall Precinct and Rawson Park Area. Modelling addressed both current operations of the area, as well as potential changes in how it may be used. Potential noise generated by increased traffic was also modelled. The scenarios examined were:

Drill Hall Precinct Operations:

1. Current and proposed use (day time only);
2. Current use (evenings only);
3. Proposed use (evenings only),

Drill Hall Precinct, Rawson Park and Tennis Centre:

4. Current use (daytime only); and
5. Proposed period (evenings only).

The results of the modelling found all scenarios were predicted to comply with project specific criteria at all considered receivers, with the exception of one residential receiver, located on Cross Street adjacent to the western boundary of the precinct. Exceedances were modelled to occur during current day operations for the Drill Hall Precinct (scenario 1), and the proposed evening operations (scenario 3).

For scenario 1 (current daytime operations of the Drill Hall Precinct), modelled exceedances would be 3 dB; the exceedances were attributed to during outdoor play by children attending the out-of-school-care (OOSH) service in the Drill Hall. When OOSH children are not playing outdoors, compliance with the criteria was achieved at all residential receivers.

For scenario 3 (proposed evening use), an exceedance of 1 dB at the nearest residential receiver (Cross Street adjacent to the western boundary of the precinct) was modelled. Benbow noted that an exceedance of 1 dB negligible significance, “not being discernible by the average listener and therefore not warranting receiver-based treatments or controls”. Noise was predicted to result from whistles in use of the outdoor netball courts; when noise from whistles was removed from the model, compliance with project criteria was achieved at all receivers.

Modelling of the cumulative scenarios (scenarios 4 and 5 – use of the Drill Hall Precinct as well as Rawson Oval and facilities to the north), were predicted to comply with project-specific criteria at all surrounding receivers (including residences on Cross Street and those to the north of Rawson Park).

Benbow Environmental recommended a range of measures to further reduce noise levels at surrounding receivers. These measures would address not only the potential additional noise generating activities in the evening, but also existing conditions. Careful coordination and management of activities across Drill Hall/Rawson Park is essential for managing potential adverse noise impacts – this is discussed more in Section 8.1.

Recommended mitigation measures include limiting outdoor activities by users of the Drill Hall to between 7 am and 6 pm, focusing evening netball activities on the eastern most courts where possible, not using whistles during evening netball activities, and erecting signs to encourage quiet behaviour when leaving the site. Additional mitigation measures are outlined in Sections 8.3, 8.4 and 8.5.

7.12. Lighting Impact

In 2018, the Harbour Trust engaged Lighting, Art + Science Pty Ltd (LAANDS) to undertake a lighting impact assessment of the Mosman Drill Hall Precinct. As part of this study, a survey was undertaken at potentially affected residential premises close to the site to examine current impacts of illumination of facilities at the Drill Hall Precinct and Rawson Park, and whether the installation of lights to the outdoor netball courts would result in unreasonable impacts to nearby residential properties.

LAANDS found that the four, 20 metre-tall floodlights on Rawson Oval currently emit a substantial level of light at night that is visible from residences in Cross Street and surrounding areas. Lighting of the interior and exterior of the Drill Hall and sports centre, as well as

safety lighting on streets and footpaths in and around the precinct also contributes to background levels of light. High fences and mature local plantings, such as trees in Cross Street and in the Rawson Oval carpark, mitigate some adverse lighting impacts.

LAANDS' assessment examined vertical illuminance (a measure of how much the lighting would illuminate a room in a residence), luminous intensity (potential for illumination to cause glare), and threshold increment (the impact of the lighting would have on drivers of surrounding streets to see objects and signs). The assessment also examined potential for the illumination to comply with Australian Standard 4282 – this standard sets what level of light intrusion a person living in an urban environment could be reasonably expected to tolerate, if they resided next to an external lighting installation.

The assessment also examined if lighting of the courts could be viewed from Sydney Harbour. LAANDS concluded that the difference in elevation between the Harbour and the Drill Hall Precinct, together with the naturally vegetated landscape, would act to screen potential visual intrusion to the Harbour that could result from the installation of lights. LAANDS also noted that the existing Rawson Oval lights are much taller and higher on the ridge, are thus more prominent than any lights proposed for installation at the outdoor netball courts.

In relation to impact on nearby residences, the assessment found that because the netball courts are at a lower elevation and would be separated from the adjacent residential properties, the potential for visual intrusion from the lights is minimal and would comply with relevant Australian Standards.

LAANDS recommended a range of measures that would enable the installation of training-standard lights on the outdoor courts at Drill Hall Precinct, while ensuring compliance with AS4282 in respect of limiting visual intrusion to nearby residential properties and visual intrusion of the lights from Sydney Harbour. These measures include the use of low height (8 metres) poles and luminaires with a lower total wattage consumption. Additional mitigation measures are outlined in Section 8.4.



8. OUTCOMES



8. Outcomes

The key outcomes for the site are to:

- Conserve and interpret the site's heritage values through the ongoing conservation and appropriate use of the Drill Hall;
- Ensure uses for the Drill Hall help its conservation and are sympathetic to its simple, institutional form and the need to open up the site to the public;
- Continue the use of the indoor sports centre for a range of sports and recreation activities;
- Maintain the three hard-surfaced outdoor training courts and an indoor sports building for community uses;
- Allow the introduction of lighting for the outdoor courts to facilitate their use into the evening for sports training;
- Maintain public access to the site through the provision of new pathways and parking;
- Improve the precinct's integration with the surrounding ridge-top parklands and adjacent urban areas, without diminishing its sense of place as an institutional, campus-like precinct;
- Facilitate coordinated management of the sport, recreation and community facilities in the adjoining Mosman Drill Hall/Rawson Park precincts;
- Maintain the precinct as part of the sequence of civic centres along the plateau, formed by the former military bases;
- Manage drainage through the existing stormwater retention and swale system; and
- Manage bushland in accordance with the Bushfire Management Plan while retaining the sense of a 'green' gateway to Sydney Harbour.

These outcomes are depicted in **Figure 19**.

8.1. Coordinated Management of the Drill Hall/Rawson Park Sport and Recreation Area

The Mosman Drill Hall Precinct is owned by the Harbour Trust but is managed by Mosman Council for sport, recreation and community purposes under a long term lease. Mosman Council also manages the adjoining Rawson Park, which includes a sports oval and popular off-leash dog-walking area.

Mosman Council has the opportunity to take a proactive role with sports groups to better coordinate their activities, to improve operational outcomes, in particular in relation to traffic and parking.

Mosman Council is proposing to install lighting for the outdoor netball courts. This would be subject to Harbour Trust approval, which would involve this proposed amendment to the 2006 Precinct Management Plan, revised lease conditions for the site, and planning approval. These instruments provide the Harbour Trust with the ability to require Council to coordinate its management of these adjoining lands, to ensure the protection of the precinct's environmental and heritage values, and the amenity of local residents.

A coordinated approach would cover a range of matters including:

- Scheduling of events and activities
- Management of access and parking
- Interpretation of the heritage significance of the locality
- Environmental management

A number of management principles and opportunities have been identified, as outlined below:

Scheduling of Activities

The Drill Hall/Rawson Park Area is an important hub for sporting, recreation and community activities. Most of the community facilities are managed by Mosman Council in collaboration with sporting and community groups.

Concurrent start/finishing times of multiple activities can contribute to traffic and parking congestion. In collaboration with sporting and recreational groups, Mosman Council will be able to monitor activities and modify schedules to stagger start/finishing times, or introduce short breaks between each training session or game. This would help reduce peaks of traffic and parking demand, improving the operation of the facilities, and protect local amenity.



Figure 17: Rawson Oval

Access and Parking

To facilitate improved access to the sporting, recreation and community facilities in the precinct, Mosman Council has the opportunity to investigate:

- Undertaking modest improvements to existing parking areas (such as one-way circulation, which was implemented in 2019) to improve their efficiency and safety;
- Promoting the use of public transport, walking and cycling to access the precinct;
- Coordinating the management of traffic and parking through consistent signage, line marking and regulatory controls; and

- Encouraging the use of parking in areas on the northern side of Rawson Oval to decrease demand in parking areas to the south of the oval (ie via Cross Street).

Environmental Management

The Harbour Trust will continue to work with Mosman Council and NPWS to protect the natural values of the precinct and to reduce threats to biodiversity by:

- Protecting threatened species, populations or communities in accordance with relevant guidelines;
- Coordinating implementation of bushfire protection strategies;
- Managing stormwater runoff to Sydney Harbour National Park by controlling the downslope dispersal of nutrients; and
- Limiting lightspill and intrusive noise by ensuring compliance with relevant Australian Standards and enhancing awareness of the local environment.

Interpretation

One of the primary objectives of the Harbour Trust is to increase public understanding and appreciation of the lands' rich natural and cultural heritage.

A key means of achieving this is through the development of interpretive activities that are meaningful, relevant and engaging to a broad audience, such as ensuring uses at the precinct interpret and respect the site's heritage values. The Harbour Trust will continue to work with Mosman Council to enhance the community's appreciation of the heritage significance of the place.

8.2. Heritage Conservation

The Mosman Drill Hall Precinct is recognised as being of great heritage significance, and these heritage values will be protected, conserved and interpreted. This includes the conservation of the Drill Hall and its setting, the Parade Ground, the historic military road alignment and significant landscape features of the site.

The use of the site as an area of community use and public active open space is compatible with conserving the heritage values of the Drill Hall and the place as it enables the retention of the open landscape, the building's setting and the dominant historic elements of the site's military past. The Drill Hall will continue to be conserved and used for appropriate activities such as local events, performances and sports training.

The scale and form of any new buildings or additions on the site will have to respect the heritage values of the place.

Conservation Policies

The Conservation Management Plan (CMP) prepared by Simpson Dawbin Architects and Heritage Consultants in 2005 identifies items of significance (see **Figure 14**) provides policies and recommendations to guide future use and development of the Drill Hall and the precinct. Relevant conservation policies for the ongoing use of the Drill Hall are summarised below:

Conservation and Upgrading:

- All elements of high significance should be preserved and / or restored
- All elements of some significance should be preserved / restored / reconstructed or adapted within the new site design.
- The Drill Hall should be upgraded to meet current standards of WH&S with respect to public access, staff amenities and services whilst causing minimal impact on identified significant elements of the building.

Setting and Boundaries:

- Development within the immediate vicinity of the Drill Hall that may adversely impact upon the significance of the site is to be restricted.

Compatible Uses:

- The primary use of the Drill Hall should be a sporting or recreational facility that does not subdivide or detract from the existing interior space.
- Alterations or additions to the exterior of the Drill Hall should not compromise the integrity or form of the building.

Access and Security:

- The parade ground is suitable for use as the primary parking area.
- Disabled access should be provided to the Drill Hall.
- Effective security lighting should be provided.

Services and Amenities:

- Existing services should be recorded prior to removal.

- New facilities such as toilets, washrooms and kitchen facilities should not adversely impact the heritage significance of the site or Drill Hall.
- New amenities should be located within the annexed section of the Drill Hall or in a purpose designed building located separately to the Drill Hall, and which has minimal impact on the Drill Hall or precinct.

Landscape:

- Retain the military character of the precinct within the vicinity of the Drill Hall.
- Use of low maintenance materials.

Interpretation:

- Interpretative elements should be incorporated into the site to ensure that the significance of the site and the Drill Hall is evident to future users
- The interpretation strategy is to be integrated with other related sites at Georges Heights and Middle Head.

8.3. The Drill Hall

The Drill Hall will continue to be used and occupied to facilitate its conservation and public use. Uses will need to satisfy criteria relating to public benefit, heritage conservation, traffic generation, parking requirements and transport needs, environmental impact, noise emissions, service and infrastructure constraints, compliance with the NCC, and the *Objectives and Policies* set out in Section 3 of the Harbour Trust's Comprehensive Plan.

The general principles that will underlie the selection of uses will be their compatibility with:

- Maintaining the heritage values of the place;
- Responding to the place and providing a positive contribution to the people's enjoyment and understanding of the place and its heritage;
- Environmental, public access and amenity considerations (such as noise and light impacts); and
- Managing transport demand.

Use of the Drill Hall will not be permitted after 10pm, this will be reinforced through leasing conditions.

In accordance with the CMP, alterations or new additions should be strictly limited and controlled to ensure that there is no loss of significant fabric. The integrity and volume of the interior space should not be compromised by inappropriate development or fitout within the building. The Drill Hall may need to be assessed in terms of acoustic insulation during any future refurbishment.

New amenities, such as toilet facilities, wash rooms and tea rooms have been accommodated in a separate purpose-built building (which replaced previous demountable buildings) to provide minimal impact on the Drill Hall and its setting.

The primary use for the Drill Hall should be as a sporting or recreation facility which utilises the available volume of the interior without subdivision or disintegration of the existing space. The CMP identifies a range of uses and activities that would be suitable for the Drill Hall, such as: indoor practice courts; meeting hall;

performing arts; exhibition space; and arts & crafts workshops and display.



Figure 18: 2018 – South elevation of the Mosman Drill Hall

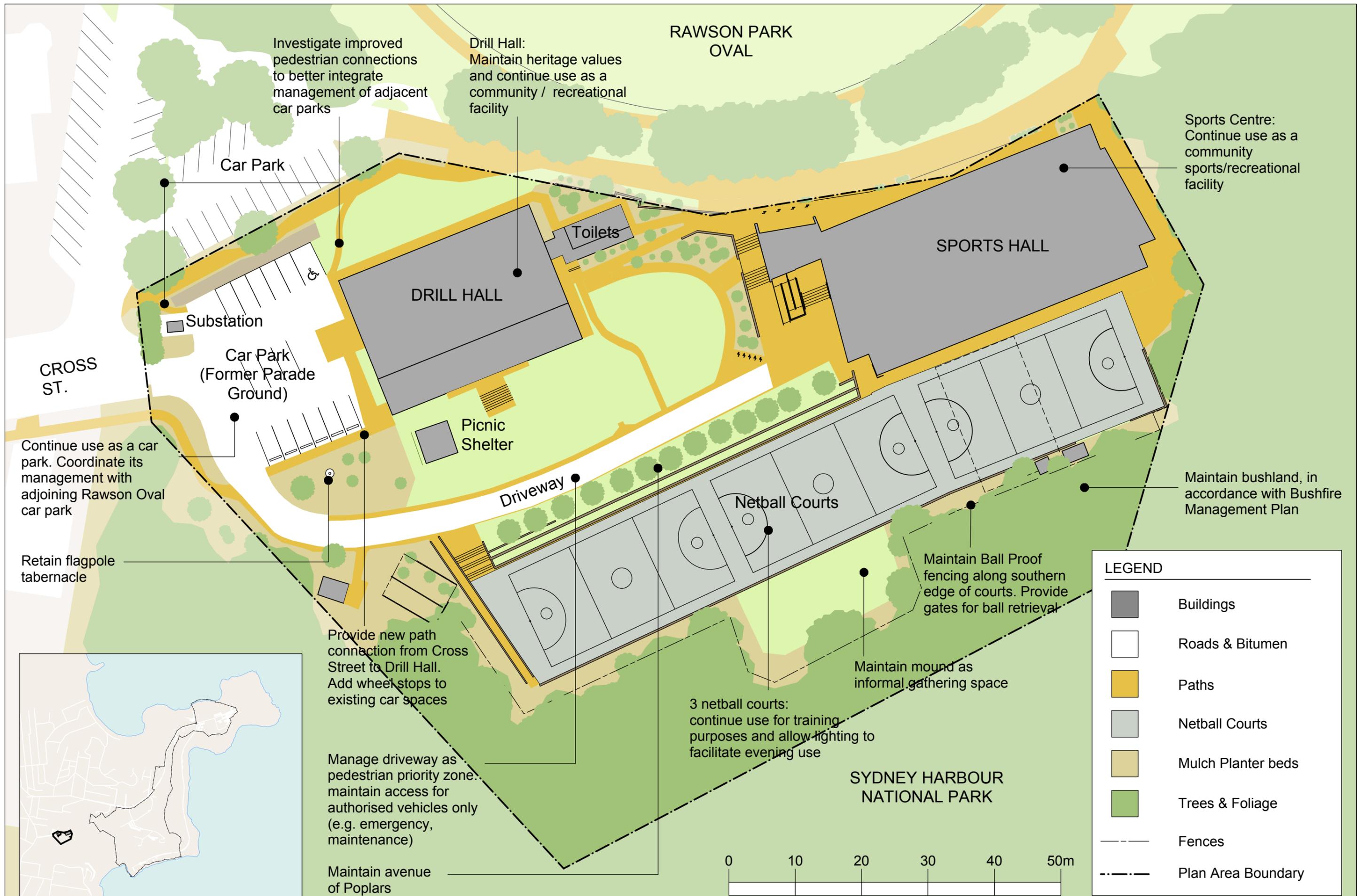


Fig.19 - Outcomes



8.4. Outdoor Sports Courts

The three outdoor courts are to be used for practice and training purposes only. The dimensions of the outdoor courts make them suitable for sports such as netball and basketball.

The outdoor courts may be used for training purposes until 8.30 pm. This is subject to their use being carefully managed to protect local amenity. This includes the matters discussed at Section 8.1 of this Plan, such as the scheduling of training sessions. All lights must be extinguished by 8.30 pm, or at the end of each training session, whichever occurs first. All court users must depart the precinct promptly. Any evening use of the courts must comply with relevant Australian Standards relating to impacts from obtrusive lighting and noise generation.

To limit noise and visual impacts associated with use of the courts, evening use of the outdoor courts should be focussed on the eastern-most courts where possible. That is, if only one court is to be used, the eastern-most court (no 3), is to be used. If two courts are to be used, the eastern (no 3) and central (no 2) courts are to be used. The western-most court (no 1) is only to be used when all three courts are required to be used simultaneously. Only those courts that are in use may be illuminated.

The use of amplified sound systems in outdoor areas, and the use of whistles after 6 pm, are not permitted. Signage should be installed reminding site users to keep noise to a minimum. The Harbour Trust will reinforce restrictions on outdoor lighting (not permitted after

8.30 pm), sound systems, and the use of the courts through leasing conditions.

8.5. Indoor Sports Centre

In 2011, the Marie Bashir Mosman Indoor Sports Centre was opened to the public. Named for former Governor of NSW and long-term Mosman resident, Professor Marie Bashir, AC, CVO, the centre incorporates a single indoor sports court, which is suitable for a range of sports such as netball, basketball, wheelchair basketball, volleyball, futsal and indoor hockey.



Figure 20: 2018 – Marie Bashir Mosman Indoor Sports Centre and outdoor netball courts

Use of the centre is limited to training and local club/school competitions. The building incorporates a viewing gallery, toilets, change-rooms and storage space.

The centre was sited and designed to minimise impacts on the adjacent Drill Hall and surrounding parklands. Access to the centre is available via a network of wheelchair-friendly pedestrian and cycle paths; the former military road deviation provides access for emergency and service vehicles.

Rainwater from the roof of the building is collected and stored in a stormwater retention tank located beneath the eastern-most outdoor netball court; photovoltaic panels have been installed on the roof of the centre to help meet the centre's needs.

To minimise adverse impacts on local amenity, all sporting and recreational activities within the centre are required to cease by 10 pm on any night. This will be reinforced through leasing conditions.

Where possible, the use of the centre should be coordinated with other Council-managed activities in the area, to ensure its orderly operation, and protection of local amenity.

8.6. Public Domain

The existing military character of the site, particularly the open lawn setting of the Drill Hall has been retained as site improvements have been completed, while the bushland edges have been expanded. Careful siting of the outdoor netball courts and indoor sports centre reinforced the east-west geometry of the Drill Hall and enabled

significant trees within and adjacent to the site to be retained. This also assists in reducing impacts on the amenity of local residents and allowing a generous curtilage to the Drill Hall.

A network of bicycle and pedestrian paths provides connections to Rawson Park and the wider landscape of the Headland Park.

Public facilities promote community use of the precinct and include a covered barbecue area on the grassed area adjacent to the Drill Hall and numerous bicycle racks. A line of landscaped terraces adjacent to the outdoor courts provides seating as well as serving as an acoustic barrier from noise from the outdoor courts.

Landscape elements retained from the military-era include: the Brush Box to the east of the Drill Hall; the poplars along the northern boundary; and the avenue of poplars along the former military road. New plantings are based upon those species identified as suitable in the Conacher Travers Flora Study. A ball-proof fence will be installed to the south of the outdoor training courts to prevent balls from continually entering into the National Park.



Figure 21: 2018 – Open landscape, Mosman Drill Hall Precinct

To minimise bushfire risk, bushland will be managed in accordance with the Bushfire Management Plan. Stormwater is captured from the hard-surfaced courts and runoff is direct to a retention swale within the site.

Modest ancillary sheds to accommodate site services are discretely located at the entrance to the precinct, away from pedestrian paths and the curtilage of the Drill Hall.

The car park will be maintained as a paved space for car parking, forming a defined forecourt to the Drill Hall, and reflecting the dimensions of the historic Parade Ground.

Whilst much of the activity in the precinct is related to sport, recreation and community activities, this is balanced by allowing the naturalistic setting of the Sydney Harbour National Park to extend well into the site and retaining much of the historic fabric. In this way, the precinct has been integrated with both the Headland Park and the adjacent sport and recreation precinct.

8.7. Access and Parking

The former Parade Ground will continue to be used as a car park. The layout of the car park has been designed to provide efficient circulation and to maximise parking provision (16 spaces, including one space for people with disabilities). A drop-off area is provided at the entrance to the Drill Hall. The Harbour Trust previously proposed allowing the lawn to the south of the Drill Hall to be used for occasional special event parking. This is no longer considered appropriate given the high pedestrian activity in this area, particularly by children. Other than the car park, the precinct will be managed as a car-free zone, with occasional access allowed for emergency or maintenance vehicles.

In 2018, traffic consultants GTA investigated traffic and parking conditions in the precinct and surrounding area (see discussion in Section 7.10 of this Plan). GTA recommended a range of measures aimed at managing the additional parking and traffic generated by the proposed use of the outdoor courts in the evening. Implementation of these measures would also have the further benefit of improving existing conditions in the area at other times.

An important finding from GTA's investigation is the key role that Mosman Council, as the manager of the Drill Hall precinct and adjoining Rawson Park, is able to play in coordinating the management of these sites to improve the area's traffic and parking outcomes. This could be achieved through the implementation of various measures, such as:

- Staggering the scheduling of the sites' activities to avoid start/finish times coinciding – this will help reduce acute peaks in demand;
- Scheduling the start/finish times for training sessions on the outdoor courts to avoid out-of-school-hours-care pick-up times – the lighting of courts may facilitate this, which in turn may help reduce demand at a peak time;
- Introducing a one-way circuit around the Rawson Oval car park – to avoid congestion on this narrow carriageway;
- Introducing time restrictions (for example, 2 hour maximum stay) in the Drill Hall and Rawson Oval car parks – to improve turnover, and free up additional spaces;
- Improving pedestrian connections between the Drill Hall and Rawson Oval car parks – to facilitate an integrated approach to these adjoining car parks;
- Providing a drop-off/pick-up zone along the northern edge of the Rawson Oval car park – to improve traffic flows; and
- Providing lighting on path connections from the Oval to parking on Croquet Lane/Alexander Ave – to encourage Rawson Park/Oval users to use these spaces, reducing demand on Drill Hall/Rawson Oval car parks.

Some of these measures were implemented by Mosman Council in 2019. The sequenced scheduling of activities is likely to offer the

most effective means for improving traffic and parking outcomes - which would be subject to Council working closely with sports groups and stakeholders. Ongoing monitoring of traffic and parking in the area will be essential to ensure that the management of the site continues to achieve optimal traffic and parking outcomes.

Pedestrian access from Cross Street could be improved by building a new path along the southern edge of the car park to provide direct access to the Drill Hall.

8.8. Stormwater and Water Sensitive Urban Design

Vegetated swales, infiltration trenches and a consolidated outlet area have been constructed. This allows the capture and treatment of stormwater flowing from Rawson Oval, Cross Street and from within the site before it enters the National Park.

A stormwater detention tank has been built beneath the eastern-most netball court, helping to manage flows into downslope areas, and providing water for re-use.

The principles of Water Sensitive Urban Design (WSUD) have been incorporated into the redevelopment of the Mosman Drill Hall precinct to achieve water quality, water conservation and ecological objectives. Effective integration has involved the application of concepts on a catchment wide basis. The key concepts applied are:

- *Source controls* – removal or mitigation of the pollutant source, and on-site rainwater use;
- *Conveyance controls* – applied during the conveyance of stormwater to bushland, streets or channels;

- *Discharge controls* – applied at the point where water leaves the site or the catchment; and
- *Natural systems planning* – applied to the entire area. Natural systems planning recognises essential hydrological and ecological functions of watercourses, wetlands and native vegetation.

Various measures have been implemented in the redevelopment of the Mosman Drill Hall precinct to facilitate the stormwater management objectives in the table below.

Concept	Issue	Application within the precinct
Source Controls	Street sweeping and landscape maintenance	Roads and organic matter are a source of many pollutants. Sweeping and maintenance will be part of the on-going management of the site.
	Rainwater tanks	The use of rainwater for toilet flushing, irrigation etc will reduce water use and stormwater flow peaks.
	Rainwater detention gardens	Applied to intercept sheet and concentrated flows. This will reduce flows and reduce scouring and erosion in bushland areas. It will also improve stormwater quality by controlling the dispersal of nutrients downslope.
	Pit pollution control traps	Investigate their installation at various locations to remove gross pollutants and hydrocarbons.
	Stormwater Collection	Investigation of options for collection of stormwater from paved areas for reuse.
Conveyance controls	Water sensitive road design	Investigate the installation of buffer strips and bioretention swales, particularly along up-gradient edges of hard-surfaced areas. These measures will reduce run-off velocities and reduce contaminant transport to receiving waters.
Discharge controls	Stormwater Collection	Divert flows to collection areas for possible reuse. This will assist in reducing velocities of run-off on areas down slope and reduce contaminant transport to receiving waters.

Concept	Issue	Application within the precinct
Natural systems planning	Weed removal and revegetation with native species	This will improve water retention and site amenity.
	<i>Phytophthora cinnamomi</i>	Reduce nutrient impact to bushland areas. Reduce ponding and concentrated stormwater flows.
	Dieback areas	Regenerate to reduce erosion, water retention and amenity. To be carried out in parallel with a strategy for controlling <i>Phytophthora cinnamomi</i> .

8.9. Phytophthora cinnamomi

The Harbour Trust’s Phytophthora Management Strategy will continue to be implemented, key components of which are shown in the following table. In addition, testing for Phytophthora will be undertaken prior to any civil works commencing.

Risk of spread or introduction by –	Management Strategy
Bush regeneration activities	<p>Implementation of best practice hygiene procedures for bush regeneration or related activities;</p> <p>Soil and plant materials to be sourced from appropriately certified suppliers.</p>
Water flows and increased surface water nutrients	<p>Introduce stormwater measures so that flows are remediated to approach the natural condition in bushland areas, or direct flows away from bushland;</p> <p>Reduce nutrient impact to bushland areas, by remediating nutrient and contaminant sources or nutrient removal.</p>
Walkers	<p>Introduction of a Phytophthora community education program;</p> <p>Walking track design that limits the potential for spread by walkers, including:</p> <ul style="list-style-type: none"> – Integrated drainage controls; – Clean crushed sandstone capping; – Mulched edges; <p>Confine walkers to tracks in bushland areas.</p>
Construction/ earthworks/ landscaping activities	<p>Implement hygiene protocols for personnel, machinery and tools;</p> <p>Soil and plant materials to be sourced from Phytophthora-free certified suppliers, or low risk sources;</p> <p>Use only well composted, soil-free mulch.</p>

8.10. Remediation

A hazardous materials removal and abatement program has been carried out for the Drill Hall, in conjunction with and during building refurbishment works. Remediation works included:

- Removal, or repair and management, of remaining asbestos cement building materials, and removal of asbestos cement fragments from beneath the Drill Hall building;
- Removal and appropriate disposal of PCB containing capacitors in light fittings of the Drill Hall; and
- Removal or abatement of deteriorating lead-based paint systems located mainly on the outside of the Drill Hall.

In 2008, ENVIRON Australia prepared a site audit report for Mosman Council. The report certifies that the site has been remediated to a level suitable for use as a park, recreational open space and playing field, subject to compliance with an Environmental Management Plan prepared for the site by URS Australia in 2008.

8.11. Interpretation

One of the primary objectives of the Harbour Trust, in conserving the heritage values of its lands and opening them up to public access, is to convey their rich natural and cultural heritage in a meaningful, relevant and engaging way to the general public.

The Harbour Trust has prepared an Interpretation Strategy for Headland Park which provides recommendations as to how the Harbour Trust can best communicate the significant values of the park and its setting to the public.

The aims of the Interpretation Strategy are to:

- Engage visitors in understanding and appreciating Headland Park and its stories;
- Convey the historical patterning of the place through imaginative and relevant interpretive themes;
- Reflect the Harbour Trust's aspirations and understand the community's interests and their views regarding visitor experiences and the interpretation plan;
- Consider the visitor segments/experience;
- Recommend interpretation media (tools and devices) for anticipated audiences that are cost effective and sustainable; and
- Provide a continuing reference for prioritising and guiding interpretation planning at Headland Park.

For the Mosman Drill Hall precinct, all phases of the site's previous occupation and use will be interpreted, focusing in particular on the site's role in the evolution of Australia's defence system.

The methods of interpretation proposed to be used across Headland Park could include, but would not be restricted to:

- Digital Strategy – using tools such as social media, podcasts, an updated website and digital walking tours;
- Printed Material – such as visitor guides;
- Oral Histories;
- Cultural Programming and Partnerships – such as events and tours;
- Interpretive Landscaping and Furniture;

- Interpretive Playground;
- Education Programs and Kits; and
- Signage – including wayfinding, interpretive, tactile and feature signage.

8.12. Implementation

Priorities for implementation have been determined in a manner consistent with *Part 11* of the Harbour Trust's Comprehensive Plan.

The following table summarises the outcomes to be achieved through the implementation of this Management Plan. The table identifies individual elements of the project and prioritises those elements in a manner consistent with those priorities identified in the Comprehensive Plan. The relevant sections of the Management Plan and supporting studies which detail each element are also included in the table as a quick reference point.

Implementation and Action Plan

	Outcomes	Elements	Priority	Relevant Management Plan or Supporting Study (in addition to the Cross Street Drill Hall Precinct Planning Report and the Park Design Concept)
Public Domain	<p>Increased Public access - pedestrian links, facilities for cyclists, disabled access, parking</p> <p>Improvements to landscape / public facilities</p>	<ul style="list-style-type: none"> ▪ Provide pedestrian, disabled and vehicular access to and within the site. ▪ Reuse the Parade Ground as a car-parking area, with a drop-off zone at the entry to the Drill Hall. ▪ Provide one parking space for people with a disability. ▪ Implement measures to improve traffic and parking management ▪ Provide clear and accurate information on available public transport services. ▪ Pedestrian and cyclist links (where appropriate) to the Headland Park and adjacent urban areas. ▪ Integrate the site with adjoining parkland by removing fencing and creating continuity of landscape treatment. ▪ Bush regeneration and screen planting. ▪ Provision and / or upgrade of on-site services. 	<p>Achieved</p> <p>Achieved</p> <p>Achieved</p> <p>High</p> <p>Partly Achieved</p> <p>Achieved</p> <p>Achieved</p> <p>Achieved</p> <p>Achieved</p>	<ul style="list-style-type: none"> ▪ Conservation Management Plan ▪ Review of Traffic and Parking ▪ Conservation Management Plan ▪ GTA Traffic Impact Assessment ▪ Conservation Management Plan ▪ Bushfire Management Plan ▪ Flora Study ▪ Fauna Study ▪ Conservation Management Plan ▪ Site Services Survey

		<ul style="list-style-type: none"> Provision or upgrade of public facilities such as toilets, lighting, bicycle parking rails and picnic areas. Possible removal of demountable amenities block 	<p>Achieved</p> <p>Achieved</p>	<ul style="list-style-type: none"> Conservation Management Plan Conservation Management Plan
	Improved Environmental Conditions	<ul style="list-style-type: none"> Remediation of contaminated land and hazardous materials in public areas. Conservation of existing bushland and extension of bushland where possible. Comply with asset protection from bushfire threats. Introduce management controls to minimise the risk of the spread of <i>Phytophthora Cinnamomi</i>, including testing prior to undertaking civil works. Control run off from the site by developing vegetated swales, infiltration trenches and a consolidated drainage outlet. Restrict use of sound systems and whistles to minimise noise. Install appropriate signage. 	<p>Achieved</p> <p>High / ongoing</p> <p>High / ongoing</p> <p>High</p> <p>High / ongoing</p> <p>High</p>	<ul style="list-style-type: none"> Contamination Report Hazardous Materials Survey Site Audit Report Supplementary Site Assessment Flora Study Fauna Study Bushfire Management Plan Bushfire Management Plan Threat Abatement Plan Stormwater Management Plan 2018 Noise Impact Assessment
Building & Site Uses, New Building and Adaptive Reuse	New Sporting Facilities	<ul style="list-style-type: none"> Subject to Mosman Council: funding; removing the existing courts in Rawson Park; and rehabilitating the site of the existing courts; provide: <ul style="list-style-type: none"> Stage 1 - Five outdoor hard-surfaced courts Stage 2 - An indoor sports building to replace two of the outdoor courts constructed in Stage 1. Allow lighting of the outdoor netball courts (subject to proposed amendment to the 2006 Precinct Management Plan, revised lease conditions for the 	<p>Achieved</p>	<ul style="list-style-type: none"> 2018 Noise Management Plan 2018 Lighting Impact Assessment 2018 GTA Traffic and Parking

		site, and planning approval)		Assessment
Heritage Conservation and Interpretation	Conservation and adaptive reuse	<ul style="list-style-type: none"> ▪ Conservation and adaptive reuse of the Drill Hall ▪ Significant site features restored and interpreted including: Parade Ground; driveway; stone buttressed wall; and flagpole and tabernacle. ▪ Landscape improvements that respond to and convey the site's natural and cultural heritage. ▪ Preparation and presentation of interpretative material and signage in public domain areas. 	<p>Medium</p> <p>High/ ongoing</p> <p>Achieved</p> <p>High / ongoing</p> <p>Medium / ongoing</p>	<ul style="list-style-type: none"> ▪ Conservation Management Plan ▪ Conservation Management Plan ▪ Conservation Management Plan ▪ Conservation Management Plan ▪ Interpretation Strategy



9. FUTURE ACTIONS



9. Future Actions

Section 9 outlines the process for implementing this Plan.

9.1. Assessment and Approval of Actions

Proposed actions will be assessed for their potential impacts on heritage values and the environment in accordance with the EPBC Act and the Harbour Trust's Comprehensive Plan (see Section 3 Planning Framework). Approved actions will be subject to conditions to avoid potential impacts; or to put in place measures to minimise or mitigate impacts, and to manage activities in accordance with relevant legislation and standards.

9.2. Unforeseen Archaeological Discoveries

Archaeology includes: buildings, structures, objects and relics, landscapes and other remains, both above and below the ground. All of these items have enormous potential to contribute to our knowledge of the place by revealing information about how people lived and worked there. All relics are protected by Commonwealth legislation and the intentional uncovering of relics, without a permit, is forbidden.

Appropriate provisions will be included, in leases for the site and in any contracts for works to be undertaken, requiring that in the event that relics are unintentionally uncovered, work must cease in the area where the relics were found and the Harbour Trust immediately informed.

The Harbour Trust will arrange for an archaeologist with the appropriate experience to visit the site and undertake an assessment before determining the appropriate course of action.

9.3. Records of Intervention and Maintenance

The Harbour Trust is proposing to use the inventory sheets as the starting point for establishing an ongoing record for each of the site's buildings and structures. This will enable all relevant information relating to a building or structure (eg its history, statement of significance, conservation policies, leasing arrangements, etc) to be available for reference in one document.

9.4. Future Consultation

Community consultation and communications is critical to the implementation of this plan. The community includes the Harbour Trust's Community Advisory Committee, broad community, special interest groups, non-government organisations and Local, State and Commonwealth Governments.

The Harbour Trust has been consulting with these groups since its inception and will continue this process in accordance with the *Consultation and Communications Objectives and Policies* set out in *Part 3* of the Harbour Trust's Comprehensive Plan.

9.5. Aboriginal Consultation

Ongoing consultation with the aboriginal community will take place through the Harbour Trust's Aboriginal and Torres Strait Islander Advisory Group and in accordance with the Harbour Trust's Reconciliation Action Plan and the *Aboriginal Heritage Objectives and Policies* set out in *Part 3* of the Harbour Trust's Comprehensive Plan.

9.6. Monitoring and Review of the Plan

During the implementation, this plan will be continuously monitored in terms of its objectives and consistency with the Commonwealth Heritage management principles.

At least once in every 5 year period after the plan's adoption the plan will be reviewed in accordance with Section 341X of the EPBC Act, 1999 as amended. The review will assess whether the plan is consistent with the Commonwealth management principles in force at the time.



APPENDICES



Appendix A: Table of Figures

Figure 1: Management Plan Area	9
Figure 2: Comprehensive Plan – Outcomes Plan for Middle Head, Georges Heights and Chowder Bay	20
Figure 3: 2002 – Front elevation of the Mosman Drill Hall	24
Figure 4: 2018 – Front elevation of the Mosman Drill Hall	24
Figure 5: Headland Park – Design Framework.....	25
Figure 6: 2005 – The deviation of the former military road, the avenue of poplars and the precinct’s park-like landscape.	26
Figure 7: 2018 – The deviation of the former military road, with the indoor sports centre and netball courts in the background.	26
Figure 8: c1940 – The Mosman Detachment of the Australian Electrical and Mechanical Engineers (AEME).	33
Figure 9: Mosman Drill Hall – phases of development.	34
Figure 10: 1988 – Mosman Drill Hall, HQ 8th (Infantry) Brigade.....	36
Figure 11: Northern elevation, Mosman Marie Bashir Sports Centre and deviation of former military road	37
Figure 12: 1990 – HQ 8th (Infantry) Brigade at the Mosman Drill Hall site preparing for ‘Exercise Silent Shadow’.	39
Figure 13: 1992 - HQ 8th (Infantry) Brigade, Regimental ‘Dining-in night’ at the Fromelles Club.	43
Figure 14: 2018 – interpretation of former Fromelles Club	43
Figure 15: Cultural Heritage Analysis.....	44
Figure 16: Landscape Analysis	47
Figure 17: Rawson Oval	59
Figure 18: 2018 – South elevation of the Mosman Drill Hall	62
Figure 19: Outcomes	63
Figure 20: 2018 – Marie Bashir Mosman Indoor Sports Centre and outdoor netball courts.....	64
Figure 21: 2018 – Open landscape, Mosman Drill Hall Precinct	66

Appendix B: Acknowledgements – Images

Figure 3

2002, The Mosman Drill Hall with parade ground in the foreground.
Source: Ron Mason.

Figure 4

2018, Front elevation of the Mosman Drill Hall
Source: **Shafagh Sharifian**:

Figure 6

2005, The former Military Road and natural setting of the site.
Source: Ron Mason.

Figure 7

2018 – The deviation of the former military road, with the indoor sports centre and netball courts in the background

Figure 8

c1940's, The Mosman Detachment of the Australian Electrical and Mechanical Engineers (AEME) on parade in front of the Mosman Drill Hall.
Source: Mess Album, HQ 8th (Infantry) Brigade, Timor Barracks, Dundas.

Figure 10

1988, HQ 8th (Infantry) Brigade recruit induction and instructor evaluation, Mosman Drill Hall.
Source: Mess Album, HQ 8th (Infantry) Brigade, Timor Barracks, Dundas.

Figure 11

2018 – Northern elevation, Mosman Marie Bashir Sports Centre and deviation of the former military road

Source: **Shafagh Sharifian**

Figure 12

1990, HQ 8th (Infantry) Brigade at the Mosman Drill Hall site preparing for 'Exercise Silent Shadow'

Source: Mess Album, HQ 8th (Infantry) Brigade, Timor Barracks, Dundas.

Figure 13

1992, HQ 8th (Infantry) Brigade, Regimental 'Dining-in night' at the Fromelles Club, Mosman Drill Hall site.

Source: Mess Album, HQ 8th (Infantry) Brigade, Timor Barracks, Dundas.

Figure 14

2018 – Interpretation of former Fromelles Club

Source: **Shafagh Sharifian**

Figure 18

2018 – South elevation of the Mosman Drill Hall

Source: **Shafagh Sharifian**

Figure 21

2018 – Open landscape, Mosman Drill Hall Precinct

Source: **Shafagh Sharifian**

Appendix C: Related Studies

Australian Museum Business Services, 2004, Archaeological Survey of Sydney Harbour Federation Trust Land at Middle Head, Georges Heights, and Chowder Bay

Benbow Environmental, 2018, Noise Impact Assessment

Christopher Hallam and Associates, 2006, Review of Traffic and Parking Analysis, Cross Street Drill Hall, Mosman

Conacher Travers Environmental Consultants, 2001, Comprehensive Fauna Survey of Interim Sydney Harbour Federation Trust Land and National Parks and Department of Defence Land at Georges Heights and Middle Head.

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Dick Benbow and Associates, 2006, Noise Impact Assessment Report for Sydney Harbour Federation Trust, Mosman Drill Hall Precinct

EDAW Gillespies, 2005, Cross Street Drill Hall Precinct Planning Report

Environ Australia, 2004, Site Audit Report – Cross Street, Mosman

GTA Consultants Pty Ltd, 2018, Mosman Drill Hall Precinct – Transport Impact Assessment

Hibbs & Associates, 2002, Hazardous Materials Survey Former Headquarters 8th Brigade, Cross Street, Mosman

Lighting, Art + Science Pty Ltd, 2018, Mosman Drill Hall Precinct, Obtrusive Lighting Impact Assessment

Maunsell Australia Pty Ltd, 2003, Transport Management Plan for Middle Head – Georges Heights and Chowder Bay

PPK Environment and Infrastructure, 1999, Final Draft Stage 1 Contamination Assessment and Geotechnical Study, Defence Sites at Middle Head, Georges Heights, Chowder Bay and Mosman

PPK Environment and Infrastructure, 2001, Final Draft Stage 2 Contamination Assessment and Geotechnical Study, Defence Sites at Middle Head, Georges Heights, Chowder Bay and Mosman

PPK Environment and Infrastructure, 2001, Summary Report, Stage 2 Contamination Assessment and Geotechnical Study, Middle Head, Georges Heights, Chowder Bay and Mosman Defence Sites

PPK Environment and Infrastructure, 2002, Site Services Survey - Middle Head, Georges Heights and Chowder Bay, Stages 2 & 3 – Location of Services

Travers Bushfire & Ecology, 2016, Draft Bushfire Management Plan for Headland Park, Mosman

Simpson Dawbin Architects and Heritage Consultants, 2005,
Mosman – Cross Street Drill Hall – Conservation Management Plan

Storm Consulting, 2007, Drill Hall Common – Stormwater Re-use
Scheme – Operation, Maintenance and Monitoring Plan

URS Australia, 2006, Final Report - Additional Phase II Environmental
Site Assessment – Cross Street Drill Hall Precinct – Mosman, NSW

URS Australia, 2007, Final Report – Sampling, Analytical and Quality
Plan – Remediation and Validation Works at Drill Hall Common, Cross
Street, Mosman, NSW

URS Australia, 2008, Draft Environmental Management Plan (EMP)

Appendix D: Commonwealth Heritage Listings

The following Commonwealth Heritage Listings are relevant to the Mosman Drill Hall Precinct:

- Defence site – Georges Heights and Middle Head, Middle Head Road, Georges Heights (Place ID 105541);
- Headquarters 8th Brigade Precinct, Cross St, Clifton Gardens (Place ID 105574); and
- Military Road Framework – Defence Land, Middle Head Road, Georges Heights (Place ID 105572).

The official summary statement of significance for each place is provided below (source: www.environment.gov.au)

Defence site - Georges Heights and Middle Head, Middle Head Rd, Georges Heights, NSW, Australia

List	Commonwealth Heritage List
Class	Historic
Legal Status	Listed place (22/06/2004)
Place ID	105541
Place File No	1/13/026/0026

Summary Statement of Significance

The Defence Site within the headland complex of Middle Head and Georges Heights is important as an area of significant cultural and natural heritage interaction recording a long history of Aboriginal occupation and the defence of Sydney Harbour since European settlement. The two areas of the Defence Site are contiguous with two sub-areas of Sydney Harbour National Park (Register No. 2584) and linked by important evolving cultural landscape frameworks within the scenic foreshores of Sydney Harbour, perhaps Australia's best-known waterway, and a nationally significant icon. The cultural landscape framework comprises a range of historic sites and structures which contribute individually and in groups to the national estate values of the Defence Site. Not all structures or sites within the boundaries are of significance. Sites and places of individual significance include the Military Road Framework (Reg. No. 103266), Headquarters 8th Brigade Precinct (Reg. No. 103292), Batteries A83 & C9a (Reg. No. 103295), Battery B42 (Reg. No. 103294), WRAAC Officers Mess (Reg. No. 2871), Battery for Five Guns (Reg. No. 2870), Headquarters Training Command Precinct (Reg. No. 103338), 30 Terminal Squadron Precinct (Reg. No. 103339), Chowder Bay Submarine Miners Barracks (Reg. No. 2876), Navy Refuelling Depot and Caretakers House (Reg. No. 103337), Commonwealth Avenue Defence Housing (Reg. No. 103341), Ten Terminal Regiment Headquarters and AUSAID Training Centre Precinct (Reg. No. 103342) and the former Golf Clubhouse (Reg. No. 103293), most of which are or will be managed by the Sydney Harbour Federation Trust. HMAS Penguin (Reg. No. 103327) remains in use as an operational Naval Base and represents the continuing presence of Defence at Middle Head and Georges Heights.

The Defence Site occupies part of Middle Head and Georges Heights which are held in high esteem by Sydney residents for their natural and scenic values as a significant part of Sydney Harbour's foreshore, and as a relatively natural vantage point and landmark in an otherwise highly urbanised environment. Middle Head has featured in paintings of the Sydney Heads by artists such as Augustus Earle c.1825 and in photographic works by Holtermann c.1875 and, in conjunction with Georges Heights, has been a significant part of the cultural and social life of Sydney and the colony of NSW. (Criterion E.1 and G.1)

The remnant natural vegetation is contiguous with Sydney Harbour National Park which is considered one of the finest harbour foreshore parks in the world. (Criteria B.1 and D.1)

Middle Head and Georges Heights have significant associations with the science of botany and the study of eucalypts in Australia. A number of early eucalypt specimens were collected by botanists including Robert Brown in 1802, Ferdinand Von Mueller in 1855, Joseph Henry Maiden in 1897, and William S. Blakely in 1937. (Criterion C.1)

Middle Head also documents an important story in post-contact history. In 1815, Governor Macquarie attempted to settle King Bungaree and his people on the upper areas of Middle Head. (Criterion A.4)

As a natural vantage point, Middle Head and Georges Heights have played a significant role in the development of colonial and national defence policy and military training in Australia from the Napoleonic Wars until the 1960s and in the implementation of military technology important for its historic values, research and archaeological potential and social values. The evolving cultural landscapes of the headland areas, produced by over 150 years of military and naval use, and linked by a network of military roads, are important for their association with, and ability to illustrate, a broad range of processes which exemplify the strategic role of Middle Head and Georges Heights in the growth of Sydney, the Colony of New South Wales and Australia under Imperial, Colonial and Commonwealth government policies. In this respect the suite of defence related sites are particularly important in illustrating the adoption and development of military technology and the provision of housing for military personnel. The drill hall located in Headquarters 8th Brigade illustrates the universal training scheme which followed the 1909 Defence Act. The former Middle Head barracks complex is also

important for its association with the Australian School of Pacific Administration and subsequently as the Commonwealth's AUSAid Centre from the 1970s. (Criterion A.4)

The defensive works at Middle Head and Georges Heights are particularly important for their association with; Lt Colonel J Gordon, who introduced the 'two tier' Gordon scheme for the defence of Sydney Harbour in 1845; Colonial Architect James Barnet for the design of the Artillery Barracks in 1873; and General Sir William Jervois RE and Lt Colonel Peter Scratchley, whose report of 1877 formed the basis of defence planning in Australia until after federation in 1901.

The growth of leisure and recreation in the late nineteenth and early twentieth centuries, and the establishment of Mosman Municipal Council in 1893, following the sub-divisions of the 1880s, is illustrated by a number of sites which are now important elements in the cultural landscapes associated with military use of the headlands. Important structures include the former Mosman Golf Club House of 1927 and the former 'Mosman Septic Tank' used as a swimming pool during the 1920s and which remains in use as part of HMAS Penguin, the focus of Naval training and hospitalisation in Sydney Harbour. (Criterion A.4 and Criterion H.1) (Australian Historic Themes: 4.2 Supplying urban services, 7.7 Defending Australia, 7.7.1 Providing for the common defence, 7.7.2 Preparing to face invasion, 7.7.3 Going to war, 8.1 Organising recreation)

The evolving cultural landscapes contain a wide range of military sites, structures and complexes which are important for their ability to yield information which will lead to a wider understanding of the historical context, design, construction and operation of military barracks, defence housing, fortifications, gun batteries and defensive works in Australia from 1870 to the post war years of the twentieth century. (Criterion C.2)

Individual sites and complexes within the relict cultural landscape areas are important for their ability to demonstrate technical innovation in the early use of concrete and the principal characteristics and operation of military barracks, drill halls, defence housing, fortifications, gun batteries and defensive technology and policy in Australia and the architectural styles employed by (NSW) Colonial architects from 1870 and Commonwealth architects from 1901. (Criteria D.2 and F.1))

A number of individual sites are important in demonstrating functions or designs of exceptional interest. Amongst others these include: the Submarine Miners Barracks and Workshops of 1890-93 at Chowder Bay; the former Military Hospital erected towards the end of the First World War; the three c.1930 roofed fuel storage tanks which were the first example of large scale camouflage in Australia; and HMAS Penguin as a purpose built naval training and hospitalisation complex. (Criterion B.2)

Defence land at Georges Heights and Middle Head is important for its contribution to the Sydney Harbour foreshores and contains places, which are highly valued by the community. The headland areas are also important for their associations with recreational use, which began in the nineteenth century and for their symbolic associations as part of the setting of Sydney Harbour and the Sydney Heads. (Criterion G.1)

It is possible that Indigenous cultural values of national estate significance may exist in this place. As yet, the AHC has not identified, documented or assessed these values.

Official Values

Criterion A Processes

Middle Head documents an important story in post-contact history. In 1815, Governor Macquarie attempted to settle King Bungaree and his people on the upper areas of Middle Head.

As a natural vantage point, Middle Head and Georges Heights have played a significant role in the development of colonial and national defence policy and military training in Australia from the Napoleonic Wars until the 1960s and in the implementation of military technology important for its historic values, research and archaeological potential and social values. The evolving cultural landscapes of the headland areas, produced by over 150 years of military and naval use, and linked by a network of military roads, are important for their association with, and ability to illustrate, a broad range of processes which exemplify the strategic role of Middle Head and Georges Heights in the growth of Sydney, the Colony of New South Wales and Australia under Imperial, Colonial and Commonwealth government policies. In this respect the suite of defence related sites are

particularly important in illustrating the adoption and development of military technology and the provision of housing for military personnel. The drill hall located in Headquarters 8th Brigade illustrates the universal training scheme which followed the 1909 Defence Act. The former Middle Head barracks complex is also important for its association with the Australian School of Pacific Administration and subsequently as the Commonwealth's AUSAid Centre from the 1970s.

The growth of leisure and recreation in the late nineteenth and early twentieth centuries, and the establishment of Mosman Municipal Council in 1893, following the sub-divisions of the 1880s, is illustrated by a number of sites which are now important elements in the cultural landscapes associated with military use of the headlands. Important structures include the former Mosman Golf Club House of 1927 and the former 'Mosman Septic Tank' used as a swimming pool during the 1920s and which remains in use as part of HMAS Penguin, the focus of Naval training and hospitalisation in Sydney Harbour.

Attributes

The natural and evolving cultural landscape and the evidence of a long history of use by defence, including the drill hall, the Middle Head Barracks, the Mosman Golf Club House and the HMAS Penguin swimming pool.

Criterion B Rarity

The remnant natural vegetation is contiguous with Sydney Harbour National Park, which is considered one of the finest harbour foreshore parks in the world. A number of individual sites are important in demonstrating functions or designs of exceptional interest. Amongst others these include: the Submarine Miners Barracks and Workshops of 1890-93 at Chowder Bay; the former Military Hospital erected towards the end of the First World War; the three c.1930 roofed fuel storage tanks which were the first example of large scale camouflage in Australia; and HMAS Penguin as a purpose built naval training and hospitalisation complex.

Attributes

The remnant natural vegetation plus the individual sites listed above.

Criterion C Research

The evolving cultural landscapes contain a wide range of military sites, structures and complexes which are important for their ability to yield information which will lead to a wider understanding of the historical context, design, construction and operation of military barracks, defence housing, fortifications, gun batteries and defensive works in Australia from 1870 to the post war years of the twentieth century.

Attributes

All of the built fabric and associated cultural landscapes from the earliest European defence related use of the site up to the post-war years of the twentieth century.

Criterion D Characteristic values

The remnant natural vegetation is contiguous with Sydney Harbour National Park.

Individual sites and complexes within the relict cultural landscape areas are important for their ability to demonstrate technical innovation in the early use of concrete and the principal characteristics and operation of military barracks, drill halls, defence housing, fortifications, gun batteries and defensive technology and policy in Australia and the architectural styles employed by (NSW) Colonial architects from 1870 and Commonwealth architects from 1901.

Attributes

Remaining natural vegetation, and the individual sites and complexes referred to above.

Criterion E Aesthetic characteristics

The Defence Site occupies part of Middle Head and Georges Heights which are held in high esteem by Sydney residents for their natural and scenic values as a significant part of Sydney Harbour's foreshore, and as a relatively natural vantage point and landmark in an otherwise highly urbanised environment. Middle Head has featured in paintings of the Sydney Heads by artists such as Augustus Earle

c.1825 and in photographic works by Holtermann c.1875 and, in conjunction with Georges Heights, has been a significant part of the cultural and social life of Sydney and the colony of NSW.

Attributes

The ability of the public to continue to enjoy the views on, to and from the site.

Criterion F Technical achievement

Individual sites and complexes within the relict cultural landscape areas are important for their ability to demonstrate technical innovation in the early use of concrete.

Attributes

Relic cultural landscape area

Criterion G Social value

Defence land at Georges Heights and Middle Head is important for its contribution to the Sydney Harbour foreshores and contains places, which are highly valued by the community. The headland areas are also important for their associations with recreational use, which began in the nineteenth century and for their symbolic associations as part of the setting of Sydney Harbour and the Sydney Heads.

Attributes

Continued recreational access to and use of community areas, natural areas and foreshores.

Criterion H Significant people

The defensive works at Middle Head and Georges Heights are particularly important for their association with; Lt Colonel J Gordon, who introduced the 'two tier' Gordon scheme for the defence of Sydney Harbour in 1845; Colonial Architect James Barnett for the design of the Artillery Barracks in 1873; and General Sir

William Jervois RE and Lt Colonel Peter Scratchley, whose report of 1877 formed the basis of defence planning in Australia until after federation in 1901.

Attributes

Not clarified.

Criterion I Indigenous tradition

It is possible that Indigenous cultural values of national estate significance may exist in this place. As yet, the AHC has not identified, documented or assessed these values.

Attributes

Not clarified.

Description

BACKGROUND

Military fortifications and defence reserves have played a major role in the development of Sydney Harbour's landscapes. Middle Head has featured in paintings of the Sydney Heads by many artists including Augustus Earle c.1825 and in photographic works by Holtermann c.1875, recording gun batteries and fortifications. Consequently Middle Head and Georges Heights have been a significant part of the cultural and social life of the colony of NSW, as part of the backdrop to the harbour and as the site of major defence works. The defences of Port Jackson and Sydney Harbour have developed in phases subject to changes in defence policy.

HISTORY

1788-1839

During the early 1800s any threat to Sydney was seen as coming from the sea. Following a warning from Sir Joseph Banks, during the the Napoleonic Wars, Governor King constructed a battery between Georges Heights and Middle Head in

1802 which remained the most forward battery in Sydney's defences until the 1850s. This site was chosen for its strategic position at the entrance to Port Jackson. The disadvantage of the site was its isolation and distance from Sydney. Middle Head was occupied for uses other than defence as early as 1815 with Governor Macquarie attempting unsuccessfully to form an Aboriginal settlement on Middle Head. By 1828 the area was described as King Bungaree's Farm, with King Bungaree having been appointed Chief of the Broken Bay tribes by the Governor. The venture appears to have failed. In 1839 the British government admitted that the harbour was defenceless, following the arrival of two American warships at night, and a number of reports into Harbour defences were commissioned.

1839-1877

A report by Captain G Barney led to the construction of defences on Pinchgut Island (now Fort Denison) and Bradley's Head but this work ceased in 1842. The first comprehensive plan for the defence of Sydney Harbour, made by Lt Colonel J Gordon in 1845, recognised the defence potential of the headlands near the entrance to Port Jackson. The 'Gordon' scheme was implemented from 1847 establishing a two line defensive system with the inner line at Sydney Cove with Georges Heights and Middle Head as part of an outer line of defence. The Gordon scheme recognised the limitations of armaments of the day with their limited range.

The Crimean War of 1853-56 accelerated the selection of sites for defensive purposes. Sites selected at Middle Head and Inner South Head were designed to command the entrance to the harbour, the shipping channels and the area to seawards of the Heads. These outer works ceased in 1855 with the arrival of Sir William Denison, the new Governor of NSW. The experience of the American Civil War had restated the need for heavier weapons and more secure gun emplacements; the armoured casemate principle was to be used on open sites with circular gun pits in more protected areas. In 1855 Denison submitted a report which stressed that the inner defences were more important and works were concentrated in the inner harbour when Fort Denison was completed. To assist in navigation of the important shipping channel between Middle Head and the Sow and Pigs Reef two obelisks were constructed above Obelisk Bay in 1858.

In 1862 the British government resolved that colonies with responsible government should bear the cost of their own defence. During the 1860s a Royal Commission

investigated the state of the colony's defences. By 1870 the last British (Imperial) line regiment had left Australia. The Defence Committee of September 1870 recommended the construction of batteries on Middle Head and Georges Heights as well as Bradley's Head, Steel Point and South Head. The 1870-1877 program concentrated on an outer line of defences with batteries erected on Middle Head and Georges Heights as well as South Head. A major development in 1872 was the formation of the Engineers Corps of NSW, which was to assist in the works. Plans were drawn up in the Office of the Colonial Architect James Barnet, with construction starting in 1871. Executed by 1876, this work included the construction of military roads. At Georges Heights three separate batteries (B42, A83 and A84) were commenced between 1871 and 1888. A new Rock Casemate Battery constructed 1872 -76 near the shoreline at Georges Heights was designed to operate in conjunction with the batteries at Georges Heights and a series of booms and submarine mine fields.

The Outer Middle Head Battery was commenced in January 1871 with at least 8 gun pits completed by 1874 with the Inner Middle Head Battery functional by 1881. Between 1871 and 1890 the barracks area of Middle Head was developed and a defensive moat constructed across the headland separating the gun batteries from the barracks. To support the development of defences, Artillery Barracks, designed by the office of the Colonial Architect, were erected in 1873 at Georges Heights. The lower barracks for Submarine Miners at Chowder Bay was equipped with outhouses and by 1877 Officers Quarters were in place. Fortifications were of necessity connected by roads; the road to Middle Head, Military Road, was commenced in 1870 and finished by 1871. These military roads allowed guns to be rolled to the batteries and provided strategic access between batteries and barracks. These roads also became, in part, thoroughfares for the area from the 1870s, when developer Richard Harnett organised the formation of many of the roads of Mosman.

1877-1900

British fortifications expert General Sir William Jervois RE (Royal Engineers) was appointed governor of South Australia in 1877. Sir William Jervois and Lt Colonel Peter Scratchley inspected each colony's defences leading to the Jervois-Scratchley reports, which were to form the basis of defence planning in Australia for the next 30 years. The reorganisation of the batteries on Middle Head and Georges Head and South Head between 1885 and 1890 resulted from their reports in which the need for better designed defences and for torpedoes or submarine mines was

stressed. In 1878 submarine mine observing stations were constructed on Green Point, Inner South Head and Georges Heights. Recommendations made 1877-1885 included the construction of an Armoured Casemate Battery in 1882 at Georges Head, completed in 1886 under the direction of Colonel Scratchley. By 1889 areas of Middle and Georges Heads were clearly identified as resumed by the Crown for military purposes.

Technical developments in the 1880s resulted in changes to the fortifications of Sydney Harbour, including the use of telephone lines in the late 1880s, and the construction of a Submarine Miners Observing Station in 1890 at Chowder Bay. The Submarine Mining facility was completed in 1893. The Hidden Guns of the 1880s were generally replaced in the 1890s, as a matter of policy, by Quick Firing Guns mounted in deep open concrete emplacements. Such emplacements were constructed on Georges Heights and Middle (and South) Head, remaining the standard form until after World War Two. The office of Colonial Architect James Barnet was responsible for much of the new works. The struggle between Lieut. Colonel de Wolski of the NSW Engineers and James Barnet in 1886, over defects in execution and design, was to lead to Barnet's retirement.

The development of defence facilities was mirrored by the subdivision of land north of Military Road in the 1880s. By July 1884 the North Shore Ferry Co was providing a regular ferry service to the city. This active subdivision continued in the 1890s with the Municipality of Mosman established in 1893. Balmoral Beach had been dedicated as a Public Reserve in 1878. During the 1880s and 1890s the headland areas provided recreational and viewing areas.

1900-1945

By 1903 the most important defence works in Sydney Harbour were concentrated on Georges Heights, Middle Head and at South Head.

Supporting structures at Georges Heights by 1903 included Sergeant Majors quarters, cool store, artificers workshop, Quarter Masters store, machine gun shed, women's wash house, huts, an asphalt (drill) yard, four married quarters, a married sergeants quarters, a laboratory for filling cartridges and an artillery store. Battery A84 stayed as a firing station for the minefield, while battery A83 kept its 6 inch pneumatic disappearing guns. Two other batteries were decommissioned. Towards the end of WW1 a weatherboard military hospital was established at Georges Heights.

In 1906 the 'pleasure ground', on the Clifton Estate at Chowder Bay, was purchased by Sydney Ferries Ltd, and a circular, offshore swimming pool added with space for over 3,000 spectators. This facility was mirrored by the 1904 Balmoral Beach 'Mosman Septic Tank', which in 1927 was converted into a swimming pool. The pool was utilised by the Cavill family until 1940 when resumed by the Navy and incorporated into HMAS Penguin. The Cavill family are reputed to have developed the 'Australian Crawl' swimming stroke.

In 1923 two portions of military land were leased to Mosman Council and Mosman Golf Club for public recreation. The golf club on 59 acres was a Clifton Gardens initiative having been founded in the Clifton Gardens Hotel at Chowder Bay. A nine-hole golf course was cleared and a clubhouse built for the 300 members overlooking Middle Harbour. The club operated until 1940, when Defence resumed the site for the development of HMAS Penguin.

The Submarine Miners Corps was disbanded in 1922 although Battery A84 remained a fortress command post until 1934 at Georges Heights. Other developments included the installation of anti torpedo boat guns during the 1920s following the re-armament of Singapore by Britain. This type of gun was also mounted on Georges Head and Obelisk Point to guard the anti-submarine net between Green Point and Georges Head.

The only fixed armaments at Georges Heights in 1939 were two 6 inch guns at battery B42 but these were moved to South Head. Defences were in general however, improved during the Second World War when Middle Head and Georges Heights were important barracks and administration centres for the military, as well as an active part of coastal fortifications. Barracks complexes were constructed at Middle Head and Georges Heights at this time. Additional rapid-fire guns were erected at Obelisk Point and Georges Head to provide covering fire for the Anti-Submarine Boom from Green Point to Georges Head. Similar guns were also erected at Inner Middle Head to cover the northern channel defined by the Sow and Pigs Reef. In 1942 the Navy's refuelling storage tanks at Chowder bay, erected in the 1930s, were, with a similar facility on Garden Island, camouflaged by the erection of pitched roofs above the tanks.

The only significant defence action in the harbour was the Japanese midget submarine raid in 1943. Radio monitoring equipment at the Middle Head Barracks intercepted the transmissions of the submarines alerting defence forces to the

attack. Defence installations on Middle and Georges Heads failed to identify the attackers, although one of the submarines was caught in the anti-submarine net. HMAS Penguin, commissioned in 1942, has continued to operate on the northern edge of the headland since 1945. In 1945 Italian prisoners of war were housed in the barracks above Obelisk Bay.

1945-PRESENT

From 1946, with the end of the war, the almost obsolete military fortifications and barracks were rationalised. One group of barracks was handed over to the Department of Foreign Affairs to house the newly formed School of Pacific Administration, intended to train officers to work as administrators in the Pacific and Asian Islands. This school (AUSAID) played an important role in International Affairs over the next 40 years. In 1948 the Military Board decided to maintain a regular coastal artillery unit when Obelisk Section were returned to full serviceability. In 1948 the Police requested use of the area for its wireless receiving station.

The School of Military Intelligence took over part of Middle Head Barracks, constructing a barracks and teaching complex and using the fortifications for their training activities during the Vietnam War of the 1960s. However, from 1962 the role of the coastal artillery defences was considered to be outmoded.

In 1965 the army constructed houses for personnel along Middle Head Road at Georges Heights, adding to the prefabricated Swedish Åmåls Sågverks Aktiebolag type houses erected in the 1950s, for the Navy, near HMAS Penguin. Between the 1960s and 1980s new single storey houses were also erected for Defence personnel on Commonwealth Avenue. The HMAS Penguin Naval Base at Balmoral developed rapidly with training schools established from 1951 to 1964 when it was the main submarine base in Sydney harbour. In support of these developments new refuelling facilities were erected at the Navy Refuelling Depot, including steel oil tanks and a new caretakers cottage. The Diving and Hydrographic Survey teams have had a long and close relationship with the base and continue to utilise the 'septic tank' pools. The increasing role of recreation in the defence forces was expressed in the construction of the Georges Heights and Naval ovals.

In 1979 parts of the headland were included in the newly formed Sydney Harbour National Park. The transfer excluded the Naval Base, HMAS Penguin, the 10th Terminal Squadron buildings, the School of Pacific Administration (AusAid Training Centre), the Army Maritime School at Chowder Bay and the majority of the Army

headquarters training command and accommodation facilities at Georges Heights. By the 1980s military units had been dismantled or converted to other uses, with the relocation of all Defence operations imminent.

PHYSICAL DESCRIPTION

The headland areas comprise a relict cultural landscape articulated by one of the most diverse collections of coastal defence heritage in Australia set amidst remnant native vegetation, which extends in places from the high water level into developed areas. Natural and Indigenous and historic cultural values are described separately. Natural:

Middle and Georges Heads are contiguous sandstone headlands on the western side of the main channel of Sydney Harbour. The headlands are comprised primarily of Hawkesbury Sandstone and the soils overlying this parent material are shallow, easily eroded, infertile quartz sands.

The remaining vegetation of is dominated by a mature bangalay (EUCALYPTUS BOTRYOIDES) and red bloodwood (E. GUMMIFERA) woodland with a dense shrub understorey. Because the absence of fire in recent decades, sweet pittosporum (PITTOSPORUM UNDULATUM) now dominates the vegetation at Middle Head. The area has a reasonably comprehensive fauna list, with 129 species of birds, 1 species of frog, 11 species of reptiles and 8 species of mammals. Birds recorded at Middle Head include the whistling kite (HALIASTUR SPHENURUS), rufous fantail (RHIPIDURA RUFIFRONS) and the brown gerygone (GERYGONE MOUKI). Short-beaked echidnas (TACHYGLOSSUS ACULEATUS) have also been recorded at Middle Head.

Indigenous:

No evidence of King Bungaree's farm appears to remain above surface, although it is possible that there are archaeological remains. Indigenous rock carvings and engravings recorded in the nineteenth century have not been identified.

Historic:

Historic sites and precincts within the Defence Site are connected by Middle Head Road, which terminates at Middle Head in Governor's and Old Fort roads and at Chowder Bay via Chowder Bay Road. The Defence Site comprise an evolving

cultural landscape, which retains pockets of native vegetation with introduced species identifying developed areas centred on the military road system. Military roads formed a strategic framework for gun emplacements, batteries and the nineteenth century military buildings as part of the evolving cultural landscape. The Military Roads Framework (Register No.103266) is an historically important link between the National Park areas (formerly Defence land) managed by the NSW NPWS.

Individually significant sites and structures within the Defence Site are discussed at items 1-10. Terminology reflects Defence usage and the 1998 Heritage Assessment by Godden Mackay Logan for Defence.

1. Headquarters 8th Brigade Precinct (Register No 103292) is adjacent to Rawson Park at the western end of the defence area on Cross Street, an expression of the original line of the Military Road. The site includes the regionally significant 1913 former Mosman Drill Hall and several locally significant weatherboard structures. The Drill Hall in its location illustrates the political and social role of drill halls in the community in the years preceding the First World War.

2. Gun Batteries and former Officers Mess

The ridge at Georges Heights, commanding the harbour approaches, was chosen in 1870 as the location for major defensive works comprising gun batteries A83, A84, B42 and C9a and the associated Artillery Barracks completed in 1873.

-Battery A83 (Register No. 103295) is largely an underground structure with above ground features limited to circular in ground concrete roofs to the gun pits, two entrances to the complex, and a brick walled observation post. The complex retains its underground passages, gunpowder magazine and gun pits relatively intact complete with many internal fittings which illustrate the working of the battery; in this respect it is the only battery in the area with timber fittings in place.

-Battery A84 (Battery for Five Guns Register No. 2870) was built as a five-gun battery with a sixth emplacement added on completion in 1873. The complex is connected with the 1873 Artillery Barracks complex via a sloping passageway cut in the bedrock.

-Battery C9a (Register No. 103295) appears to have been excavated 1871-1888. Only the pecked sandstone glacia of one gun pit is visible at ground level.

-Battery B42 (Register No. 103294) displays two periods of construction. The earliest construction 1877-1903, located below ground level, includes the Main gallery with its dead end branches and storage alcoves, the original Cartridge Stores, the Magazine access passage and the Powder Magazine.

-The WRAAC Officers Mess (Register No. 2871), completed in 1873 as an Artillery Barracks, is an ashlar sandstone Victorian Georgian style building roofed with corrugated galvanised iron set in an excavated terrace with steep rock faces to the rear and sides. The single storey, hipped roof section, at the front, was extended c.1891 by Lt Colonel de Wolski by the addition of a two storey gabled section at the rear.

3. Headquarters Training Command (Register No. 103338) occupies buildings associated with the development of Georges Heights as the command centre of artillery defences during the nineteenth century and the military hospital of the First World War period.

Nineteenth century buildings associated with the four batteries include the WRAAC Officers Mess (with battery A84), Gunshot Alley, at the junction of Suakim Drive and Commonwealth Avenue, weatherboard cottages and the remains of an Artillery Command Post, Building A76, of the 1890s.

- Gunshot Alley built 1898-1900 as accommodation for married soldiers. The terraced form is typical of army housing of the 1890s; exterior and cross walls of brick with internal walls in timber; gabled pitched roofs with the end houses returned as hipped bays to enclose the verandah on the north side.

- Victorian Regency weatherboard cottage (Buildings A6, A7 & A8) built as an Officers residence c.1890s and a single storey weatherboard cottage of c.1900 erected opposite Gunshot Alley.

Twentieth century structures include single storey buildings and structures dating from WW1, WW2 and the post war era. The irregularly shaped asphalt parade ground utilises part of battery A83 as the site for the ceremonial flagpole. Notable buildings include

- Hospital buildings 1914-1918, which together represent a single storey purpose-built weatherboard and corrugated galvanised iron military hospital, include Buildings 24, 21, 23, 15, 13, 29, 26, 27, 28, 3, 4 and 5.

-Barracks style accommodation c.1918 includes a single storey brick barracks and the associated brick kitchen in the Federation style. (Buildings 54, 55)

- Weatherboard buildings associated with the Inter War, Second World War and Post War periods include the Duty Room (A1). Buildings 38, 34, 32, 30, 9, 12 and 11.

4. 30 Terminal Squadron (Register No. 103339) includes the following significant structures. a c.1890 corrugated iron, paired gable roofed shed (Building B1) used to house artillery; a corrugated asbestos cement HQ building of c.1918 (Building B4); a range of weatherboard structures including the All Ranks Club (Building B3 c.1940), Orderly Room (Building B13) and a small weatherboard Gardeners shed/cottage associated with the operation of battery B42. Stores Buildings B16 and B17 erected c.1918 appear to have been associated with the military hospital of 1914-18. Supporting buildings include a range of buildings in brick, corrugated galvanised iron and weatherboard.

5. Chowder Bay Submarine Miners Barracks (Register No. 2876) was constructed from 1890-93 to provide accommodation, storage and operational facilities for the NSW Submarine Corps. The complex developed as a series of terraces connecting Chowder Bay Road with the wharf on the western, sheltered side of the headland. The complex is listed in the RNE at .

6. Navy Refuelling Depot and Caretakers Cottage (Register No. 103337) comprises 2 (in use) fuel tanks and 3 1930s roofed storage tanks (Tanks 3, 4 & 5) with associated pumps, fire fighting equipment and a 1930s brick Naval Caretakers Cottage in the prevailing Functional style, linked to an off-shore refuelling facility. The roofed storage tanks are the first large-scale example of camouflage in Australia.

7. Commonwealth Avenue Defence Housing (Register No. 103341)

A group of Defence housing erected from the 1930s-1980s, which illustrates the characteristics of housing types provided for Defence personnel.

-Number 5 Commonwealth Avenue erected as Officers Quarters c.1935 in brick and tile in the prevailing Art Deco style

-Former Navy Cottages of the Swedish Åmåls Sågverks Aktiebolag prefabricated type imported in the 1950s to meet the Commonwealth's demand for housing.

8. Middle Head Road Defence Housing

On Middle Head Road are five remaining representative examples of an original eight prefabricated Swedish Åmåls Sågverks Aktiebolag (ASA) houses imported in the early 1950s and used by Defence for married quarters accommodation. The ASA cottages are now rare examples of this form of housing imported to Australia after World War II at a time when building materials were in short supply. The associated group of masonry housing, MQ1101-1107, on the opposite side of Middle Head Road, was developed in the 1960s.

9. 10 Terminal Regiment Headquarters and AUSAID Training Centre Precinct (Register No. 103342)

The AUSAID Training Centre, formerly Middle Head Barracks, comprises some 15 vernacular timber and corrugated galvanised iron huts (Buildings in the range 1-21) characteristic of Defence barracks style accommodation in the 1939-45 period, known generally as type P-1 huts. As a group the huts comprise the largest surviving complex of standard weatherboard gabled P-1 type huts on the headland areas and are important for their use as an Italian POW camp.

The 10 Terminal Regiment complex comprises a range of buildings including three weatherboard huts (Buildings 1, 14 and 18), formerly part of the adjacent former Middle Head Barracks. The School of Military Intelligence commenced in 1959 was housed primarily in red-brick buildings with green Marseilles tiled hipped roofs reflecting in general the influence of the Inter War Stripped Classical style employed at HMAS Penguin. Buildings of particular importance include Headquarters Building (1), Workshop and Rear Annexe (6 & 7), Officers Mess (2 and 3), and the later Other Ranks Accommodation (Barracks 1, 2, 3) comprising three 3-storey weatherboard dormitory buildings.

9. HMAS Penguin Naval Base (Register No. 103327) comprises significant groups of weatherboard and brick buildings in the bush setting of the Middle Harbour foreshores. The main complex comprises 12 buildings, including hospital and barracks style accommodation of 1-3 storeys with a nautical character constructed in brick with green Marseilles tiled hipped roofs. This group provides the dominant character of the site and includes: the Gatehouse (1); Conference Hall (2); Admin Support Centre (3); Naval Stores (4); Naval Hospital (8); Naval Police School (26); Accommodation (28); Senior Sailors Accommodation and Mess (17); Ward Room/Officers Mess (20); Administration (19); Information Technology (18); and

Junior Sailors Quarters (16). Other structures include the Naval Flagstaff and the Sewer Vent Stack and Swimming Pool, formerly part of the Mosman Sewage Treatment Works.

The waterfront areas include a group of weatherboard single storey gabled buildings with green Marseilles tiled roofs, amongst the earliest erected on the site, associated with the jetty complex. Of particular significance are the Diving School (46) and Workshops, Stores and Administration (47, 48).

10. Golf Clubhouse

The former Mosman golf clubhouse (Register No. 103293) constructed in sandstone in the California Bungalow style in 1925 has been adapted for Defence use but retains its essential form intact as the focus of the former 9-hole golf course. The grassed area in front of the clubhouse provides an appropriate setting.

History Not Available

Condition and Integrity

CONDITION AND INTEGRITY

Historic:

The range of historic places and their integrity and condition was documented by Godden Mackay Logan (1998) for Defence as part of the Georges Heights and Middle Head Defence Site Heritage Assessment.

Specific details of the condition and integrity of each structure is beyond the scope of this assessment.

Location

About 60ha, at Georges Heights and Clifton Gardens, comprising generally the Department of Defence lands at Georges Heights/Middle Head, and in particular:

(1) the whole of the property Headquarters 8th Brigade, Cross Street, Clifton Gardens, and

(2) the whole of the Department of Defence land, Middle Head Road, Georges Heights, other than 1st Commando Company HQ and adjacent defence housing areas on Markham Close and at the end of Dominion Crescent, being the area to the north and west of a line consisting of the rear (south) boundaries of defence housing blocks to the north of Georges Heights Oval and extending westerly from Middle Head Road to the southern most point of Lot 19 DP831153, then south easterly via the alignment of the south west boundary of Lot 19 to its intersection with AMG easting 338280mE (approximate AMG point 38305452), then directly south westerly to the intersection of the western boundary of Lot 202 with AMG easting 338200mE (approximate AMG point 38255445).

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Headquarters 8th Brigade Precinct, Cross St, Clifton Gardens, NSW, Australia

List	Commonwealth Heritage List
Class	Historic
Legal Status	Listed place (22/06/2004)
Place ID	105574
Place File No	1/13/026/0031

Summary Statement of Significance

The Headquarters 8th Brigade Precinct is one of a number of places that are part of the larger Middle Head-Georges Heights defence site (see Register No.102619). The site is historically significant as the location of major defence works for Sydney Harbour and Port Jackson during the nineteenth and twentieth centuries and provides an appropriate setting for the former Mosman Drill Hall.

The Mosman Drill Hall, under erection in October 1913 as one of 5 new drill halls in Sydney, was one of the earliest erected in New South Wales by the Commonwealth Government. Until 1901 Defence had been the responsibility of each colony. The passing of the Defence Act in December 1909 introduced a universal training scheme based on the Swiss model which provided for the compulsory training of Junior and Senior cadets from the age of twelve to eighteen and for adult training. Drill halls for militia training were implemented in 1913 to four standard plans prepared by the Commonwealth Architect's office under J S Murdoch. (Criterion A.4) (Historic Themes: 7.4 Federating Australia; and 7.7 Defending Australia)

The Drill Hall is important as an excellent example of a Type-2 drill hall designed by the Commonwealth Architects office. The drill hall location at the junction of Cross Street and Bradleys Head Road illustrates the characteristic prominent siting employed to promote public access, the northern boundary of the site defining the alignment of the military road of 1871. The building is unusual in the use of steel framing throughout in contrast to the standard stud framed construction. (Criteria B.2 and D.2)

Official Values

Criterion A Processes

The Headquarters 8th Brigade Precinct is one of a number of places that are part of the larger Middle Head-Georges Heights defence site. The site is historically significant as the location of major defence works for Sydney Harbour and Port Jackson during the nineteenth and twentieth centuries and provides an appropriate setting for the former Mosman Drill Hall.

The Mosman Drill Hall, under erection in October 1913 as one of 5 new drill halls in Sydney, was one of the earliest erected in New South Wales by the Commonwealth Government. Until 1901 Defence had been the responsibility of each colony. The passing of the Defence Act in December 1909 introduced a universal training scheme based on the Swiss model which provided for the compulsory training of Junior and Senior cadets from the age of twelve to eighteen and for adult training. Drill halls for militia training were implemented in 1913 to four standard plans prepared by the Commonwealth Architect's office under J S Murdoch.

Attributes

The architectural form and fabric of the whole building.

Criterion B Rarity

The building is unusual in the use of steel framing throughout in contrast to the standard stud framed construction.

Attributes

The building's steel-framed construction.

Criterion D Characteristic values

The Drill Hall is important as an excellent example of a Type-2 drill hall designed by the Commonwealth Architects office. The drill hall location at the junction of Cross

Street and Bradleys Head Road illustrates the characteristic prominent siting employed to promote public access, the northern boundary of the site defining the alignment of the military road of 1871.

Attributes

The architectural form and fabric of the whole building, including plan, elevations, architectural details, setting and address to the road.

Description

Background

The Headquarters 8th Brigade Precinct is one of a number of places that are part of the larger Middle Head-Georges Heights defence site (see Register No.102619). The site is historically significant as the location of major defence works for Sydney Harbour and Port Jackson during the nineteenth and twentieth centuries.

History

The area of the Headquarters 8th Brigade Precinct on which the form Mosman Drill Hall is located, was dedicated for Defence purposes by 1870 as part of the Middle Head and Georges Heights headlands, which were strategically placed to defend the approaches to Sydney Harbour through the Sydney Heads.

In 1862 the British Government resolved that colonies with responsible government should bear the cost of their own defence. During the 1860s a Royal Commission investigated the state of the colony's defences and by 1870 the last British (Imperial) line regiment had left Australia. In September 1870 a Defence Committee recommended the construction of batteries at Middle Head and Georges Heights as well as Bradley's Head. By 1871 the Military Road to Middle Head, including Governors Road and Old Fort Road, and branch roads to the lower part of Georges Head and to Bradley's Head, had been completed following the recommendations of the Defence Committee.

Between 1885 and 1890 batteries, barracks and fortifications on Middle Head and Georges Heights were reorganised following the reports of General Sir William Jervis RE and Lt Colonel Peter Scratchley. However, the military road system of

Middle Head and Georges Heights continued to link all phases in the development of defensive measures for Port Jackson and Sydney Harbour.

By 1889 land at Mosman had been subdivided for housing during the boom in Sydney's suburban areas, primarily under Richard Harnett. This resulted in a new road, Middle Head Road, defining the western boundary of the defence land and intersecting with the line of the military road of 1871 to Bradley's Head, at Batteries A83 and B42 on Georges Heights. Bradley's Head Road adopted the alignment of the underlying military road as a local distributor within the district at this time.

In October 1913 the Commonwealth was in the process of constructing a drill hall at the junction of Bradley's Head Road and the military road of 1871 (Cross Street) one of five new drill halls in Sydney, and one of the earliest erected in New South Wales, by the Commonwealth, to one of four standard designs.

Until 1901 Defence had been the responsibility of each colony. The passing of the Defence Act in December 1909 introduced a universal training scheme based on the Swiss model which provided for the compulsory training of Junior and Senior cadets from the age of 12-18 and then for adult training. The development of drill halls for training does not appear to have been fully implemented until 1912, when urgent discussions took place between the Department of Defence and the Department of Home Affairs. This followed Parliament's decision to vote 80,000 pounds for the construction of drill halls, and for the purchase of sites. A reference of 19 March 1913 reveals that standard plans had been sent to the Department of Defence by the Department of Home Affairs to expedite the construction of drill halls. Three standard plans were prepared, with a fourth as a variation, by the Commonwealth Architect's office under J S Murdoch. The Minister for Defence laid down the principal that 'the cost of Drill Halls was to be put down to bedrock', since so many were required.

The strategic location of the drill hall close to Bradley's Head Road allowed optimum access by members of the local community for militia training.

This drill hall is now the Main Depot Building in the Headquarters 8th Brigade Precinct, now separated from the main Defence areas at Georges Heights by the establishment of Sydney Harbour National Park.

Physical Description:

The Headquarters 8th Brigade Precinct includes the Main Depot Building (former Mosman drill hall), a flagstaff, a building slab, sandstone retaining walls and a range of c.1950s post Second World War timber framed buildings of P1 type clad with metal cliplock sheeting.

The drill hall identifies the intersection of the 1871 military road linking Middle Head and Georges Heights with fortifications at Bradleys Head. The boundary of Rawson Oval to the north appears to have followed the line of the military road. A twelve-metre flagpole defines the formal and ceremonial nature of the former training depot.

During the 1920s, Defence carried out a review of drill halls across Australia. The Mosman Drill Hall was classified as a standard Type-2 design in which the main hall measured 50x100 feet, with a range of small offices under a skillion at one side and access at one gabled end. In contrast to the majority of drill halls erected by the Commonwealth after 1913 the structural frame is of steel throughout, rather than timber, although the building is typically clad in corrugated galvanised iron externally. Supported on sandstone masonry piers, the building features timber framed windows characteristic of the Type-2 drill hall and timber framed and slatted gable ventilators. These characteristics are also seen at Haberfield drill hall, which was also under erection in October 1913. The former Mosman Drill Hall is unusual in the use of steel for structural support for the steel roof trusses rather than timber stud framed walls. In this respect the drill hall is unusual and the use of steel probably reflects the fact that the site was already dedicated to defence uses, and would remain so.

History Not Available

Condition and Integrity

The building is in good condition. It is of high integrity with little visible modification (1998)

Location

About 1ha, Cross Street, Clifton Gardens, comprising the whole of Lot 2 DP 541799.

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Military Road Framework - Defence Land, Middle Head Rd, Georges Heights, NSW, Australia

List	Commonwealth Heritage List
Class	Historic
Legal Status	Listed place (22/06/2004)
Place ID	105572
Place File No	1/13/026/0027

Summary Statement of Significance

The Military Road Framework-Defence Site and the Military Road Framework-Sydney Harbour National Park (see Register No. 103267) are part of a single historic military road system. The latter is significant within the Sydney Harbour National Park (see Register No.101087). Both areas were originally part of the Georges Heights-Middle Head defence site. The site is historically significant as the location of major defence works for Sydney Harbour and Port Jackson during the nineteenth and twentieth centuries.

The Military Road Framework-Defence Site comprises the alignment of the northern section of Middle Head Road, Suakin Drive, part of Chowder Bay Road and part of Cobbler's Beach Road.

The Military Road Framework-Defence Site is historically important as part of a single military road system at Middle Head and Georges Heights, which developed from 1870 following the departure of British troops. The road system was a strategic link between gun batteries, barracks and associated defence works and is a major component in a relict cultural landscape which illustrates the strategic importance of roads in the logistics of nineteenth century defence works and batteries in the defence of Sydney Harbour. (Criterion A.4) (Historic Themes: 7.7 Defending Australia, 4.1 Planning urban settlements)

Official Values

Criterion A Processes

The Military Road Framework-Defence Site and the Military Road Framework-Sydney Harbour National Park are part of a single historic military road system. The

latter is significant within the Sydney Harbour National Park. Both areas were originally part of the Georges Heights-Middle Head defence site. The site is historically significant as the location of major defence works for Sydney Harbour and Port Jackson during the nineteenth and twentieth centuries.

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Attributes

The single road system that linked the gun batteries, barracks and associated defence works.

Description

BACKGROUND:

The Military Road Framework-Defence Site and the Military Road Framework-Sydney Harbour National Park (see Register No. 103267) are part of a single historic military road system. The latter is significant within the Sydney Harbour National Park (see Register No.101087). Both areas were originally part of defence land at Georges Heights-Middle Head which is historically significant as the location of major defence works for Sydney Harbour and Port Jackson during the nineteenth and twentieth centuries.

HISTORY:

Middle Head and Georges Heights are of major importance in the story of the defence of Sydney Harbour and have been closely associated with the defence of Sydney since 1800. In 1801 a battery and magazine were constructed at Georges

Head, however, it was soon abandoned. In the early 1840s a foot track was established from North Sydney to Middle Head, running south of the route now known as Military Road (Military Road is not included in the registered area). In the 1840s two lines of defence, an inner and an outer line, were proposed and with the outbreak of the Crimean War in 1853 works were begun, including batteries at Middle Head as part of the outer line. But the new Governor of New South Wales, Sir William Denison, changed these plans, with renewed emphasis on the inner line, closer to Sydney.

In 1862 a British committee recommended that self-governing colonies should provide for their own defence, and in 1870 the last British regimental troops left New South Wales. A New South Wales Defence Committee recommended that the two line system should be proceeded with, and it was planned that the outer line would include Georges Heights and Middle Head. Work started in 1871, with military road access well under way by February 1871, and two batteries at Middle Head and two at Georges Head under construction. Various garrison buildings (sandstone and weatherboard) were erected. These works were designed by New South Wales Colonial Architect James Barnet, with input from the Corps of Engineers.

Late in the 1870s British military experts Sir William Jervois and Lieutenant Colonel Peter Scratchley advised on the reorganisation of the Australian colonies' defences, with the result that substantial development was undertaken at the Middle Head-Georges Heights site. In 1870, after the Legislative Council agreed to fund the construction of military roads and fortifications at Middle Head, Military Road was formed and an internal military road was also built between Middle Head and Bradley's Head. The northern section of this route is now part of Middle Head Road and the southern section now forms part of Bradley's Head Road (Bradley's Head Road is not included in the registered area). At the same time, Governors Road and Old Fort Road were completed at Middle Head, connecting the two batteries that were constructed in 1871 with the internal military road.

These roads were used for the 'rolling of the guns' with construction of the roads providing a major stimulus to development in the Mosman district.

The completion of Cobbler's Beach Road and jetty relate to the construction of the Fort at Middle Head in the 1870s and the need for supply and access by sea. The internal military road between Middle Head and Bradley's Head was rerouted during the late 1870s or early 1880s, and Cross Street is a reminder of the

alignment of the original route (Cross Street is not included in the registered area). Suakin Drive provided access to the A84 Battery (Battery for Five Guns) and the Officers Mess and Barracks, now known as the WRAAC Officers Mess (former). Suakin Drive was named following the involvement of New South Wales Colonial troops in the Sudan War.

Improvements in weaponry and other technology saw still more changes; meanwhile the Submarine Mining Corps was developed at adjacent Chowder Bay. During the early 1890s, Chowder Bay Road was constructed to connect the Submarine Mining Depot with Middle Head. This road also gave access to the 1882-85 Armoured Casemate and to the earlier Rock Casemate of 1872-76.

In 1889, amid controversy, Colonel F.R.de Wolski replaced James Barnet as designer of Sydney's defensive works. Electricity and telephone were connected to the site. Following Federation and the Commonwealth's assumption of responsibility for defence, new guns were installed.

With the outbreak of the First World War, the defences at the site were mobilised, but no action was seen. The main activity was the construction of a major military hospital at Georges Heights, in 1916, to treat casualties from overseas. By mid 1918, as No.21 Australian Auxiliary Hospital, the complex was the third largest military hospital in Australia. It operated until 1923, after which the buildings were used as accommodation for various army units.

During the inter-war years, new technology saw new units and weapons introduced at the site. Then in the Second World War, harbour defences were upgraded and put on full alert following Japan's entry into the war. The penetration of Sydney Harbour by Japanese submarines was the first and only time that enemy forces have raided the harbour. By 1944 activity at the site was being scaled down. The post-war years saw older style port defence systems made obsolete, and the batteries were dismantled in the 1950s. Middle Head-Georges Heights now became a training area with barracks facilities. In the 1970s, some of the original military roads became part of the Sydney Harbour National Park, after areas of land were dedicated for this purpose. An overseas training school, the Australian School of Pacific Administration, (subsequently the AusAid Centre for Pacific Development and Training) was housed at the site. With further rationalisation of defence facilities, by the late 1990s very little of the site remained occupied. In 2001 the remaining defence land was earmarked for management by the Sydney Harbour Federation Trust.

The military road framework at Middle Head and Georges Heights links all the aforementioned phases in the development of the defensive measures in the area. The major ridgeline roads that are now known as Military Road, Middle Head Road and Bradley's Head Road were built during the 1870s in order to move defence equipment around the site and secondary roads were added as the site was developed.

PHYSICAL DESCRIPTION:

The Military Road Framework is a historically important link between land that continues to be occupied for defence purposes and land that now forms part of Sydney Harbour National Park. The roads had a strategic role in linking the defensive sites and features at Georges Heights and Middle Head.

In particular, Middle Head Road connects many of the historic sites and precincts in the Middle Head-Georges Heights area. The northern section of Middle Head Road follows the alignment of the original internal military road. Governor's Road, Old Fort Road, Chowder Bay Road, and Cobbler's Beach Road are believed to retain their original alignments as is Suakin Drive.

The Military Road Framework-Defence Site comprises the alignment of the northern section of Middle Head Road, Suakin Drive, part of Chowder Bay Road and part of Cobbler's Beach Road. The present day routes follow the original routes closely and are part of a relict cultural landscape

History Not Available

Condition and Integrity

The roads generally retain their original alignments (November 2001).

Location

Comprising the following roads in Georges Heights: 1. That section of Cobblers Beach Road from its intersection with Middle Head Road to its intersection with the Sydney Harbour National Park boundary. 2. That section of Middle Head Road extending from its intersection with AMG northing 6255040mN (approximate AMG point 38765504) to its intersection with the Sydney Harbour National Park

boundary. 3. The following two sections of Chowder Bay Road; that part of the road extending from its intersection with Middle Head Road to its intersection with the Sydney Harbour National Park boundary (approximate AMG point 39015537), and between its intersection with the Sydney Harbour National Park boundary (approximate AMG point 38865435) and the end of the road. 4. The whole of Suakin Drive.

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Cockatoo
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