



GREATER
SYDNEY
PARKLANDS

REVIEW OF ENVIRONMENTAL FACTORS

Callan Park Vegetation Management

December 2023

Centennial Park and Moore Park Trust

Review of Environmental Factors Report

Centennial Park and Moore Park Trust

Vegetation Management at Callan Park



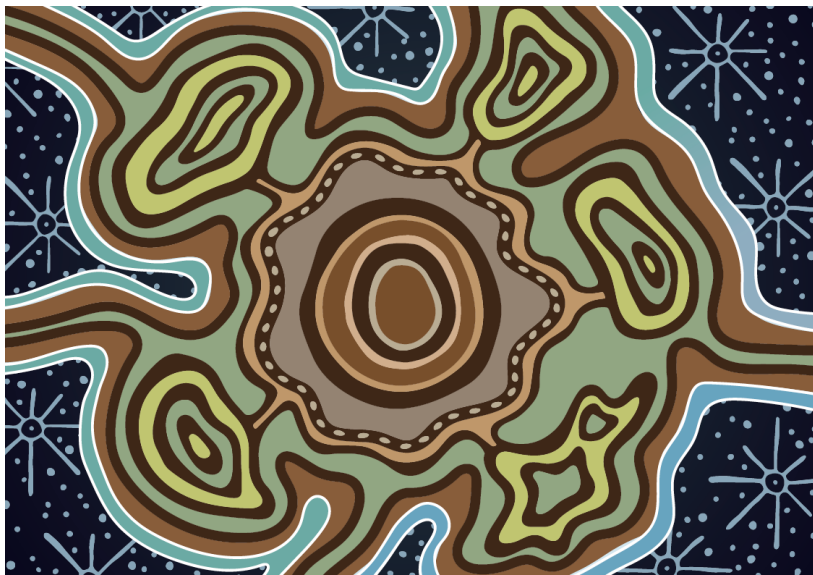
December 2023



Acknowledgement of Country

Callan Park acknowledges the Gadigal - Wangal people of the Eora Nation as the traditional custodians of the Land, Sky and Waters where the Parklands are located.

As part of the Parklands role in Caring for Country, we walk alongside our Aboriginal communities, journeying together as we care for and learn from Country.



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Decision Statement

This Review of Environmental Factors (REF) has been prepared by Helen Mulcahy Urban Planning Pty Ltd on behalf of the Centennial Park and Moore Park Trust to take into account all matters affecting, or likely to affect the environment as a result of the Activity which comprises proposed works to specific trees / tree groups, eight (8) of which are identified as having cultural significance, as well as detailing a regime for ongoing vegetation management at Callan Park.

The REF has been prepared in accordance with the *Environmental Planning and Assessment Act 1979*, *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), *Biodiversity Conservation Act 2016*, *Environment Protection and Biodiversity Conservation Act 1999*, *National Parks and Wildlife Act 1974*, *Heritage Act 1977*, State Environment Planning Policy (Transport and Infrastructure) 2021, Chapter 2.

This REF addresses all matters affecting, or likely to affect the environment as a result of the proposed Activity and provides a true and fair review in relation to its potential effects on the environment. The information contained in this REF is neither false nor misleading and contains all available information that is relevant to the environmental assessment of the proposed activity.

It is concluded that by adopting mitigation measures identified in Section 7 to eliminate, minimise or manage environmental impacts, the proposed activity:

- a. is not likely to have a significant impact on the environment, therefore an Environmental Impact Statement is not required;
- b. the proposed activity will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a Species Impact Statement and/or BDAR is not required;
- c. is not likely to affect any Commonwealth land, or significantly affect any matters of National Environmental Significance.

Subject to implementation of the mitigation measures identified in Section 7 the proposed activity is recommended for approval.

The following referrals, permits or approvals are required under the following legislation before the proposed activity may lawfully be carried out:



- *Heritage Act 1977* (section 60) for works to three (3) culturally significant trees.

The proposed activity requires publication of the REF in accordance with clause 171(4) of the EP&A Regulation.

Prepared by	Helen Mulcahy
Qualifications	Diploma of Town & Country Planning
Address	[REDACTED]
Signature	[REDACTED]
Date	20 December 2023


Certification

I certify that I have reviewed and endorsed the contents of this REF document and, to the best of my knowledge, it is in accordance with the EP&A Act, the EP&A Regulation and the Guidelines approved under clause 170 of the EP&A Regulation, and the information it contains is neither false nor misleading.

Name	Kerrie Symonds
Qualifications	BTP (Hons 1), M Comm (Land Ec), MBA (Tech Mgt)
Address	
Signature	
Date	20 December 2023

Determination

I accept this REF on behalf of the Centennial Park and Moore Park Trust, as the determining authority, and determine that the proposed activity is approved subject to mitigation measures in Section 7.0 being implemented and may proceed.

Trust Delegated Officer	Paula Tomkins
Position	A/Director Strategy, Design and Delivery
Address	Level 1, 6 Parramatta Square, Parramatta
Signature	
Date	4/7/2024

Executive Summary

This Review of Environmental Factors (REF) has been prepared by Helen Mulcahy Urban Planning Pty Ltd for the Centennial Park and Moore Park Trust (CPMPT) to take into account all matters affecting, or likely to affect the environment as a result of the Activity which comprises proposed works to specific trees / tree groups, eight of which are identified as having cultural significance, as well as detailing a regime for ongoing vegetation management in the parkland precinct at Callan Park. The Activity is required to ensure the safety of users of the recreation area, whilst preserving the amenity and the cultural heritage significance of the place, its buildings and landscaped setting.

The proposed works include:

- removal of 20 trees, including dead trees (2), weed species (6) and trees where the structural integrity has been compromised (12) as assessed by a specialist arboriculturist and arborist
- pruning of trees, including selective pruning, reduction pruning and removal of deadwood
- ongoing vegetation management including pruning, weed management and removal of stumps.

The REF includes an assessment of the potential environmental impacts associated with the proposed Activity and relies on technical advice from an arboriculturist, arborist and aboriginal and European heritage consultants.

An approval under the *Heritage Act 1977* (section 60) is required prior to works to three (3) culturally significant trees.

It is concluded that when carried out in accordance with the environmental mitigation measures outlined in the REF, the proposed Activity will not result in any significant and long-term negative impacts on the environment and can proceed, subject to the implementation of mitigations measures identified in Section 7.

1. Introduction

1.1. Proposed Activity

This Review of Environmental Factors (REF) has been prepared by Helen Mulcahy Urban Planning Pty Ltd for the Centennial Park and Moore Park Trust (CPMPT) to take into account all matters affecting, or likely to affect the environment as a result of the Activity which comprises proposed works to specific trees / tree groups, eight (8) of which are identified as having cultural significance, as well as detailing a regime for ongoing vegetation management at Callan Park. The Activity is required to ensure the safety of users of the recreation area, whilst preserving the amenity and the cultural heritage significance of the place, its buildings and landscaped setting.

The CPMPT is both the proponent and the determining authority under Part 5 Division 5.1 of the *Environmental Planning and Assessment Act 1979* for the proposed activity. Greater Sydney Parklands Trust (GSP) has responsibility for all functions of CPMPT under the *Centennial Park and Moore Park Trust Act 1983* (CPMPT Act).

The purpose of this REF is to describe the proposed works and assess the potential environmental impacts with consideration of the factors listed in clause 170 of the EP&A Regulation 2021. The REF identifies safeguards to mitigate identified impacts.

1.2. Proposal Background

Callan Park is located on the foreshore of the Parramatta River, on Gadigal - Wangal Country. CPMPT owns and manages 38.4 hectares of the 60.6 hectare site, including the waterfront and central park areas. Other areas are owned and managed by NSW Health. Both areas are within the Callan Park Conservation Area and Buildings which is listed on the State Heritage Register. The architectural and aesthetic qualities of the buildings and their landscape setting are considered to be of exceptional significance (CMP 2011). Callan Park incorporates many layers of Aboriginal, archaeological, historic, cultural, aesthetic and environmental heritage.

The CPMPT owned portion of the site is predominantly used as a recreation area. This is consistent with the *Callan Park (Special Provisions) Act 2002* which ensures the site remains in public ownership and the community has ongoing access to the park's open spaces and foreshore.

The *Callan Park Landscape Structure Plan* (LSP) (Tyrrell Studio and Terroir 2021) has been endorsed by the Minister for Planning and Public Spaces and will guide Callan Park's transformation to an iconic urban parkland in line with the Act. It establishes a Vision for the Park to be "a unified and welcoming parkland that protects its valuable heritage".

The *Callan Park Tree Management Strategy 2020*, prepared by Tree IQ, provides an approach for management of the trees across the Callan Park site, including the parklands precinct/recreation area. The Strategy acknowledges that Callan Park contains many significant trees that have been managed to varying degrees by a number of stakeholders and have been affected by constrained levels of maintenance and lack of future planning. The Strategy sets best practice management standards to improve tree management at Callan Park, to ensure the tree population is resilient for future generations. CPMPT is implementing this strategy across the parklands precinct.

Changes to planning controls now provide CPMPT with the ability to undertake an assessment and determination of activities for the purpose of the recreation area and will assist in providing a more timely response to tree management issues arising in the parkland precinct. This REF arises from those changes and has been prepared to:

-
- (i) assess the likely environmental impacts of proposed works to various trees / tree groups in the parkland precinct, including works to 8 trees which have been identified as having cultural significance; and
 - (ii) providing environmental parameters / mitigation measures for ongoing vegetation management within the Parkland Precinct.

The Activity is being undertaken in response to the CPMPT's statutory obligations to manage risk and ensure safe access to, and movement within the parklands precinct of Callan Park.

1.3. Environmental Assessment and Approval process

The Activity, involving works to 8 individual trees as well as ongoing vegetation management within the Callan Park parklands precinct is permissible without consent under the provisions of s2.73(3)(a)(ii) of *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) as these works are for the purposes of a recreation area and will be carried out by or on behalf of CPMPT.

Accordingly, the proposal is subject to assessment and determination under Division 5.1 of the EP&A Act. This is discussed in more detail in Section 4.

1.4. Methodology

This REF relies on specialist technical advice to assess the likely environmental impact of the proposal. The findings of this report consider the results of the assessments undertaken, with the relevant technical advice/reports reproduced in the Appendices of this report.

2. Site Analysis

2.1. Site Location and Context

Callan Park is a 60.6 hectare park located on the southern edge of Iron Cove, which is a tributary of the Parramatta River. Its primary address is Glover Street, Lilyfield and is legally identified as Lot 130 DP 1280992. The site is located within the Inner West Local Government Area (LGA).

CPMPT owns and manages 38.4 hectares of the site, including the waterfront and central park areas. The remaining 22.2 hectares are owned by NSW Health, which manages education, community and health functions on its land.

Callan Park is the traditional land of the Gadigal and Wangal people of the Eora Nation. The whole site is an important cultural landscape that serves to promote and strengthen connections to Aboriginal culture and identity. It is a historically significant site with a long history of therapeutic health services which continues to service the community in a variety of ways through the provision of government and private sector health services, passive recreation, and sports and community facilities.

The CPMPT Parkland Precinct (**Figure 1**) includes three lease areas to Inner West Council for playing fields, at Glover Street, Balmain Road and Waterfront Drive. The recreation area is interspersed with a variety of buildings that are used for community, health, education and art and cultural uses. A number of buildings are also vacant, awaiting demolition or adaptive reuse.



Figure 1: Extent of Parkland Precinct (Source: Biosis)

2.2. Site Characteristics

2.2.1. The Site

Callan Park is located on the foreshore of the Parramatta River and covers an area of approximately 60.6 hectares. The land is legally described as Lot 130 in DP 1280992.

The boundaries of Callan Park are broadly defined by:

- the southern foreshore of the Parramatta River (Iron Cove) to the north / northwest;
- Balmain Road to the south / southeast;
- Manning Street, Rozelle Substation and King George Park to the east; and
- Glover Street and Wharf Road to the west.

2.2.2. Development in the Locality

Development in the immediate vicinity of Callan Park is predominantly residential to the south, southwest and southeast, comprising the suburbs of Lilyfield and Rozelle. Public recreation uses dominate the adjacent foreshore areas, with King George Park sharing a common boundary to the east and Leichhardt Oval and the Leichhardt Park Aquatic Centre to the west.



Figure 2: Callan Park – local context

Source: SixMaps

2.2.3. Heritage

Callan Park is listed on the State Heritage Register (SHR) under the NSW Heritage Act 1977 as “Callan Park Conservation Area & Buildings” (No. 00818). A Statement of Heritage Impact has been prepared by Hector Abrahams (**Appendix 1**) to inform this REF.

2.2.4. Topography and Soils

The land gently slopes towards Iron Cove in the north, with a maximum elevation of 38 metres in the south. The majority of the land adjacent to Iron Cove is less than 8 metres in elevation¹. Various areas of cut and fill are evident and provide flat surfaces for playing fields.

Research² indicates that the study area is located within the Hawkesbury Sandstone geological unit, which is commonly associated with grinding groove sites, rock shelters and rock art sites.

The site is also underlain by Hawkesbury and GyMEA soil landscapes, both of which typically feature higher levels of soil erosion and shallow soils deposits. Within the Hawkesbury soil landscape, rocky outcrop formations are common which could indicate the presence of grinding groove sites and rock shelters with art or deposits.

The GyMEA soil landscape is characterised as highly erosional, and this high erosion potential suggests that the presence of Aboriginal sites and objects is unlikely. Notwithstanding, an Aboriginal Due Diligence Assessment has been prepared by Biosis (**Appendix 2**) to inform the REF and detail CPMPT’s responsibilities with regards to Aboriginal cultural heritage within the parklands precinct at Callan Park.

2.2.5. Watercourses

An ephemeral drainage line traverses an area in the western part of Callan Park in the vicinity of Broughton Hall Gardens. It has been maintained as a sandstone-lined channel, disappearing under Wharf Road and emerging as a concrete channel adjacent to the sporting field. However it is not identified as a stream using current 1:25,000 topographic maps.

2.2.6. Existing Vegetation

Historically extensive clearing of naturally occurring vegetation, resulting in a fragmented landscape punctuated by buildings, broad swathes of open grassed areas and an extensive network of internal roads and pathways.

Ecological investigations commissioned by Greater Sydney Parklands (GSP) in 2021³, which included site-specific literature reviews, database analysis and field survey revealed:

- three (3) Threatened Ecological Communities - Sydney Turpentine-Ironbark Forest, Swamp Oak Floodplain Forest and Lowland Rainforest;
- two (2) threatened fauna species Grey-headed Flying Fox and Large bent winged Bat, and
- no threatened flora species.

The plan at **Figure 3** illustrates the areas within the site that are classified as being of high, medium and low ecological value.

¹ Aboriginal Due Diligence Assessment, Biosis, 20 September 2023

² Biosis

³ Travers Ecology, draft Biodiversity Assessment Callan Park, 9 December 2021

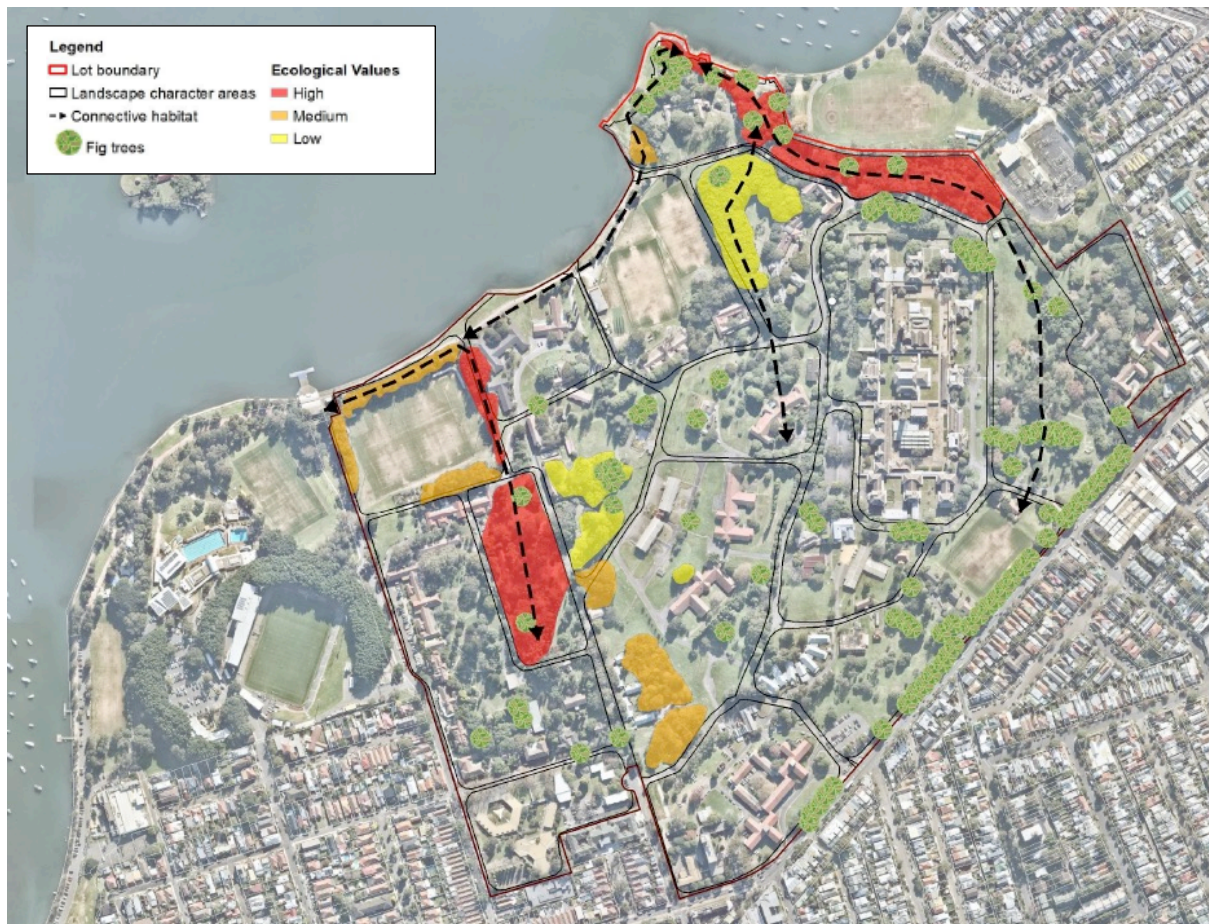


Figure 3: Areas of Ecological Value

Source: Travers Ecology

2.2.7. Access

There are 2 main vehicle entrances to Callan Park:

- Wharf Road via Balmain Road
- Balmain Road, Gate A opposite Cecily Street

Pedestrian access is available from both these locations and a number of other areas, e.g. King George Park, the Bay Run, through the Ambulance NSW site on Balmain Road or Glover Street.

2.2.8. Other physical characteristics

The site is not identified as being bush fire prone land, nor is it subject to flooding.

3. Proposed Activity

3.1. Description of the Activity

The proposed Activity involves works to specific trees / tree groups as detailed below, some of which have been identified as having cultural significance. The location of the trees is illustrated at **Figure 4**. In addition, this REF details a regime for ongoing vegetation management at Callan Park.

The scope of works is described below and in the Arboricultural Report prepared by Tree IQ (**Appendix 3**).

3.1.1. Works to Specific Trees / Tree Groups

Tree 7

Jacaranda mimosifolia (Jacaranda). A large, second order branch has been subject to extensive damage and should be removed by selective pruning.

Trees 61, 161 & 658

Populus nigra 'Italica' (Lombardy Poplar). The trees are in poor health and in poor structural condition with extensive basal decay and major trunk cavities. The trees have reached the end of their useful life and will be removed.

Trees 66, 114, 276, 328, 376, 391, 454, 468, 473, 497 & 554

These are a mix of species. Extensive deadwood is present within the crowns of the trees which presents a hazard. The deadwood will be removed.

Tree 67

Casuarina glauca (Swamp She Oak). Root growth has lifted a section of pavement in close proximity to the tree. The pavement should be repaired to eliminate the trip hazard, which may necessitate root pruning or shaving which would be done under the supervision of an arborist.

Trees 76, 78, 80 & 198

Acer negundo (Box Elder). The trees are in poor structural condition exhibiting wounds with advanced stages of decay which have formed major cavities (in Trees 80 and 198). Trees 76 and 198 have also been subject to previous branch failures. *Acer negundo* (Box Elder) is considered an environmental weed species. Based on the above, Trees 76, 78, 80 and 198 have a Useful Life Expectancy (ULE) of less than 5 years and will be removed.

Tree 95

Corymbia maculata (Spotted Gum). The tree is in fair health and in fair structural condition due to the presence of fungal fruiting bodies visually identified as *Armillaria luteobubalina*. This fungal plant pathogen causes white rot of the root and collar of trees and shrubs. It results in reduced shoot growth, stunted, chlorotic foliage and the characteristic 'dead top' often seen in mature trees. Based on the reduced crown density and presence of *Armillaria* fruiting bodies, Tree 95 will be removed.

Trees 91, 103 & 174

Trees 91 and 103 were identified as *Eucalyptus spp.* (Eucalypt) and Tree 174 was identified as *Schinus molle* var. *areira* (Peppercorn Tree). The trees are in poor health with a reduced crown density of 0-25%. Wounds with advanced stages of decay are also present on all trees. All have reached the end of their useful life and will be removed.

Tree 126

Cupressus guadalupensis (Guadalupe Cypress). The tree exhibits a significant structural defect. The installation of a dynamic restraint system (i.e. Cobra Brace) will be provided for additional support to the inclusion and may minimise the likelihood of branch failure.

Tree 115

Celtis sinensis (Chinese Nettle Tree). A significantly decayed branch is present within the crown of the tree which is weighted towards the road. This branch will be removed by selective pruning.

Trees 156 & 400

There are three (3) dead trees with close proximity to Tree 156 which have not been numbered or included in previous assessments of the park trees. Tree 400 is also dead. The trees are beginning shedding deadwood and the dead woody tissues are beginning to exhibit the early stages of decay. The decay is likely to extend into the root systems of the trees which increases the likelihood of whole tree failure as the decay develops. These trees will be removed.

Trees 175 & 178

Tree 175 is identified as *Lophostemon confertus* (Brush Box) and Tree 178 as *Agonis flexuosa* (Willow Myrtle). There is limited clearance between the crowns of the trees and the adjacent building. These trees should be Reduction Pruned to re-establish adequate building clearances.

Tree 252

Corymbia citriodora (Lemon Scented Gum). A large, significantly decayed branch is present within the crown of the tree. This branch will be removed by selective pruning.

Trees 361 & 511

Trees 361 and 511 were identified as *Populus alba* (Silver Poplar) and Tree 511 *Eucalyptus botryoides* (Bangalay). The trees are in poor structural condition due to the presence of major trunk cavities. These structural defects have an increased likelihood of failure, and the trees will be removed.

Tree 348

Eucalyptus saligna (Sydney Blue Gum). It is heavily suppressed by adjacent trees which has significantly impacted its form. Tree 348 has a ULE of less than 5 years and will be removed.

Trees 402 & 407

Ficus rubiginosa (Port Jackson Fig). The trees are in poor health due to a reduced crown density of 0-25% and high volumes of deadwood present within their crowns. Trees 402 and 407 have reached the end of their useful life and will be removed.

Tree 575

Ligustrum lucidum (Large Leaf Privet). Privet is considered an environmental weed species. This species is subject to a general biosecurity duty by the Department of Primary Industries. Tree 575 will be removed.

Tree 618

Jacaranda mimosifolia (Jacaranda). A branch of the tree has been subject to storm damage. This branch will be removed by selective pruning.

Tree Group 668

Tree Group 668 is a large group of *Casuarina glauca* (Swamp Oak). The tree group has become infested with a number of weed species, particularly *Celtis* sp. The weed species should be removed from this group of trees.



Figure 4: Approximate location of trees / groups of trees identified for arboricultural works
(Source: Tree IQ)

Trees identified as having cultural significance

Eight (8) of the aforementioned trees have been identified as having cultural significance⁴:

➤ **Tree No. 328 *Eucalyptus botryoides***

Proposed Works: Pruning - remove dead wood >30mm; inspect trunk wound at 8m

Heritage Significance: Exceptional. Based on its approximate location, the tree is likely part of the pleasure garden that was an integral part of the original plan.

➤ **Tree No. 391 *Ficus rubiginosa***

Proposed Works: Pruning - remove dead wood >30mm

Heritage Significance: Exceptional. Evidence of the avenue of Figs and Pines designed by Charles Moore and aligned entrance drive. Evidence of Victorian picturesque landscape.

➤ **Tree No. 402 *Ficus rubiginosa***

Proposed Works: Remove - crown density 0-25%. Crown consists mainly of epicormic growth. Wound(s), various stages of decay.

⁴

Statement of Heritage Impact – Callan Park, Lilyfield; Hector Abrahams Architects; 25 August 2023

Heritage Significance: Exceptional. Evidence of the avenue of Figs and Pines designed by Charles Moore and aligned entrance drive. Evidence of Victorian picturesque landscape.

➤ **Tree No. 447 *Ficus rubiginosa***

Proposed Works: Remove - crown density 0-25%. Small (<25mmØ) & medium (25-75mmØ) deadwood in high volumes. Crown consists mainly of epicormic growth.

Heritage Significance: Tree is part of the 1883 boundary planting after the widening of Balmain Road.

➤ **Tree No. 473 *Lophostemon confertus***

Proposed Works: Pruning - remove dead wood >30mm.

Heritage Significance: Could possibly be part of the 1880s plantings that incorporated earlier individual specimens.

➤ **Tree No. 497 *Eucalyptus botryoides***

Proposed Works: Pruning - remove dead wood >30mm

Heritage Significance: Remnant Eucalyptus associated with asylum farm.

➤ **Tree No. 511 *Eucalyptus botryoides***

Proposed Works: Remove - Small (<25mmØ), medium (25-75mmØ) & large (>75mmØ) deadwood in low volumes. Wound(s), advanced stages of decay. Trunk cavity(s), major.

Heritage Significance: Remnant Eucalyptus associated with asylum farm.

➤ **Tree No. 554 *Ficus rubiginosa***

Proposed Works: Prune - remove dead wood >30mm.

Heritage Significance: original design forming backdrop to Kirkbride Block and demonstrates historical layers of planting.

- (i) ongoing vegetation management involving a range of arboricultural works, including:
- removal of dead trees
 - stump grinding
 - canopy lifting or selective pruning to trees adjacent to structures or impacting movement corridors
 - management of weed species
 - management of hazardous trees
 - tree planting.

The location of the abovementioned trees is illustrated at **Figure 5**.

Summary of works to trees / tree groups

Trees to be removed (20) – comprising 2 dead trees; 6 weed species, some of which are multiple specimens within a group of trees; and 12 instances of structural integrity being compromised (significant deadwood, decay or trunk cavities).

Trees to be pruned (17) – comprising selective pruning of 4 trees; reduction prune of 2 trees and removal of deadwood from 11 trees.

Ancillary works:

- the cracked and raised section of pavement next to Tree 67 to be repaired to eliminate the trip hazard. Repair options may include grinding down the pavement or raising/ramping the section of pavement over roots.
- Installation of a dynamic restraint system (i.e. Cobra Brace) on Tree 126 to provide additional support.

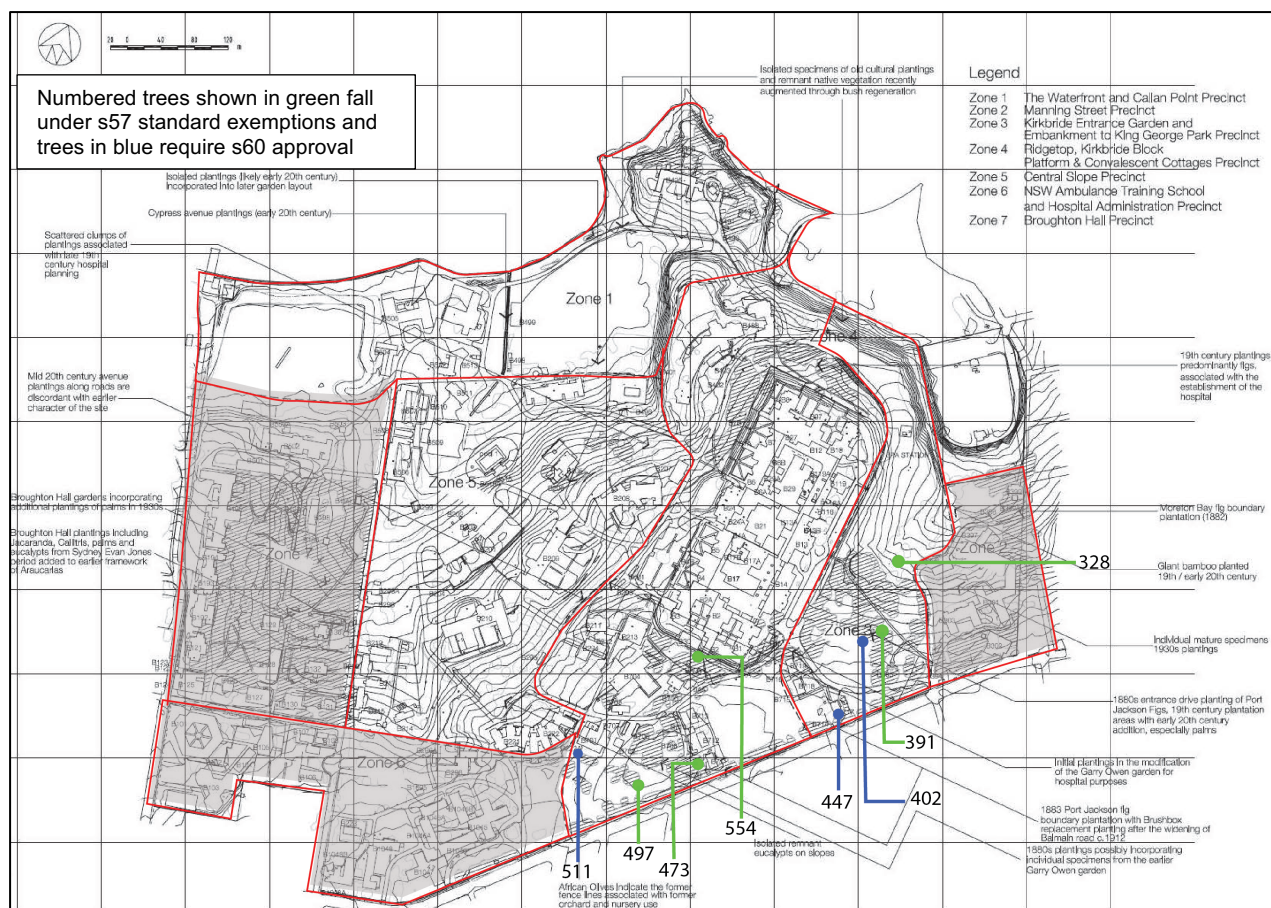


Figure 5: Approximate location of trees of cultural significance

Source: Base image Callan Park CMP (2011)

3.1.2 Ongoing Vegetation Management

There are various aspects to the ongoing management of vegetation at Callan Park, as documented in the Arboricultural Report (**Appendix 3**) and discussed in the following paragraphs:

Pruning

Many of the trees in the parkland precinct contain moderate to high volumes of deadwood. This can also occur in otherwise healthy trees. The risk is that particularly during windy conditions, deadwood can fall from the crown with the potential to cause injury or damage.

Many of the buildings in Callan Park, particularly those which are disused and temporarily fenced to prevent access by the public, are surrounded by trees which are in conflict with the buildings. Tree branches which are in direct contact with roofs and gutters are likely to cause building damage and increase building maintenance costs.

Tree pruning may be required in the following circumstances:

- To provide pedestrian clearance where these works are limited to the Crown lifting of branches up to 100mm in diameter to a maximum height of 2.5m
- To provide utility clearance where these works are limited to the selective Reduction Pruning of branches up to 100mm in diameter to provide a maximum clearance of 1m to power and telecommunications lines or as required the relevant energy authority

- To provide building clearance where these works are limited to the selective Reduction Pruning of branches up to 100mm in diameter to provide a maximum clearance of 2m to buildings (measured from the surface of the wall or roof of the building's edge)
- To remove deadwood (>30mm) deemed to pose an unacceptable risk where the tree does not contain nesting hollows
- To control the spread of clumps and remove dead canes of *Bambusa spp.* and *Phyllostachys spp.* (Bamboo species)
- To control the spread of weed species
- To improve the branching structure and reduce the encroachment on infrastructure / buildings of young and developing trees (formative pruning)
- To remove snapped or failed branches following storms or severe weather events
- For annual hedge maintenance where the branches to be pruned are less than 50mm in diameter.

Weed Management

Weed species are a major issue at Callan Park with self-sown *Celtis sinensis* (Chinese Hackberry) being particularly prevalent. Weed tree species compete with and suppress better quality trees, damage infrastructure and buildings, block important views and sightlines, and create a source from which weeds are continually spread across the wider parkland precinct.

Dense stands of weeds may also create issues for public safety. The Activity includes weed management as part of an ongoing vegetation management regime.

Standing Stumps

Many dead or senescent trees within the parkland precinct have had deadwood removed to the extent where the trees are now retained as standing stumps. The ecological value of standing stumps which are devoid of any habitat hollows is low and their retention detracts from the overall amenity of the precinct.

The removal of standing stumps forms part of the Activity as part of the ongoing vegetation management regime in the parkland precinct.

Tree removal for other trees/ongoing management (eg severe decline, have reached the end of their Useful Life or are dead) is not part of this proposal.

A further REF may be required which considers:

- a European heritage assessment and/or documentation of all significant trees and landscape elements into a single resource, which would involve combining significant trees identified within the CMP within diagrams and inventories into one accessible format for easy identification, and identification of any requirement for a s60 application
- arborist review of mature vegetation identified as 'Vegetation for further assessment' in Figure 7 of this report to identify the age, species, and any potential cultural modification prior to tree removal to address Aboriginal heritage
- ecologist review related to any removal within the mapped EEC (see **Figure 9**) and any offset requirement.

Table 1: Description of Activity

Description	
Description of works	As detailed above
Operational requirements	Ongoing vegetation management including regular inspections (arborists), maintenance, chemical dosing (weed management), planting of new and / or replacement trees etc., in accordance with the Tree Management Strategy 2020 prepared by Tree IQ (Appendix 4).
Equipment and plant	<ul style="list-style-type: none"> • Vehicles – truck, utility + trailer • Chainsaws • Climbing and rigging tools • Wood chipper • Stump grinder • Variety of axes and wedges • Safety equipment, personal equipment as well as safety fencing where required
Commencement and expected duration of construction work	The specified works to the specified trees / tree groups are expected to be undertaken in approximately early 2024. Ongoing vegetation management will be implemented as and when required.
Hours of construction work	Works are to occur generally within the following times: Monday to Friday 7 am to 6 pm Saturday 7 am to 6 pm Sunday by approval of CPMPT No work on Public Holidays

The Arboricultural Report includes a series of recommendations and mitigation measures for the works which have been included at Sections 6.3 and 7.2 respectively.

3.2. Alternatives and Preferred Option

CPMPT's objectives for this Activity are to:

- to allow public access to the open space at Callan Park, for recreational purposes of both an active and a passive nature;
- to preserve the heritage significance of Callan Park, including its historic buildings, gardens and other landscape features;
- provide minimal environmental impacts to the Park, its users and the local community; and
- ensure the safety of all users of Callan Park.

An overview of alternatives to progressing with vegetation management is provided below.

Table 2: Project Alternatives

Option	Assessment
Do-Nothing	Failure to remove / prune the identified trees would potentially pose a risk to public safety as it is anticipated that the structural condition of the individual trees would progressively deteriorate. Furthermore, if the do nothing option was pursued, the individual specimens would need to be fenced to prevent public access in specified danger zones. Such a mitigation measure would not be desirable both in terms of aesthetics and effectively sterilizing areas of the Parkland Precinct from recreation use.
Alternative Design	N/A
Alternative Location	N/A

3.3. Project Justification

As indicated above, failure to remove / prune the identified trees would potentially pose a risk to public safety as it is anticipated that the structural condition of the individual trees would progressively deteriorate.

An ongoing vegetation management regime for the parkland precinct is necessary to ensure the health of the trees and other vegetation as well as the conservation of significant landscapes. Furthermore, it will satisfy the objectives of the CPMPT in relation to Callan Park as the Activity will facilitate continued safe public access, having regard to the heritage significance of both the place, its buildings and any significant trees.

4. Legislative and Planning Framework

This section includes an assessment of the proposal against the applicable legislative and planning framework.

4.1. Planning Approval Pathway

Section 4.1 of the EP&A Act states if an environmental planning instrument (EPI) provides that development does not need consent that development may be carried out without the need for development consent.

The proposed development is not considered to be exempt development.

The proposed activity satisfies the criteria for ‘development without consent’ in accordance with the provisions of s2.73(2)(a) of *State Environmental Planning Policy (Transport and Infrastructure) 2021* as it is development for the purposes of a recreation area, intended to ensure safety and amenity, and is carried out by or on behalf of the CPMPT, a public authority.

This is explained in more detail below.

Is it by or on behalf of a public authority and on land owned or controlled by a public authority?

CPMPT:

- (i) is a public authority;
- (ii) owns the parklands precinct of Callan Park which is the location of the proposed Activity; and
- (iii) will be managing the works.

Is it development?

Section 1.5 of the EP&A Act provides the meaning of “development” as follows:

- (1) *For the purposes of this Act, development is any of the following—*
 - (a) *the use of land,*
 - (b) *the subdivision of land,*
 - (c) *the erection of a building,*
 - (d) *the carrying out of a work,*
 - (e) *the demolition of a building or work,*
 - (f) *any other act, matter or thing that may be controlled by an environmental planning instrument.*

Section 3.14 (1)(e) states that an environmental planning instrument may make provision for or with respect to protecting or preserving trees or vegetation.

As tree removal and pruning may be controlled through an environmental planning instrument it is *development* in accordance with the EP&A Act.

Is Callan Park a recreation area?

The 38.4 hectares of the site which is owned and managed by CPMPT is a recreation area and has been operating as a public park for a number of years. This is supported by:

- the Leichhardt Development Control Plan 2000, which identified the site as the Iron Cove Parklands Distinctive Neighbourhood and for the area *to retain its current nature as a*

recreation precinct, both in terms of active and passive recreation. The area should remain a publicly accessible parkland reserve providing the community with a significant recreation resource

- the objects of the *Callan Park (Special Provisions) Act 2002*, including:
 - (b) to ensure the preservation of the areas of open space at Callan Park....*
 - (c) to allow public access to that open space, including that foreshore, for public recreational purposes of both an active and a passive nature*
- the Standard LEP Instrument which defines a recreation area as follows:

recreation area means a place used for outdoor recreation that is normally open to the public, and includes—

 - (a) a children’s playground, or*
 - (b) an area used for community sporting activities, or*
 - (c) a public park, reserve or garden or the like,*

and any ancillary buildings, but does not include a recreation facility (indoor), recreation facility (major) or recreation facility (outdoor).

Is the Activity for the purpose of a recreation area?

Tree / vegetation management is integral to the function of a recreation area. The Activity will facilitate continued public access to the recreation area as required by the *Callan Park (Special Provisions) Act 2002* and will ensure the trees are not a hazard for the public or property.

The removal of dead, dying and hazardous trees in the parkland precinct, together with the ongoing management of vegetation is considered necessary to minimise risk and ensure public safety for the purpose of the recreation area.

Having regard to the above, this Activity satisfies the requirements for development without consent under the Parks and other public reserve provisions of the *State Environmental Planning Policy (Transport and Infrastructure) 2021*. As such the Activity is being assessed and determined under Part 5, Division 5.1 of the EP&A Act.

4.2. Callan Park (Special Provisions) Act 2002

The *Callan Park (Special Provisions) Act 2002* (CP Act) provides a legislative framework for the planning, land use and future development and leasing of lands within Callan Park.

Amendments to the CP Act in July 2022, with the passing of the *Greater Sydney Parklands Trust Act 2022*, mean that the provisions of *State Environmental Planning Policy (Transport and Infrastructure) 2021* now apply, and particularly Division 12 Parks and other public reserves. This allows CPMPT to undertake an assessment and determination of this proposal in accordance with Division 5.1 of the EP&A Act, as it is for the purpose of the recreation area.

Table 3 below provides an assessment of the proposed vegetation management at Callan Park against the relevant provisions of the Act.

Table 3: Assessment under Callan Park (Special Provisions) Act 2002

Relevant Provision	Compliance Comment
4(b) to ensure the preservation of the areas of open space at Callan Park that were in existence immediately before the commencement of the Act, and that extend to and include the foreshore of Iron Cove on the Parramatta River	Complies. The proposed tree management works will not alter the quantum of open space at Callan Park.
4(c) to allow access to that open space, including that foreshore, for public recreational purposes of both an active and a passive nature	Complies. The Activity will facilitate continued public access to the recreation area and will ensure the trees do not present a hazard for the public or property.
4(d) to preserve the heritage significance of Callan Park, including its historic buildings, gardens and other landscape features	Complies. The proposed works to culturally significant specimens has been assessed in the Statement of Heritage Impact (Appendix 1). Furthermore any future works will also be subject to the same assessment.
(2) The consent authority for development applications relating to land within Callan Park is the council of the local government area within which the land is situated, despite any other Act or any environmental planning instrument.	Noted. However, the Activity is permitted without consent under the provisions of s2.73(3)(a)(ii) of State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) as these works are for the purposes of a recreation area and will be carried out by or on behalf of CPMPT.
7(3), (3A) Development may be carried out at Callan Park, with development consent, for the purpose of health facilities and educational or community facilities, and development for the purpose of retirement villages is prohibited at Callan Park	N/A
7(6) Consent must not be granted for any development at Callan Park if the development would result in: (a) less open space at Callan Park than existed immediately before the commencement of this Act, or (b) an increase in the total floor area of all buildings that existed at Callan Park immediately before the commencement of this Act.	Complies. The proposed tree management works will not alter the quantum of open space at Callan Park. The works will make a positive contribution to the amount of open space that can be safely accessed by the public. The works will not have any impact on total floor area.
7(7) Development at Callan Park must not adversely affect the Broughton Hall Garden, Charles Moore Garden or Kirkbride Garden.	Noted. No vegetation management works will be undertaken in Charles Moore Garden without the appropriate heritage and arboricultural assessments. Broughton Hall Garden and Kirkbride Garden are not part of the parklands precinct where the activity is proposed.

4.3. Environmental Planning and Assessment Act 1979

Duty to Consider Environmental Impact

Division 5.1 of the EP&A Act applies to activities that are permissible without consent and are generally carried out by a public authority (excluding State significant infrastructure). Activities under Division 5.1 of the EP&A Act are assessed and determined by a public authority, referred to as the determining authority. CPMPT is a public authority and is the proponent and determining authority for the proposed works.

For the purpose of satisfying the objects of the EP&A Act relating to the protection and enhancement of the environment, a determining authority, in its consideration of an activity shall examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that Activity.

4.4. Environmental Planning and Assessment Regulation 2021

Clause 170 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation 2021) provides for the issue of Guidelines for Division 5.1 assessments in relation to factors to be taken into account when considering the likely impact of an activity and the form of the document

required to be prepared by a determining authority. This REF has been prepared in accordance with those Guidelines⁵.

Clause 171 of the EP&A Regulation 2021 provides a list of environmental factors that must be taken into account for an environmental assessment under Division 5.1 of the EP&A Act. These requirements are considered at section 6.1 of this REF.

The EP&A Regulation (clause 171(4)) requires publication for activity with:

- a capital investment value of more than \$5 million or,
- an approval or permit for activity that requires approval under:
 - Fisheries Management Act 1994 sections 144, 200, 205 or 219, or
 - Heritage Act 1977 section 57, or
 - National Parks and Wildlife Act 1974 section 90 or
 - Protection of the Environment Operations Act 1997 sections 47-49 or 122, or
- if the determining authority considers it to be in the public interest.

The proposed activity has an estimated capital investment value of \$90,000.00. However, an approval under the *Heritage Act 1977* is required for works to 3 trees and as a consequence, the REF requires publication.

4.5. Greater Sydney Parklands Trust Act 2022

Callan Park and Centennial Parklands are managed under the umbrella of the *Greater Sydney Parklands Trust Act 2022* (GSPT Act). The objects of the GSPT Act include to maintain and improve the parklands estate across Greater Sydney and ensure it is effectively managed, and to ensure the conservation of the natural and cultural heritage values and the protection of the environment. The proposed vegetation management will directly contribute to these objects.

The GSPT Act also requires that each park has an approved plan of management and gives effect to that plan of management. For Callan Park specifically, the GSPT Act requires a plan of management to be in place by 1 July 2025. At the time of preparing this REF a plan of management has not been prepared for Callan Park.

4.6. Centennial Park and Moore Park Trust Act 1983

The land is owned by CPMPT and therefore the CPMPT Act applies. Under the provisions of section 8 the Act, CPMPT has a duty to:

- maintain and improve the Trust lands,
- encourage the use and enjoyment of the Trust lands by the public by promoting and increasing the recreational, historical, scientific, educational, cultural and environmental value of those lands,
- maintain the right of the public to the use of the Trust lands,
- ensure the protection of the environment within the Trust lands, and
- such other objects, consistent with the functions of the Trust in relation to the Trust lands, as the Trust considers appropriate.

The proposed Activity is demonstrably consistent with the objects of the Trust insofar as the immediate works to the specified trees / tree groups described in Section 3, together with the ongoing vegetation management will serve to maintain and improve Callan Park. Providing a safe

⁵ Guidelines for Division 5.1 Assessments, DPE June 2022

and well-maintained landscape will encourage the public's use and enjoyment of the space and will be undertaken in the context of protecting the environment and heritage values of Callan Park. CPMPT is guided by a Landscape Structure Plan and various specialist reports that have been prepared for the site.

The Landscape Structure Plan (LSP)

In 2021, a Landscape Structure Plan (LSP) for Callan Park was endorsed by the (then) Minister for Planning and Public Spaces.

The LSP is a high-level conceptual plan for the parklands precinct of Callan Park that aims to develop quality accessible parkland, celebrating the Park's green, open space, unique heritage and waterfront location. The LSP does not provide guidance on tree management or canopy cover targets.

Tree Management Strategy

The Tree Management Strategy 2020 (TMS) for Callan Park was prepared by Tree IQ (**Appendix 4**). The purpose of the TMS is to provide an overview of the existing tree population, determine the major challenges affecting the trees at present and into the future, and set out the protocols to guide stakeholders to professionally manage Callan Park's trees.

The TMS focuses on the existing trees and general tree management practices. Importantly, it also lays the groundwork for key urban forestry principles that are paramount to ensuring the tree population is resilient for future generations and provides an overview of the current canopy cover, species and age diversity, and Useful Life Expectancy of the trees.

Given the significance of Callan Park including its contribution to community health and mitigation of urban heat impacts, it is important to develop a comprehensive, strategic approach to manage the trees and the urban forest as a whole.

The Tree Management Strategy is the guiding document for the ongoing vegetation management at Callan Park.

Tree Survey Report

The Tree Survey Report 2020 was prepared by Martin Peacock Tree Care and provides a detailed inventory of existing trees at Callan Park – Precinct 1 (the parklands precinct) including an assessment of their health, structure, and landscape value, together with recommendations as to priority for tree management works. A copy of the Tree Survey is included at **Appendix 5**.

Arboricultural Report

The Arboricultural Report (dated 29 August 2023) was prepared by Tree IQ to support the REF. It provides a detailed assessment of the required tree management works and includes a photographic record of each of the 37 trees which require attention in the short term.

The report also outlines general tree maintenance issues across the Parkland Precinct and makes recommendations regarding ongoing vegetation management, having regard to:

- (i) current best practice arboricultural standards and protocols;
- (ii) Australian Standard 4373: Pruning of Amenity Trees (2007);

- (iii) Safe Work Australia Guide for Managing Risks of Tree Trimming and Removal Work (2016); and
- (iv) The Callan Park Tree Management Strategy.

A copy of the Arboricultural Report is included at **Appendix 3**.

4.7. Other Relevant Legislation

The following table lists any additional legislation that should be considered.

Table 4: Other Relevant Legislative Requirements

State Legislation	Purpose of Legislation	Relevance to the Proposal and Approval Requirements
<i>Heritage Act 1977</i>	The <i>Heritage Act 1977</i> is the principal Act for the management of NSW's environmental heritage. It establishes the State Heritage Register (SHR) and includes provisions for Interim Heritage Orders, Orders to Stop Work and archaeological relics (both on land and underwater). It also requires government agencies to maintain a Heritage Conservation Register under Section 170.	<p>Eight trees are identified as having cultural significance and the work to three of these significant trees will require section 60 approval. The works to the remaining trees fall under section 57 standard exemptions and are assessed in the Statement of Heritage Impact prepared by Hector Abrahams (Appendix 1).</p> <p>The relevant specified works as set out in Standard Exemption 13 are:</p> <ul style="list-style-type: none"> c. Pruning to control size, improve shape, condition, flowering or fruiting. d. Removal of non-significant diseased, dying, dead and / or dangerous trees and / or plant material
<i>National Parks and Wildlife Act 1974</i> (NPW Act)	The NPW Act provides protection for all Aboriginal places and objects, regardless of whether they have been previously recorded in the OEH Aboriginal Heritage Information Management System. Part 6 of the Act states that it is an offence to harm or desecrate an Aboriginal place or object unless it is undertaken in accordance with an Aboriginal Heritage Impact Permit. Clause 87A outlines an obligation to report any discoveries of previously unknown Aboriginal sites to the OEH.	Biosis has prepared an Aboriginal Cultural Due Diligence Assessment (Appendix 2), which has determined that there is low and moderate archaeological potential for undiscovered Aboriginal sites to be located within Callan Park. The areas of low archaeological potential were determined due to the significant disturbances which will have disturbed any potential Aboriginal archaeological deposits. Refer Section 6.2.1.
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	The EPBC Act provides for the protection of the environment, especially matters of national environmental significance (MNES) and provides a streamlined national environmental assessment and approvals process.	<p>The proposed activity is not located on or in proximity to Commonwealth land and is therefore unlikely to affect Commonwealth land.</p> <p>The findings of previous ecological investigations (2021) in accordance with the EPBC Act, Biodiversity Conservation Act, and which included surveys, indicates that the proposed Activity is unlikely to have an impact on any matters of national environmental significance (MNES). Commonwealth approval is therefore not required under the EPBC Act.</p> <p>Further discussion in this regard is included at Section 6.2.3.</p>
<i>Biodiversity Conservation Act 2016</i> (BC Act)	The BC Act aims include to 'maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development'. It provides for the listing of threatened species and	<p>Previous ecological investigations (2021) indicate that no endangered flora populations occur within the Inner West LGA.</p> <p>Three (3) threatened ecological</p>

State Legislation	Purpose of Legislation	Relevance to the Proposal and Approval Requirements
	communities, establishes a framework to avoid, minimise and offset the impacts of proposed development, and establishes a standard method for assessing the likely impacts on biodiversity values and calculating measures to offset those impacts.	communities, two (2) threatened fauna species and no threatened flora species, were recorded on site. Further discussion in this regard is included at Section 6.2.3 of this REF.
<i>Water Management Act 2000</i> (WM Act)	The Act outlines approval requirements for activities at a specified location in, on or under waterfront land. Waterfront land includes the bed of any river, lake or estuary and all land within 40 metres of the highest bank of the river, lake or estuary.	In accordance with Section 41 of the Water Management (General) Regulation 2018 a public authority is exempt from the requirement for a controlled activity approval in relation to all controlled activities that it carries out in, on or under waterfront land. The proposed Activity does not constitute a controlled activity.
<i>Contaminated Land Management Act 1997</i>	The CLM Act provides the framework for the management of contaminated land in NSW and requires that the nature and extent of any potential contamination be investigated and demonstrated.	N/A – the proposed Activity does not constitute a change of use, or a change to the nature or intensity of recreation use and as such, no contamination investigation is required.
<i>Roads Act 1993</i>	The objects of this Act are to, among other things, confer certain functions (in particular, the function of carrying out road work) on TfNSW and on other roads authorities, and to provide for the distribution of the functions conferred by this Act between TfNSW and other roads authorities.	Not applicable. The proposed activity does not necessitate any works to public roads.
<i>Waste Avoidance and Recovery Act 2001</i>	Aims to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development.	Noted. In this regard vegetative material generated by the vegetation management regime will be mulched (unless it is diseased) and will be used elsewhere on the site.

4.8. State Environmental Planning Policies

4.8.1. State Environmental Planning Policy (Transport and Infrastructure) 2021

The proposed development is 'development without consent' in accordance with the Parks and other public reserves provisions of Division 12, s.2.73(3)(a)(ii) of *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) as it is development for the purposes of a recreation area, intended to ensure safety and amenity, and is carried out by or on behalf of CPMPT, a public authority.

This Proposal is being assessed and determined under Part 5, Division 5.1 of the EP&A Act.

In accordance with the T&I SEPP the definition of consent (s.2.3) is:

(a) when used in relation to the carrying out of development without consent, means development consent and any other type of consent, licence, permission, approval or authorisation that is required by or under an environmental planning instrument,

As a result of paragraph (a) of the definition of consent under Chapter 2 of the T&I SEPP development that may be carried out without development consent may also be carried out without any other consent, licence, permission, approval or authorisation that would otherwise be required by another environmental planning instrument (such as an approval to remove a tree that is subject to a tree preservation order).

4.8.2 State Environmental Planning Policy (Resilience and Hazards) 2021

An area 0.88 km to the north of Callan Park is mapped as “coastal wetlands” as illustrated at **Figure 6** below.



Figure 6: Location of mapped coastal wetlands area (solid blue) and proximity area (hatched

Source: Base image NSW Planning Portal, spatial viewer

It is not anticipated that the vegetation management works within Callan Park will have any substantive impact on the coastal wetlands or wetlands proximity areas on the northern foreshore of the Parramatta River.

4.8.3 State Environmental Planning Policy (Biodiversity and Conservation) 2021

Chapter 2 of the Biodiversity and Conservation SEPP – vegetation in non-rural areas is relevant to the proposed Activity. Under the provisions of the SEPP and Inner West Council’s *Tree Management DCP 2023*, removal of the trees on a heritage property would require development consent. However, as noted in Section 4.8.1 of this REF, development under Chapter 2 of the T&I SEPP may be carried out without any other consent, such as approval to remove a tree that is subject to a tree preservation order.

The proposed Activity is instead, being assessed under Division 5.1 of the EP&A Act and is the subject of this Review of Environmental Factors.

It is noted that Callan Park is not located within the Foreshores and Waterways area (Chapter 6 of the SEPP), but it does abut the mapped area. Whilst the proposed Activity does not require consent,

for completeness, the matters for consideration set out in section 6.28(1) and (2) of the SEPP are briefly addressed below:

(a) whether the development is consistent with the following principles—

- (i) Sydney Harbour is a public resource, owned by the public, to be protected for the public good,***
- (ii) the public good has precedence over the private good,***
- (iii) the protection of the natural assets of Sydney Harbour has precedence over all other interests,***

Comment: Callan Park is also a public resource and provides public access to the foreshore. The proposed vegetation management works will not threaten the adjacent foreshores and waterways area. Furthermore, the works are in the public interest and will not compromise the natural assets of Sydney Harbour.

(b) whether the development will promote the equitable use of the Foreshores and Waterways Area, including use by passive recreation craft,

Comment: The proposed vegetation management within Callan Park will not have any impact on the use of the foreshores and waterways area.

(c) whether the development will have an adverse impact on the Foreshores and Waterways Area, including on commercial and recreational uses of the Foreshores and Waterways Area,

Comment: No adverse impact to the foreshores and waterways area arising from the proposed vegetation management is anticipated in terms of natural systems or commercial and recreational uses. Callan Park represents a substantial area of publicly accessible recreation space, directly adjacent to the foreshore.

(d) whether the development promotes water-dependent land uses over other land uses,

Comment: N/A

(e) whether the development will minimise risk to the development from rising sea levels or changing flood patterns as a result of climate change,

Comment: The proposed vegetation management in and of itself will not alter risk associated with rising sea levels or flood patterns as a result of climate change.

(f) whether the development will protect or reinstate natural intertidal foreshore areas, natural landforms and native vegetation,

Comment: The proposed vegetation management at Callan Park is not expected to have any substantive impact on intertidal foreshore areas or natural landforms. The land comprising Callan Park has experienced varying levels of disturbance over time. It has been subjected to extensive native vegetation clearance, with limited native, mature vegetation remaining. Mitigation measures have been included to minimise disturbance to native vegetation.

(g) whether the development protects or enhances terrestrial and aquatic species, populations and ecological communities, including by avoiding physical damage to or shading of aquatic vegetation,

Comment: The proposed Activity, both the immediate works to thirty seven trees / tree groups and the ongoing vegetation management regime, is required to ensure the health of the trees and other vegetation as well as the conservation of significant landscapes. The Activity is unlikely to result in any physical damage to, or shading of, aquatic vegetation.

(h) whether the development will protect, maintain or rehabilitate watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity.

Comment: Ecological investigations commissioned by GSP in 2021 (Travers Bushfire and Ecology) identified an ephemeral drainage line which traverses an area in the western part of Callan Park in the vicinity of Broughton Hall Gardens. However it is not identified as a stream using current 1:25,000 topographic maps therefore a controlled activity approval on waterfront land is not required under the *Water Management Act 2000*.

As described in Section 2.2.6 of this REF previous ecological investigations at Callan Park have identified three (3) Threatened Ecological Communities - Sydney Turpentine-Ironbark Forest, Swamp Oak Floodplain Forest and Lowland Rainforest. Tree No, 252 and Tree No. 276 (group of trees) are part of the immediate scope of works and are located within the mapped area of Sydney Turpentine-Ironbark Forest. Further discussion in this regard is provided at Section 6.2.3 of this REF.

Callan Park is highly fragmented from any substantial, densely vegetated natural habitat due to being historically surrounded by high density housing, roadways, industrial precincts to the west, south and east, and the Parramatta River to the north.

The matters set out in section 6.28(2) of the SEPP are as follows:

(a) having regard to both current and future demand, the character and functions of a working harbour will be retained on foreshore sites,

Comment: N/A

(b) if the development site adjoins land used for industrial or commercial maritime purposes—the development will be compatible with the use of the adjoining land,

Comment: N/A

(c) if the development is for or in relation to industrial or commercial maritime purposes—public access that does not interfere with the purposes will be provided and maintained to and along the foreshore,

Comment: N/A

(d) if the development site is on the foreshore—excessive traffic congestion will be minimised in the zoned waterway and along the foreshore,

Comment: The proposed Activity is not expected to result in any substantive impact on traffic in the vicinity of the foreshore.

(e) the unique visual qualities of the Foreshores and Waterways Area and its islands, foreshores and tributaries will be enhanced, protected or maintained, including views and vistas to and from—

(i) the Foreshores and Waterways Area, and

(ii) public places, landmarks and heritage items.

Comment: The proposed Activity may have some visual impact, where trees are removed or pruned, however the extent of impact will be localised and with the implementation of the mitigation measures set out in Section 7 of this REF, it is considered that the potential impact on views and vistas to and from Callan Park and the foreshores and waterways area, will be negligible.

Having regard to the preceding assessment, it is considered that the proposed Activity, comprising the immediate tree management works to thirty seven trees / tree groups and the ongoing vegetation management regime at Callan Park, will not significantly adversely impact the adjacent Foreshores and Waterways Area.

4.9. National, State, regional, subregional, district and local plans

The table below details how the proposal contributes or responds to relevant objectives, directions, policies, actions, community priorities and key issues of National, State, regional, subregional, district and local plans.

Table 5: Plans to be considered

Plans	Relevance to the Proposal	Compliance
The Greater Sydney Region Plan – A Metropolis of Three Cities	<p>The Greater Sydney Region Plan, <i>A Metropolis of Three Cities</i> is built on a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places. It seeks to meet the needs of a growing and changing population by transforming Greater Sydney into a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City.</p> <p>The proposed vegetation management would help support the vision of a Metropolis of Three Cities, by ensuring that this significant area of public open space remains accessible, protected and enhanced. The works are required to ensure public safety in the recreation area, and ensure accessibility is not inhibited due to tree hazards.</p>	Yes
Eastern City District Plan	<p>The <i>Eastern City District Plan</i> is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It is a guide for implementing the Greater Sydney Region Plan, <i>A Metropolis of Three Cities</i>, at a district level and is a bridge between regional and local planning.</p> <p>The vision for the <i>Eastern City District Plan</i> is to transform the district over the next 20 to 40 years to see it become more innovative and globally competitive, carving out a greater portion of knowledge-intensive jobs from the Asia Pacific Region. At the same time, the plan will improve the District's lifestyle and environmental assets.</p> <p>This proposal is consistent with the objectives of the Planning Priorities featured in the plan as follows:</p> <p>Planning Priority E16 – Protecting and enhancing scenic and cultural landscapes</p> <p>Comment: Callan Park is listed in the State Heritage Register. The proposed activity is limited to works to 8 existing trees (3 of which are to be removed). The trees have been identified as being significant and require a s60 approval under the NSW Heritage Act. The ongoing vegetation management regime is based on the Tree</p>	Yes

Plans	Relevance to the Proposal	Compliance
	<p>Management Strategy prepared by Tree IQ in 2021 (Appendix 4) and the Arboricultural Report also prepared by Tree IQ and dated August 2023. This REF establishes a set of parameters / mitigation measures designed to ensure that the scenic and cultural values of the parklands precinct are protected.</p> <p>Furthermore, the proposed vegetation management regime prioritises the delivery of high quality open spaces, and enhancement of scenic landscapes.</p>	
Leichhardt Local Environmental Plan 2000	<p>The proposal is consistent with the vision, general objectives and planning principles of the LEP which seek to conserve and enhance the quality and diversity of the natural, living, working and leisure environments of the LGA.</p> <p>The entirety of Callan Park, identified as "Rozelle Hospital, rozelle" is listed in Schedule 2 of Leichhardt LEP 2000 as an item of environmental heritage.</p> <p><u>Comment:</u> Noted. The provisions of the T&I SEPP prevail. A Statement of Heritage Impact has been prepared to address the likely heritage impacts of the proposed Activity (refer Appendix 1).</p>	Yes
Inner West Local Strategic Planning Statement (LSPS)	<p>The LSPS provides two Priorities that relate to the proposed works:</p> <p>3 A diverse and increasing urban forest that supports connected habitats of flora and fauna – this includes providing a healthy, resilient and diverse urban forest, maintaining and increasing the urban forest of the Inner West and enhancing biodiversity corridors (including tree replacement) and developing a Blue/Green Grid Strategy</p> <p>11 Provide accessible facilities and spaces that support active, healthy communities – this includes Callan Park, with its heritage preserved and function as a regional park providing active and passive recreational spaces and community facilities.</p> <p>The works are intended to ensure the Callan Park site is safe and accessible to the general public. The Activity involves the removal of 20 trees and the pruning of 17 trees, together with minor ancillary works including the repair of a section of damaged pavement adjacent to Tree No.67 and the installation of a dynamic restraint system to Tree No. 126 to improve its structural integrity.</p> <p>These works are recommended by arborists (Appendix 3) and have been reviewed by specialist heritage advisors (Appendix 1).</p> <p>The implementation of an ongoing vegetation management regime, which will include new and replacement planting will ensure there is no adverse impact to the urban forest/tree canopy at Callan Park.</p>	Yes

5. Engagement

Statutory consultation is not required for the proposed tree removal and ongoing vegetation management works for the following reasons:

- (i) it will not have any impact on council-related infrastructure or services (s2.10, T&I SEPP);
- (ii) Callan Park is listed on the State Heritage Register (s2.11, T&I SEPP);
- (iii) the land is not flood liable (ss2.12 and 2.13, T&I SEPP);
- (iv) it is not located in the coastal zone (s2.14, T&I SEPP);
- (v) it does not constitute “specified development” for the purposes of s2.15 of the T&I SEPP; and
- (vi) the land is not identified as being bush fire prone (s2.16, T&I SEPP).

Furthermore, the proposed activity is wholly consistent with the Landscape Structure Plan which was the subject of extensive community consultation prior to its in January 2021.

GSP/CPMPT has consulted with Inner West Council regarding tree management at Callan Park and the ability to approve works through a development without consent pathway.

A copy of the REF will be provided to Council.

6. Environmental Impact Assessment

This chapter provides an assessment of the potential environmental impacts associated with the proposed works to thirty seven (37) trees, eight (8) of which are identified as being culturally significant, together with an ongoing vegetation management regime at Callan Park. This chapter will detail the impacts during the removal and any ongoing impacts associated with the future vegetation management and outline mitigation measures. The mitigation measures are summarised in Section 7.

6.1. EP&A Regulation 2021 – Environmental Factors to be considered

The environmental factors that the determining authority must take into account in accordance with the Guideline and Section 171(2) of the EP&A Regulation are considered below. Section 6.2 of this REF, together with specialist reports prepared in respect of heritage (**Appendix 1**), Aboriginal cultural heritage (**Appendix 2**) and Arboricultural (**Appendix 3**), make an assessment of the likely impacts of the Activity.

Table 6: Factors to be considered

Relevant Factor	Comment	Impact rating
(a) the environmental impact on the community,	The appropriate management of vegetation within the parkland precinct at Callan Park will have a positive impact on the health and sustainability of the landscape and will improve safety and amenity in the public recreation area.	Positive impact
(b) the transformation of the locality,	Whilst the proposed works will result in changes to individual trees / tree groups (pruning and / or removal), a robust vegetation management regime is integral to the proper management of public recreation spaces. The landscape character and cultural heritage values of Callan Park will be retained and preserved in accordance with the <i>Callan Park (Special Provisions) Act</i> and as a consequence there will be no substantive transformation of the locality.	Negligible impact
(c) the environmental impact on the ecosystems of the locality,	Callan Park has been extensively cleared of naturally occurring vegetation, resulting in a fragmented landscape punctuated by buildings and dominated by broad swathes of open grassed areas. Previous investigations ⁶ have confirmed that no threatened flora species were recorded on the site. Two threatened fauna species were previously recorded within a 1km radius of the site (Grey-headed flying fox and Large Bent-winged Bat). Further discussion in this regard is included at Section 6.2.3	Minor impact
(d) reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality,	The Statement of Heritage Impact (SoHI) prepared by Hector Abrahams Architect (Appendix 1) concludes that the proposed vegetation management works will not result in any impact on the heritage significance of Callan Park.	Negligible impact

⁶ Travers Ecology, December 2021

Relevant Factor	Comment	Impact rating
(e) the effects on any locality, place or building that has— (i) aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance, or (ii) other special value for present or future generations,	In addition to the aforementioned SoHI, Biosis has prepared an Aboriginal Cultural Due Diligence (Appendix 2) which has determined that there is low and moderate archaeological potential for undiscovered Aboriginal sites within Callan Park. Further discussion in this regard, together with mitigation measures is provided at Section 6.2.1.	Minor impact
(f) the impact on the habitat of protected animals, within the meaning of the <i>Biodiversity Conservation Act 2016</i> ,	The Activity is not expected to have any substantive impact on the habitat of protected fauna.	Negligible impact
(g) the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air,	The Activity is not expected to have any substantive impact on either flora or fauna.	Negligible impact
(h) long-term effects on the environment,	No long-term adverse impacts on the environment in terms of ecological, social or economic issues are anticipated. Indeed, the ongoing management of vegetation at Callan Park will enhance its public recreation use.	Negligible impact
(i) degradation of the quality of the environment,	The implementation of a tree management regime within the Park will ensure the ongoing health and vigour of the landscape as well as ensuring a high standard of amenity and safety for users of the recreation area.	Positive impact
(j) risk to the safety of the environment,	The proposed vegetation management, including pruning and removal where necessary, will improve public safety within the parklands precinct.	Positive impact
(k) reduction in the range of beneficial uses of the environment,	The proposed vegetation management program will not alter the ongoing recreational / ecological / heritage values of the parklands precinct at Callan Park.	Negligible impact
(l) pollution of the environment,	It is reasonable to expect minor impacts arising from vegetation management in terms of air and noise pollution associated with vehicles and equipment used to undertake the works. However these are short term and sporadic.	Negligible impact
(m) environmental problems associated with the disposal of waste,	Vegetative material generated by the vegetation management regime will be mulched and will be used elsewhere on the site, unless it is found to be diseased, in which case it will be removed from the site and disposed of appropriately.	Positive impact
(n) increased demands on natural or other resources that are, or are likely to become, in short supply,	The proposed vegetation management works are not expected to place additional demand on the land, soil, water, air, minerals and energy resources such that are or are likely to be in short supply.	Negligible impact
(o) the cumulative environmental effect with other existing or likely future activities,	The proposed vegetation management is limited to select specimens within the boundaries of Callan Park that are either dead, diseased or in poor condition (or are weed species) that require works that might include pruning or removal. The vegetation management regime will not alter the continued use of the parklands precinct for recreation purposes.	Negligible impact
(p) the impact on coastal processes and coastal hazards, including those under projected climate change conditions,	Callan Park is not mapped as being in the coastal zone or to be the subject of coastal hazards.	Negligible impact
(q) applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1,	The proposed change of use is demonstrably consistent with the relevant strategic plans, policies and statutory provisions (as detailed in Section 4 of this REF)	Negligible impact

Relevant Factor	Comment	Impact rating
(r) other relevant environmental factors.	Nil	Negligible impact

6.2. Consideration of Key Issues

The following section includes a description of those aspects of the environment that are likely to be affected during the vegetation management and the likely significance of the impact. It considers the legislative requirements of the following:

- EP&A Act, 1979 and EP&A Regulation 2021, including the Guidelines for Division 5.1 Assessments
- *Heritage Act 1977*
- *National Parks and Wildlife Act 1974*
- Impacts to Matters of National Environmental Significance under the *Environment Protection and Biodiversity Conservation Act 1999*
- *Biodiversity Conservation Act 2016*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*

6.2.1. Aboriginal Cultural Heritage impacts

Aboriginal people lived on the shores of Sydney Harbour for 20,000 to 30,000 years before the Europeans settled the area. They first arrived in southern Australia in the middle of the last ice age when Sydney Harbour was a river valley and giant marsupials are thought to have inhabited the area.

Archaeologists have described the people who lived around the site of Callan Park as the Wangal clan or band. They lived mostly within an area along the Parramatta River from about Petersham westward. The Wangal were part of the Eora or Dharug tribes.

Evidence remains of occupation of the site by the Wangal people, with shell middens at Callan Point, on the north-eastern side of the point, and axe grinding grooves and rock paintings elsewhere in the area. The presence of these sites indicates that the whole area from the headland to King George Park was the focus of Aboriginal activity. The place is important to Aboriginal people and especially to members of the Metropolitan Land Council because it provides evidence of the long history of Aboriginal ownership and occupation of the Sydney area (CMP 2011).

The Aboriginal Cultural Due Diligence Assessment prepared by Biosis (**Appendix 2**) indicates that Callan Park has experienced varying levels of disturbance throughout and over time. It has been subjected to extensive native vegetation clearance, with limited native, mature vegetation remaining.

Disturbance due to historical market gardening, residences, landscaping, bulk excavation, the hospital development and associated infrastructure was evident in historical aerial imagery and during the field investigation. A review of the historical photographic imagery showed that the ground surface had been extensively disturbed with multiple stages of construction occurring from at least 1943.

Throughout the site, high levels of disturbance were evident in the buildings, fencing, landscaping, park facilities, roads, driveways, and subsurface services and several areas of the ground surface had been altered as evidenced through grading and unnatural flattening of raised areas.

Constructing these items and altering the natural contours of the ground surface would have involved cutting, terracing and filling activities and resulted in a high level of ground disturbance. This would therefore have impacted both surface and subsurface deposits. Limited areas within the site were observed to have not been subject to moderate or high levels of disturbance. Soils disturbed from vegetation clearing and market gardening experience higher levels of displacement and re-deposition but with shallower impacts. The two soil landscapes within the study area also experience higher levels of erosion, especially when cleared of vegetation. The hospital development, park amenities, other structures and associated infrastructure involved the removal or modification of soils for installation of building foundations, fence lines, roads, gardens and landscaped areas and utilities including sewer, water, and electricity. Disturbances of this nature are characterised as high. The construction of the artificially raised and flattened areas would have likely involved bulk excavation. This would have displaced the soils in these areas and resulting in high disturbance levels. The disturbances observed throughout the study area would likely result in the limited preservation of *in situ* archaeological deposits in subsurface layers.

Existing Aboriginal sites

The Aboriginal Cultural Due Diligence report indicates that despite the evident disturbance within Callan Park, several Aboriginal sites are present within its boundaries. There is also the potential for further Aboriginal objects to exist in these locations, albeit potentially not in situ. As such, the Due Diligence report recommends a buffer of 25 metres to be placed around the recorded locations of

The assessment considers there to be moderate Aboriginal archaeological potential within these buffered areas. Within these areas, further investigation may be required where ground disturbing works cannot be avoided. Ground disturbing works include tree planting, stump grinding, excavation, stockpiling and grading of the ground surface. It does not include works that are considered to have a minimal disturbance such as grass cutting, leaf litter removal and tree trimming or pruning.

It is noted that Tree 252 (Lemon Scented Gum) appears to be in the general vicinity of (exact distance unknown) [REDACTED] The scope of works associated with this specimen is the removal, by Selective Pruning, of a large, significantly decayed branch within the crown of the tree. On the basis that no ground disturbance is associated with the pruning the works are unlikely to have any impact on the identified AHIMS site.

In terms of the ongoing management of vegetation at Callan Park, it should be noted that the Due Diligence investigations could not adequately investigated every large tree across the site. As a result, Figure 8 of the Due Diligence report (reproduced below at **Figure 7**) identifies areas that requires further investigation to identify the age and species of the vegetation these locations. These areas have been selected based on the archaeological survey paired with aerial photographs to identify areas that historical were cleared of vegetation.

The Due Diligence also makes a general recommendation to Greater Sydney Parklands that an updated Aboriginal Heritage Management Plan (AHMP) be prepared for Callan Park in consultation with the Aboriginal community and Heritage NSW. The updated AHMP should be a comprehensive document that provides strategies for the management of known and potential Aboriginal cultural heritage sites within the study area. The Due Diligence report confirms that the updated AHMP is not required for the proposed works to proceed.

Image redacted

Figure 7: Areas that require further Aboriginal archaeological investigation

Source: Figure 8 of Aboriginal Cultural Due Diligence report, Biosis (**Appendix 2**)

Significance rating: Minor

Mitigation measure(s):

Immediate works

- Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying Heritage NSW and Aboriginal stakeholders.
- If any suspected human remains are discovered during any activity, the following protocol must be observed:
 - Immediately cease all work at that location and not further move or disturb the remains.
 - Notify the NSW Police and Heritage NSW Environmental Line on 131 555 as soon as practicable and
 - provide details of the remains and their location.
 - Not recommence work at that location unless authorised in writing by Heritage NSW.
- All contractors should be made aware that under the National Parks and Wildlife Act, it is an offence to disturb or destroy an Aboriginal object without an Aboriginal Heritage Impact Permit under S.90 of the Act.

Ongoing Vegetation Management

- Where works are proposed in areas with mature and native vegetation detailed assessment by an arborist is required to identify the age, species, and any potential cultural modification. Areas featuring mature vegetation for further assessment by an arborist are identified in Figure 8 of the Aboriginal Cultural Due Diligence Assessment. These areas have been selected based on the archaeological survey paired with the aerial photographs to identify areas that historical were cleared of vegetation.

Further assessment in the form of an ACHA is recommended if impacts to the AHIMS sites cannot be avoided during the proposed works. Impacts include ground disturbances as a result of the proposed works such as tree planting, stump grinding, excavation, stockpiling and grading of the ground surface.

If, as part of the ACHA, test excavations are required it will be necessary to apply for an AHIP. Under Requirement 14 of the Code, any test excavations in or within 50 metres of a known or suspected shell midden, or within 50 metres of an area where burial sites are known or likely to exist, require an AHIP (DECCW 2010b, pp. 24–5). It is recommended a test excavation methodology be developed in consultation with Heritage NSW and RAPs being consulted as part of the ACHA. AHIPs should be prepared by a qualified heritage consultant and lodged with Heritage NSW.

- buffer does not apply to the area around the site which has been significantly disturbed by the road. If ground disturbing works cannot be avoided in the proposed buffered area, further assessment in the form of an ACHA is recommended. This does not include disturbed areas within the proposed buffer, including the road. Ground disturbing works include tree planting, stump grinding, excavation, stockpiling and grading of the ground surface. It does not include works that are considered to have a minimal disturbance such as grass cutting, leaf litter removal and tree trimming or pruning.
- Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying Heritage NSW and Aboriginal stakeholders.
- If any suspected human remains are discovered during any activity, the following protocol must be observed:
 - Immediately cease all work at that location and not further move or disturb the remains.
 - Notify the NSW Police and Heritage NSW Environmental Line on 131 555 as soon as practicable and
 - provide details of the remains and their location.
 - Not recommence work at that location unless authorised in writing by Heritage NSW.
- All contractors should be made aware that under the National Parks and Wildlife Act, it is an offence to disturb or destroy an Aboriginal object without an Aboriginal Heritage Impact Permit under S.90 of the Act.

6.2.2. Heritage Impact (Post-1788)

The Callan Park is listed as a State Heritage Item (No. 00818) “Callan Park Conservation Area & Buildings”.

The Conservation Management Plan (CMP) (2011) describes the heritage significance of Callan Park as follows:

Callan Park has a high level of heritage significance for the people of New South Wales:

Callan Park contains the fabric of two grand Victorian gentlemen's estates and is able to demonstrate the pastoral character of this period. The original relationship between Garry Owen House (later Callan Park) and Broughton Hall has been retained and their grounds are still interpretable and intact. These grounds became the sites of the mental health institutions that adopted their respective names.

Callan Park demonstrates two major changes in mental health care in NSW. It contains original architecture and landscaping of both hospitals. The buildings associated with the former Callan Park mental hospital are of exceptional significance, in particular the Kirkbride Block:

The Kirkbride complex has a unique place in the history of mental hospitals in New South Wales. It is the only mental hospital which fully represented the ideal and classic 'moral therapy' style of institution. In the twentieth century it became one of the major examples of the modern custodial institutions. Although now seen as inappropriate for a modern mental health care system, it stands as a significant reminder, undoubtedly the most significant in New South Wales, of two major developments in the history of mental health care.

(Assessment in Conservation Plan for the Kirkbride Block Rozelle Hospital, State Projects, NSW Public Works, May 1993, Volume 2: 102.)

The Broughton Hall Psychiatric Clinic, also unique in the history of mental health care in NSW, is still in operation. While most of its facilities are outdated for contemporary patient care its fabric reflects the institution's pioneering methods in voluntary patient care. The Clinic's buildings, while not all of high significance are consistent in character and material, and are mostly grouped around a unique inter war garden of outstanding aesthetic quality. The garden's links with the earlier Keep period and use in patient care make it a landscape of exceptional significance. These aspects of the Broughton Hall Psychiatric Clinic were continued with the construction of an integrated rehabilitation clinic during the first half of the 1960s.

Callan Park's landscaped spaces and landmark buildings have contributed visually and socially to the local area for over 100 years. The foreshore areas of the site are significant as rare open space elements. Callan Point is considered to be the most important Aboriginal archaeological site remaining on the southern shores of Sydney Harbour. Callan Point also contains rare examples of pre-European vegetation and unique European rock carvings.

The site as a whole has very high levels of social significance and has special associations for the local and broader community both as an open space resource and for its cultural and aesthetic value.

As detailed in Section 3 of this REF, eight (8) of the trees that would be the subject of the Activity are identified as having cultural heritage significance⁷. Hector Abrahams Architects has prepared a Statement of Heritage Impact (**Appendix 1**) which examines the potential impact of the immediate works to some thirty seven (37) trees / groups of trees as well as the potential impacts associated with ongoing vegetation management at Callan Park.

⁷

Based on the Callan Park Conservation Management Plan (2011)

The report confirms that three of the significant trees will require a separate section 60 approval. The works to the remaining thirty-four trees fall under section 57 standard exemptions⁸ and are assessed in the SoHI.

The SoHI identifies areas of archaeological potential as shown in Figure 8. Ground disturbance in these areas should be restricted where possible to minimise potential impacts to archaeology.

Image partially redacted



Figure 8: Map showing location of trees and approximate areas of archaeological potential
Source: Hector Abrahams Architects 2023

The SoHI also makes recommendations for the ongoing vegetation management regime to ensure the conservation and management of the landscape at Callan Park, key to which is any proposal to remove trees needs to be assessed by a suitably qualified heritage professional and any such works that do not fall within the Standard Exemption 13: Vegetation will require a section 60 application.

⁸ NSW Heritage Act 1977

The report concludes that there is no impact to the heritage significance of Callan Park as a result of the proposed works.

Significance rating: Negligible

Mitigation measure(s):

Immediate Works

- Prior to commencement of works, approval is required to be obtained under NSW Heritage Act 1977 (s60) for the removal of Tree Nos. 402, 447 and 511.
- Any stump grinding machine should be hand-held to ensure control. This should ensure any potential archaeology cannot be disturbed by the tree stump removal, and that the site can be made as safe and as usable as possible by removing potential trip hazards.
- All employees, contractors and sub-contractors engaged to undertake the proposed activity should be made aware, via an induction program prior to works commencing, that it is an offence to damage or uncover a relic without prior approval of the Heritage Council of NSW.

Ongoing Vegetation Management

- Where trees are to be removed in areas of archaeological potential or in the vicinity of the former drive entrance no stump grinding is to occur.
- Where pruning, removal of dead wood or crown removal is greater than 30% a section 60 application will be required.
- Regular arboriculture oversight (every 5 years)
- Documenting trees - consider collating all resources which identify significant trees and other landscape elements into a single resource. Current significant trees are identified within the CMP on either a diagram or in the inventories and neither source is comprehensive. The two should be combined in an easily accessible format to capture all significant trees.
- Senescence plan – plan identifying trees that are likely to die over the next 20 years. The plan should include a plan for their replacement.
- Conducting regular maintenance of the trees in accordance with the recommendations of an arboriculturist.
- Compliance with the relevant standards set out in Standard Exemption 13: Vegetation Specified Activities / Works.
- Where trees to be removed are in an identified area of archaeological potential, the stump will be cut to ground level for public safety. If the stump is required to be cut below ground level stump grinding must be controlled and is to be limited to 100mm below the existing ground level of the stump only. When removing roots, only those on the surface, to remove trip hazards, can be removed by stump grinding. The trip hazards caused by surface roots may also be removed by increasing the surface area and covering the roots.
- Any stump grinding machine should be hand-held to ensure control. This should ensure any potential archaeology cannot be disturbed by the tree stump removal, and that the site can be made as safe and as usable as possible by removing potential trip hazards.
- All employees, contractors and sub-contractors engaged to undertake the proposed activity should be made aware, via an induction program prior to works commencing, that it is an offence to damage or uncover a relic without prior approval of the Heritage Council of NSW.
- Planting of replacement trees to occur within twelve months of tree removal, consistent with arborist advice, the Callan Park Tree Management Strategy 2020 by Tree IQ (see Section 5.3), the Callan Park Landscape Structure Plan by Tyrrell Studio and Terroir (2021) or an alternate planting strategy that may be adopted by CPMPT. Where a significant tree has been removed it should be replaced in the same location and species where possible, subject to arborist advice.
- Consent pathways:

-
- Proposals to remove trees should be assessed by a suitably qualified and experienced heritage professional.
 - As of August 2023, Section 57 the relevant standard exemption for works to vegetation is, *Standard Exemption 13: Vegetation*. Work which falls within a section 57 Standard Exemption must be assessed and a report prepared by a suitably qualified and experienced professional. It should be noted that standard exemptions are subject to change and should be reviewed prior to undertaking a s57 exemption.
 - Section 60 – Works which do not fall within the Standard Exemptions will require a Section 60 application.

6.2.3. Biodiversity

Callan Park has historically been the subject of extensive clearing of naturally occurring vegetation, resulting in a fragmented landscape punctuated by buildings, broad swathes of open grassed areas and an extensive network of internal roads and pathways.

Flora

The Native Vegetation of the Sydney Metropolitan Area OEH (2016) maps the vegetation within the site as follows:

- Urban Exotic/Native, and
- PCT 1234 - Swamp Oak Swamp forest fringing estuaries, Sydney Basin Bioregion.

Ecological investigations⁹ commissioned by Greater Sydney Parklands (GSP) in 2021, which included site-specific literature reviews, database analysis and field survey verified the Swamp Forest, which was found to occur naturally in a thin band around Callan Point. It was also found to occur, in varying condition and integrity, in planted pockets and belts across the site.

Three vegetation communities were found across the site that may be considered significant with high potential as listed under the *Biodiversity Conservation Act* as threatened ecological communities (TECs): Sydney Turpentine-Ironbark Forest; Swamp Oak Floodplain Forest; and Lowland Rainforest. The area of these constitutes 5% of the total vegetated area at Callan Park. It is also noted that no endangered flora populations were identified during the 2021 ecological investigations.

In relation to the immediate works, it is noted that Tree No. 252 (Lemon scented gum) and Tree No. 276 (tree group – Spotted Gum) are located in the north eastern corner of the site, within a mapped area of Sydney Turpentine Ironbark Forest (see **Figure 9** below).

⁹ Travers Ecology (draft) Biodiversity Assessment Report Callan Park 9 December 2021

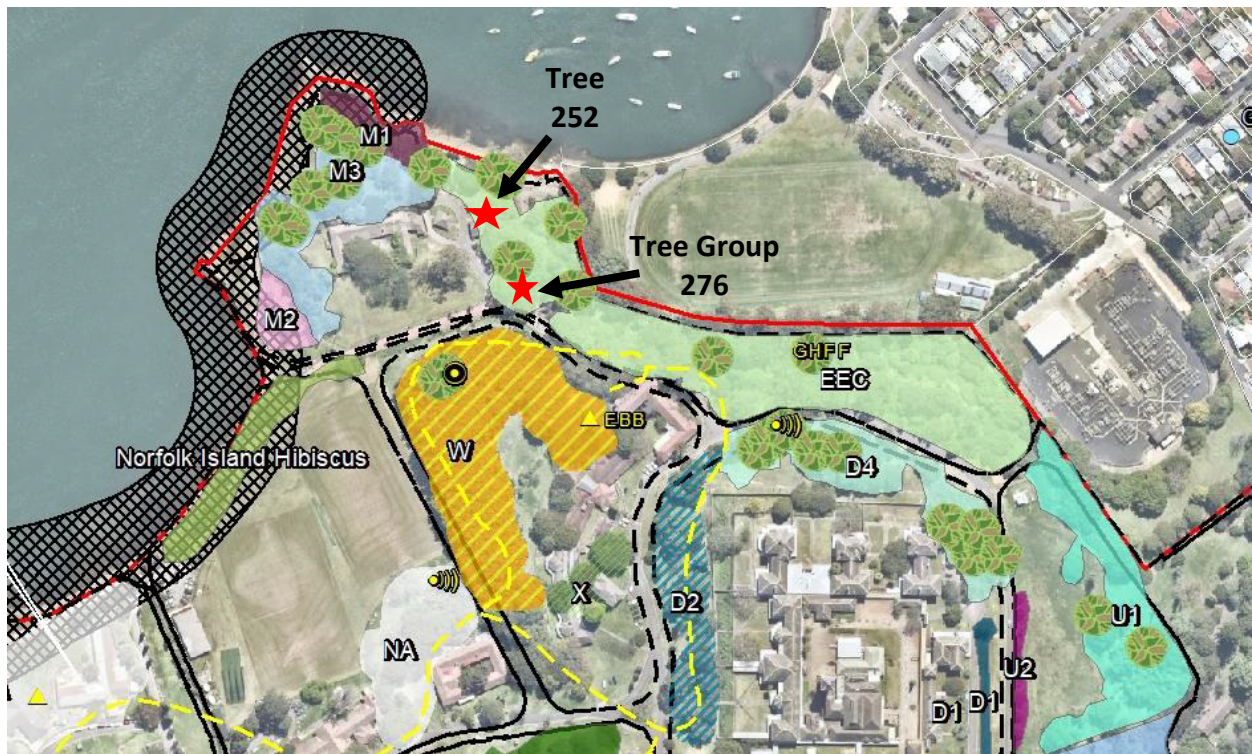


Figure 9: Location of mapped EEC Sydney Turpentine Ironbark Forest and approx. location of Tree Nos. 252 and 276

Source: (Base image) Travers Ecology Biodiversity Assessment Callan Park

The extent of works to these trees / tree groups is limited to pruning. The photographs below were taken by Tree IQ and are included in the Arboricultural Assessment at **Appendix 3**.



Tree No. 252



Tree No. 276 (group)

The pruning works to Tree Nos. 252 and 276 will not only improve public safety but could also reasonably be expected to have a positive impact on the trees health. It is therefore considered that the likely impacts on the EEC will be negligible.

In terms of the ongoing vegetation management works, any tree removal within mapped EECs will require specialist advice as to the impact on the EEC and whether any offset planting is required.

Fauna

Two (2) threatened fauna species Grey-headed Flying Fox and Large bent winged Bat were identified during the fauna survey.

Grey-Headed Flying-foxes are canopy feeding and inhabit a wide range of habitats including rainforest, mangroves, paperbark forests, wet and dry sclerophyll forests and cultivated areas.

Grey-headed Flying-fox were recorded calling within the study area during nocturnal survey on the 16 August 2021. Within Callan Park foraging habitat is well represented by non-native plant species including scattered Lemon-scented gum (*Corymbia citriodora*), and an abundance of native Port Jackson fig (*Ficus rubiginosa*), which not only provides ample foraging habitat, but also provides roosting areas for extant and migrant camps.

Whilst the proposed tree management works are not expected to significantly impact the local population, it is recommended that existing foraging habitat is preserved and where possible, introduce local native flowering eucalypts within landscaped areas.

The **Large Bent-winged Bat** would forage predominantly above the canopy and down in more open areas. Callan Park provides suitable foraging and roosting habitat and that this species would routinely utilise the study area for foraging and roosting.

Given the highly mobile nature of this species and its known ability to move across and utilise some urban landscapes it is predicted that the proposed aboricultural works will not inhibit local movements and dispersal. Therefore, this species will not likely be significantly impacted by the proposed Activity.

The following notable fauna habitat features were observed present:

Ten (10) hollow bearing trees containing good quality medium hollows, each showing signs of use.

- Year-round nectar-producing tree species, principally *Eucalyptus* species
- Fruit producing fig trees
- Dense mid and canopy foliage areas
- Ephemeral storm water drainage line
- Permanent ponds
- Open lawned expanse
- Abandoned commercial buildings.

Hollow-bearing trees were surveyed during the 2021 fauna survey with a total of ten (10) trees consisting of one (1) Sydney Blue Gum, four (4) stags and five (5) exotic Box Elder trees each containing good quality hollows. These trees were found to contain ten (10) small hollows (0–10 cm in aperture), nine (9) medium hollows (15–20 cm in aperture) and one (1) large hollow (20–30 cm in aperture).

During the fauna survey these hollow-bearing trees were found to contain common brush tail possum, common ringtail possum and signs of avian use including chew marks and one (1) recently utilised Rainbow Lorikeet nest. None of these hollows are considered significant habitat trees or suitable for threatened large forest owls or cockatoos.

The proposed Activity involves the removal of four (4) Box Elder trees - Tree Nos. 76, 78, 80 and 198. The Tree Survey Report prepared by Martin Peacock Tree Care (20 June 2020) confirms the presence of wounds and cavities in Tree Nos. 80 and 198. All four specimens have been assessed as having a Useful Life Expectancy of less than 5 years and are recommended for removal due to advanced stages of decay and previous branch failures.

It is also noted that *Acer negundo* (Box Elder) is considered an environmental weed species. Notwithstanding, replacement hollows or nesting boxes should be provided in proximity to the location of the removed hollow bearing tree(s) to minimise the displacement of any fauna inhabiting the existing hollows.

Protected migratory species (National)

No nationally protected migratory bird species were recorded present within Callan Park during survey, and it is concluded that the proposed development is not likely affect breeding habitat or habitat otherwise of importance for migratory species protected under the EPBC. Therefore, these species will not likely offer constraint to the Activity.

Significance rating: Negligible

Mitigation measure(s):

Immediate Works

- Any adjacent trees to be retained and that are close to the trees / groups of trees to be removed / pruned shall be protected in accordance with Australian Standard AS4970 – 2009 Protection of trees on development sites, for the duration of the works and decommissioning of any site compound.
- A visual inspection of each tree / group of trees for the presence of fauna immediately prior to works.
- Any native fauna encountered shall be relocated by a qualified ecologist or organisation prior to works commencing.
- Soil transportation within, into or out of the area shall be minimised to reduce the spread of weeds.
- Where trees to be removed include hollows, replacement hollows or nesting boxes should be provided in proximity to the location of the removed hollow bearing tree.
- Mulch generated from exotic trees or other weed species cleared shall not be used on site. It shall be removed from the site and disposed of appropriately in accordance with legislative requirements.

Ongoing Vegetation Management

- Disturbance to any native vegetation shall be minimised where possible.
- Any adjacent trees to be retained and that are close to the trees / groups of trees to be removed / pruned shall be protected in accordance with Australian Standard AS4970 – 2009 Protection of trees on development sites, for the duration of the works and decommissioning of any site compound.
- A visual inspection of each tree / group of trees for the presence of fauna immediately prior to works.
- Any native fauna encountered shall be relocated by a qualified ecologist or organisation prior to works commencing.
- Soil transportation within, into or out of the area shall be minimised to reduce the spread of weeds.

- Any stump / hollow from hollow-bearing trees should be retained, where possible. Where this is not possible, replacement hollows or nesting boxes should be provided in proximity to the location of the removed hollow bearing tree.
- Mulch generated from exotic trees or other weed species cleared shall not be used on site. It shall be removed from the site and disposed of appropriately in accordance with legislative requirements.

6.2.4. Visual and amenity impacts

The heritage status of Callan Park precludes any substantive changes to the buildings or their curtilages. The landscape is similarly protected, such that any works must be the subject of rigorous heritage and arboricultural assessment (**Appendices 1** and **3** respectively). Indeed, approval for any works to vegetation identified as having cultural heritage significance requires approval under the *Heritage Act 1977*.

The management of the vegetation within Callan Park is necessary to ensure the health of the trees and other vegetation and conservation of significant landscapes. Furthermore, it is noted that the proposed works will not impact the layout, contours or plant species in Callan Park.

Having regard to the above, it is considered that the potential impact on the visual and/or general amenity of the parkland precinct at Callan Park will be negligible.

Significance rating: Negligible

Mitigation measure(s): NIL

6.2.5. Safety and security

Responsible vegetation management is integral to the management of any public open space. In the broader context, the proposed Activity will minimise risk and ensure ongoing public safety for the purpose of the recreation area.

The nature of the Arboricultural works necessitates the use of certain equipment and machinery which could pose a risk to public safety if appropriate access controls set out below are not implemented.

Significance rating: Minor

Mitigation measure(s):

Immediate Works and Ongoing Vegetation Management

- Install temporary barrier fencing to prevent entry into work zone and/or appropriate 'no-go zone' signage.
- If relevant prepare a risk assessment in consultation with relevant contractors and workers, safety consultants and government agencies. All risk assessments must be in accordance with ISO 31000:2009 – Risk Management and mitigation measures included in this section.
- Hazards and risks associated with the activity must be controlled in accordance with the submitted plan. All workers and contractors must be provided with the necessary tools, supervision and instruction to manage identified risks.
- A Work, Health and Safety (WHS) Management Plan is required for all activity where construction work is to be undertaken. For more information on legal obligations refer to SafeWork NSW.

6.2.6. Air quality impacts

Very minor air quality impacts could possibly arise as a result of the works, including the movement of soil and other materials around / across the work sites. Minor air quality issues may also arise through fumes and odours from machinery and tools etc.

Significance rating: Negligible

Mitigation measure(s):

Immediate Works and Ongoing Vegetation Management

- The Contractor engaged to undertake the works is required to monitor and manage dust / air quality during the works.
- All equipment will be operated in compliance with emissions standards of the *Protection of the Environment Operations Act 1997* and its regulations.
- All plant, machinery and noise generating equipment should be maintained in good working order and should be turned off when not in use.
- Where possible, plant and machinery should be fitted with emission control devices complying with Australian Design Standards and/or Clean Air Regulations.
- Dust generating works should not be undertaken or should cease during periods of high wind.
- Vehicles exiting the work site with spoil or other loose material must be fully covered.
- Prior to commencement of works suitable measures are to be implemented to ensure that sediment and other loose material is not tracked onto the roadway.

6.2.7. Noise impacts

The nearest residential receivers to Callan Park are those located on the southern side of Balmain Road, physically separated from the recreation area by approximately 25-30 metres (to the fenceline).

There are other residential properties in Glover Street and Wharf Road, which are within 10 metres of the fenceline to Callan Park, as the road reserves of these streets are considerably narrower than that of Balmain Road. Similarly the dwellings in Manning Street to the east of Callan Park are within 10-15 metres of the fenceline.

It is reasonable to expect some noise associated with the vegetation management works, due to the nature of equipment required (i.e. chainsaws, woodchippers, stump grinder as appropriate etc), however any noise will be a short-term impact, as typically the works would be completed within a day, depending on the size of the tree.

Noise will only be an issue when the tree to which works are required is located in proximity to the boundaries of Callan Park that interface with residential properties.

Significance rating: Minor

Mitigation measure(s):

Immediate Works and Ongoing Vegetation Management

- Construction works to be restricted as follows:
Monday – Friday 7.00am – 6.00pm
Saturday 7.00am – 6.00pm
Work permitted on Sundays as required, subject to the approval of Centennial Park and Moore Park Trust/ Greater Sydney Parklands Trust
No work on Public Holidays

- The Contractor will be required to ensure that all equipment is adequately maintained and operated in compliance with emissions standards of the *Protection of the Environment Operations Act 1997* and its regulations.
- Wherever practicable, vehicles and machinery should be fitted with exhaust silencers and / or other noise mitigation devices.
- Turn off plant and machinery when not in use.
- Construction noise levels shall meet the requirements and levels detailed within the Interim Construction Noise Guideline (DECC 2009).

6.2.8. Transport, traffic, access and parking

Callan Park has an extensive network of internal roads and pedestrian pathways.

Pedestrians and cyclists have right-of-way in Callan Park and a 25 km/hour speed limit applies, with the exception of the Bay Run (Waterfront Drive), where the maximum speed limit is restricted to 10 km/hour.

The trees / tree groups that are the subject of this REF are located in various parts of Callan Park. Vehicles associated with the arboricultural works will likely access the worksite(s) via the existing points of access at either Wharf Road via Balmain Road or from Balmain Road, Gate A opposite Cecily Street.

Due to the size of the site, the scale and sporadic nature of the works (i.e. as and when required), it is considered unlikely that the works will have a significant impact on traffic volumes in the local public road network. Such works could have short term impacts on pedestrian and vehicle movements in the immediate vicinity of the individual worksites as vehicles associated with the works enter / exit the site and temporary construction fencing is installed around work sites within these spaces to ensure public safety.

Significance rating: Negligible

Mitigation measure(s):

Immediate Works and Ongoing Vegetation Management

- Prior to the commencement of works, the contractor engaged to undertake the works is to prepare and submit to CPMPT a Pedestrian and Traffic Management Plan for the duration of the construction phase which is to include, but not be limited to the following:
 - details of the manner in which pedestrian and traffic arrangements will be managed during the works period.
 - details of how construction vehicles/ machinery will access and leave the work site in a manner that minimises interference with the surrounding road network.
- Appropriate traffic / pedestrian management measures, including temporary fencing / barriers, precautionary signage, traffic controllers etc shall be implemented and maintained for the duration of the works to minimise delays to traffic / pedestrians and cyclists.

6.2.9. Management of Works

As a publicly accessible recreation area, any construction or other works involving the use of plant and equipment requires appropriate management to ensure the safety of users of the Park.

Significance rating: Minor

Mitigation measure(s):

Immediate Works and Ongoing Vegetation Management

- A detailed Construction Management Plan is to be prepared prior to the commencement of works and implemented during the undertaking of works. The Construction Management Plan is to include, but not be limited to:
 - a) How compliance with the environmental controls and mitigation measures detailed in this REF is to be achieved.
 - b) Construction noise management measures.
 - c) Vibration management measures.
 - d) Sediment and erosion control measures.
 - e) Construction site management measures.
 - f) Construction traffic management measures.
 - g) Air quality and dust management measures.
 - h) Restrictions on hours during construction.
 - i) Unexpected finds protocols
 - j) Training of responsibilities under National Parks and Wildlife Act 1975, Heritage Act 1977 and any other relevant legislation
 - k) Pedestrian safety and amenity.
- Works are to occur within the following times:
 - Monday to Friday 7 am to 6 pm
 - Saturday 7 am to 6 pm
 - Work permitted on Sundays as required subject to the approval of Centennial Park and Moore Park Trust/ Greater Sydney Parklands Trust

6.2.10. Cumulative Impacts on the environment

Cumulative impacts are incremental environmental impacts caused by the combination of past, present, and reasonably foreseeable future actions. Cumulative impacts accumulate over time, from one or more sources. While impacts may be insignificant in isolation, significant impacts may occur when individual effects are considered in combination. As such assessment of the Activity is required in the context of other projects in the vicinity and where construction and/or operational timeframes are likely to be concurrent.

The works are part of an ongoing vegetation management regime proposed to be implemented within the Parklands Precinct at Callan Park. The management of vegetation is designed to maintain public safety in the recreation area as well as preserving and enhancing the heritage landscapes and ecological values of the place.

Having regard to the scale of the works, their sporadic nature and given the size of the Precinct, it is considered unlikely that the Activity will have any substantive cumulative impact.

7. Mitigation Measures

The following Mitigation Measures will be imposed to ensure that any development activity is carried out in accordance with the environmental assessment of this report.

Table 7: Mitigation Measures – Immediate Works to Trees / Tree Groups

Issue	Mitigation measure	Timing/Responsibility
Any Approvals required	Approval is required under NSW Heritage Act 1977 (s60) for the removal of Tree Nos. 402, 447 and 511.	Prior to Commencement / CPMPT
Ground disturbance (stump removal/grinding, tree planting, weeding, excavation, stockpiling, grading, etc)	<p>Ground disturbance for stump removal/weeding/planting can occur without specific conditions in areas of low Aboriginal or European archaeological potential.</p> <p>Areas of low potential are identified in:</p> <ul style="list-style-type: none"> Figure 7 – low Aboriginal archaeological potential is identified in green Figure 8 – low European archaeological potential is the areas not identified 	Prior to Commencement / CPMPT
<p>Aboriginal Cultural Heritage – Figure 7</p> <p>Further assessment in the form of an ACHA is recommended if impacts to these sites cannot be avoided during the proposed works. If, as part of the ACHA, test excavations are required it will be necessary to apply for an AHIP. Under Requirement 14 of the Code, any test excavations in or within 50 metres of a known or suspected shell midden, or within 50 metres of an area where burial sites are known or likely to exist, require an AHIP (DECCW 2010b, pp. 24–5). It is recommended a test excavation methodology be developed in consultation with Heritage NSW and RAPs being consulted as part of the ACHA. AHIPs should be prepared by a qualified heritage consultant and lodged with Heritage NSW.</p>		
<p>European Cultural Heritage – Figure 8</p> <p>Where trees to be removed are located in an area of archaeological potential the stump will be cut to ground level for public safety. If the stump is required to be cut below ground level stump grinding must be controlled and is to be limited to 100mm below the existing ground level of the stump only. When removing roots, only those on the surface, to remove trip hazards, can be removed by stump grinding. The trip hazards caused by surface roots may also be removed by increasing the surface area and covering the roots. The stump grinding machine should be hand held to ensure control. This should ensure any potential archaeology cannot be disturbed by the tree stump removal, and that the site can be made as safe and as usable as possible by removing potential trip hazards</p>		
Aboriginal Archaeological Heritage	Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying Heritage NSW and Aboriginal stakeholders.	During works / Contractor
	<p>If any suspected human remains are discovered during any activity, the following protocol must be observed:</p> <ul style="list-style-type: none"> Immediately cease all work at that location and not further move or disturb the remains. 	During works / Contractor

Issue	Mitigation measure	Timing/Responsibility
	<ul style="list-style-type: none"> Notify CPMPT, the NSW Police and Heritage NSW Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location. Not recommence work at that location unless authorised in writing by Heritage NSW. 	
	All contractors should be made aware that under the National Parks and Wildlife Act, it is an offence to disturb or destroy an Aboriginal object without an Aboriginal Heritage Impact Permit under S.90 of the Act.	Prior to Commencement / Contractor
Heritage	All employees, contractors and sub-contractors engaged to undertake the proposed activity should be made aware, via an induction program prior to works commencing, that it is an offence to damage or uncover a relic without prior approval of the Heritage Council of NSW.	Prior to Commencement / Contractor
	<p>For the Port Jackson Fig No.402 -</p> <p>Located in the approximate area of the original entrance drive, the Port Jackson Fig is in an area of potential archaeological significance. Where trees to be removed are located in an area of archaeological potential the stump will be cut to ground level for public safety. If the stump is required to be cut below ground level stump grinding must be controlled and is to be limited to 100mm below the existing ground level of the stump only. When removing roots, only those on the surface, to remove trip hazards, can be removed by stump grinding. The trip hazards caused by surface roots may also be removed by increasing the surface area and covering the roots.</p>	During Construction/ Contractor
Biodiversity	A visual inspection of each tree / group of trees for the presence of fauna immediately prior to works. An ecologist shall be contacted for further advice if fauna is detected prior to works.	Prior to Commencement / Contractor
	Install temporary barrier fencing to prevent entry into adjacent vegetation and/or appropriate 'no-go zone' signage.	Prior to Commencement / Contractor
	Disturbance to any native vegetation shall be minimised where possible.	Ongoing / Contractor
	Where trees to be removed include hollows, replacement hollows or nesting boxes should be provided in proximity to the location of the removed hollow bearing tree.	Prior to Commencement / Contractor
	Any adjacent trees to be retained and that are close to the trees / groups of trees to be removed / pruned shall be protected in accordance with Australian Standard AS4970 – 2009 Protection of trees on development sites, for the duration of the works and decommissioning of any site compound.	Prior to Commencement / Contractor
	Soil transportation within, into or out of the area shall be minimised to reduce the spread of weeds.	Prior to Commencement / Ongoing/ Contractor
	Mulch generated from exotic trees or other weed species cleared shall not be used on site. It shall be removed from the site and disposed of appropriately in accordance with legislative requirements.	Ongoing / CPMPT
	Any root pruning or shaving shall be undertaken under the supervision of an arborist.	Ongoing / CPMPT
Safety	Install temporary barrier fencing to prevent entry into work zone and/or appropriate 'no-go zone' signage.	During works / Contractor

Issue	Mitigation measure	Timing/Responsibility
	<p>If relevant prepare a risk assessment in consultation with relevant contractors and workers, safety consultants and government agencies. All risk assessments must be in accordance with ISO 31000:2009 – Risk Management and mitigation measures included in this section.</p> <p>Hazards and risks associated with the activity must be controlled in accordance with the submitted plan. All workers and contractors must be provided with the necessary tools, supervision and instruction to manage identified risks.</p> <p>A Work, Health and Safety (WHS) Management Plan is required for all activity where construction work is to be undertaken. For more information on legal obligations refer to SafeWorkNSW.</p>	Prior to Commencement / Contractor
Air Quality	The Contractor engaged to undertake the works is required to monitor and manage dust / air quality during the works	During works / Contractor
	All equipment will be operated in compliance with emissions standards of the <i>Protection of the Environment Operations Act 1997</i> and its regulations.	During works / Contractor
	All plant, machinery and noise generating equipment should be maintained in good working order and should be turned off when not in use	During works / Contractor
	Where possible, plant and machinery should be fitted with emission control devices complying with Australian Design Standards and/or Clean Air Regulations	During works / Contractor
	Dust generating works should not be undertaken or should cease during periods of high wind	During works / Contractor
	Vehicles exiting the work site with spoil or other loose material must be fully covered	During works / Contractor
	Suitable measures are to be implemented to ensure that sediment and other loose material is not tracked onto the roadway	Prior to commencement / Contractor
Noise	The Contractor will be required to ensure that all equipment is adequately maintained and operated in compliance with emissions standards of the <i>Protection of the Environment Operations Act 1997</i> and its regulations.	During works / Contractor
	Wherever practicable, vehicles and machinery should be fitted with exhaust silencers and / or other noise mitigation devices	During works / Contractor
	Turn off plant and machinery when not in use.	During works / Contractor
	Construction noise levels shall meet the requirements and levels detailed within the Interim Construction Noise Guideline (DECC 2009).	During works / Contractor
Construction (Works) Management Plan	<p>A detailed Construction Management Plan is to be prepared prior to the commencement of works and implemented during the undertaking of works. The Construction Management Plan is to include, but not be limited to:</p> <ul style="list-style-type: none"> a. How compliance with the environmental controls and mitigation measures detailed in this REF is to be achieved. b. Construction noise management measures. c. Vibration management measures. d. Sediment and erosion control measures. e. Construction site management measures. f. Construction traffic management measures. g. Air quality and dust management measures. h. Restrictions on hours during construction. i. Unexpected finds protocols j. Training of responsibilities under National Parks and Wildlife Act 1975, Heritage Act 1977 and any other relevant legislation 	Prior to Commencement / Contractor

Issue	Mitigation measure	Timing/Responsibility
	k. Pedestrian safety and amenity.	
Pedestrian and Traffic Management	<p>Prior to the commencement of works, the contractor engaged to undertake the works is to prepare and submit to CPMPT a Pedestrian and Traffic Management Plan for the duration of the construction phase which is to include, but not be limited to the following:</p> <ul style="list-style-type: none"> • details of the manner in which pedestrian and traffic arrangements will be managed during the works period. • details of how construction vehicles/ machinery will access and leave the work site in a manner that minimises interference with the surrounding road network. <p>Appropriate traffic / pedestrian management measures, including temporary fencing / barriers, precautionary signage, traffic controllers etc shall be implemented and maintained for the duration of the works to minimise delays to traffic / pedestrians and cyclists.</p>	<p>Prior to Commencement / Contractor</p> <p>During works / Contractor</p>
Works Hours	<p>Works are to occur within the following times:</p> <p>Monday to Friday 7 am to 6 pm</p> <p>Saturday 7 am to 6 pm</p> <p>Work permitted on Sundays as required subject to the approval of Centennial Park and Moore Park Trust/ Greater Sydney Parklands Trust</p> <p>No work permitted on Public Holidays</p>	During works / Contractor
Tree Replacement	A replacement tree should be planted for each tree removed. The trees should be advanced size stock (min 100L) supplied in accordance with Australian Standard 2303: Tree Stock for Landscape Use (2015). The planting of replacement trees should occur within twelve months of tree removal and be guided by the Callan Park Tree Management Strategy (2020) by TreeIQ (see Section 5.3), the Callan Park Landscape Structure Plan by Tyrrell Studio and Terroir (2021) or an alternative planting strategy adopted by CPMPT.	CPMPT/ Within 12 months of removal

Table 8: Mitigation Measures – Ongoing Vegetation Management

Issue	Mitigation measure	Timing/Responsibility
General (applies to all aspects of ongoing vegetation management works)	<p>Aboriginal Cultural Heritage</p> <p>Should any Aboriginal objects be encountered during works associated with the proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object, the archaeologist will provide further recommendations. These may include notifying Heritage NSW and Aboriginal stakeholders.</p> <p>If any suspected human remains are discovered during any activity, the following protocol must be observed:</p> <ul style="list-style-type: none"> • Immediately cease all work at that location and not further move or disturb the remains. • Notify CPMPT, the NSW Police and Heritage NSW Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location. • Not recommence work at that location unless authorised in writing by Heritage NSW. 	<p>During works / Contractor</p> <p>During works / Contractor</p>

Issue	Mitigation measure	Timing/Responsibility
	All contractors should be made aware that under the National Parks and Wildlife Act, it is an offence to disturb or destroy an Aboriginal object without an Aboriginal Heritage Impact Permit under S.90 of the Act.	Prior to Commencement / Contractor
	Heritage All employees, contractors and sub-contractors engaged to undertake the proposed activity should be made aware, via an induction program prior to works commencing, that it is an offence to damage or uncover a relic without prior approval of the Heritage Council of NSW.	Prior to Commencement / Contractor
	Compliance with the relevant standards set out in Standard Exemption 13: Vegetation Specified Activities / Works: f) Activities/ works must not alter the significant layout, contours, plant species or other significant landscape features or views. g) Pruning of significant vegetation must not exceed 30% of the tree canopy within a period of two years. h) Tree surgery may only be performed by a qualified arborist, horticulturist or tree surgeon and must be necessary for the health of those plants. i) Selective herbicide should be used when poisoning weeds. Herbicide should be applied using: i. spot application around significant elements of the heritage item (e.g. ornamental or symbolic plants, remnant native vegetation, structures, exposed relics and moveable items) to avoid adverse impacts to these; and ii. spraying in non-significant areas of the curtilage. j) Removal of diseased, dead, dying or dangerous trees and/or plant material must not disturb archaeological relics (for example through stump grinding or removal of tree boles, in such situations stumps and tree boles should be left in place). If the Standard Exemption criteria cannot be satisfied a section 60 application will be required.	Prior to commencement / CPMP
	Biodiversity Disturbance to any native vegetation shall be minimised where possible. A visual inspection of each tree / group of trees for the presence of fauna immediately prior to works. An ecologist shall be contacted for further advice if fauna is detected prior to works. Where trees to be removed include hollows, replacement hollows or nesting boxes should be provided in proximity to the location of the removed hollow bearing tree.	Prior to Commencement / Contractor
	Mulch generated from exotic trees or other weed species cleared shall not be used on site. It shall be removed from the site and disposed of appropriately in accordance with legislative requirements.	During works / Contractor
	Soil transportation within, into or out of the area shall be minimised to reduce the spread of weeds.	During works / Contractor
	Any adjacent trees to be retained and that are close to the trees / groups of trees to be pruned shall be protected in accordance with Australian Standard AS4970 – 2009 Protection of trees on development sites, for the duration of the works and decommissioning of any site compound.	Prior to Commencement / Contractor

Issue	Mitigation measure	Timing/Responsibility
	Safety Install temporary barrier fencing to prevent entry into work zone and/or appropriate 'no-go zone' signage.	During works / Contractor
	If relevant prepare a risk assessment in consultation with relevant contractors and workers, safety consultants and government agencies. All risk assessments must be in accordance with ISO 31000:2009 – Risk Management and mitigation measures included in this section. Hazards and risks associated with the activity must be controlled in accordance with the submitted plan. All workers and contractors must be provided with the necessary tools, supervision and instruction to manage identified risks. A Work, Health and Safety (WHS) Management Plan is required for all activity where construction work is to be undertaken. For more information on legal obligations refer to SafeWorkNSW.	Prior to Commencement / Contractor
	Air Quality The Contractor engaged to undertake the works is required to monitor and manage dust / air quality during the works	During works / Contractor
	All equipment will be operated in compliance with emissions standards of the <i>Protection of the Environment Operations Act 1997</i> and its regulations.	During works / Contractor
	All plant, machinery and noise generating equipment should be maintained in good working order and should be turned off when not in use	During works / Contractor
	Where possible, plant and machinery should be fitted with emission control devices complying with Australian Design Standards and/or Clean Air Regulations	During works / Contractor
	Dust generating works should not be undertaken or should cease during periods of high wind	During works / Contractor
	Vehicles exiting the work site with spoil or other loose material must be fully covered	During works / Contractor
	Soils Prior to commencement of works suitable measures are to be implemented to ensure that sediment and other loose material is not tracked onto the roadway	Prior to commencement / Contractor
	Noise The Contractor will be required to ensure that all equipment is adequately maintained and operated in compliance with emissions standards of the <i>Protection of the Environment Operations Act 1997</i> and its regulations.	During works / Contractor
	Wherever practicable, vehicles and machinery should be fitted with exhaust silencers and / or other noise mitigation devices	During works / Contractor
	Turn off plant and machinery when not in use.	During works / Contractor
	Construction noise levels shall meet the requirements and levels detailed within the Interim Construction Noise Guideline (DECC 2009).	During works / Contractor
	Pedestrians and Traffic Management Prior to the commencement of works, the contractor engaged to undertake the works is to prepare and submit to the Trust a Pedestrian and Traffic Management Plan for the duration of the construction phase which is to include, but not be limited to the following:	Prior to Commencement / Contractor

Issue	Mitigation measure	Timing/Responsibility
	<ul style="list-style-type: none"> • details of the manner in which pedestrian and traffic arrangements will be managed during the works period. • details of how construction vehicles/ machinery will access and leave the work site in a manner that minimises interference with the surrounding road network. 	
	Appropriate traffic / pedestrian management measures, including temporary fencing / barriers, precautionary signage, traffic controllers etc shall be implemented and maintained for the duration of the works to minimise delays to traffic / pedestrians and cyclists.	During works / Contractor
	Construction (Works) Management Plan A Construction Management Plan is to be prepared prior to the commencement of works and implemented during the undertaking of works. The Construction Management Plan is to consider the following: <ul style="list-style-type: none"> a. How compliance with the environmental controls and mitigation measures detailed in this REF is to be achieved. b. Construction noise management measures. c. Vibration management measures. d. Sediment and erosion control measures. e. Construction site management measures. f. Construction traffic management measures. g. Air quality and dust management measures. h. Restrictions on hours during construction. i. Unexpected finds protocols j. Training of responsibilities under National Parks and Wildlife Act 1975, Heritage Act 1977 and any other relevant legislation k. Pedestrian safety and amenity. 	Prior to Commencement / Contractor
	Works Hours Works are to occur within the following times: Monday to Friday 7 am to 6 pm Saturday 7 am to 6 pm Work permitted on Sundays as required subject to the approval of Centennial Park and Moore Park Trust/ Greater Sydney Parklands Trust No work on Public Holidays	During works / Contractor
Ground disturbance (stump removal/grinding, tree planting, weeding, excavation, stockpiling, grading, etc)	Ground disturbance for stump removal/weeding/planting can occur without specific conditions in areas of low Aboriginal or European archaeological potential. Areas of low potential are identified in: <ul style="list-style-type: none"> • Figure 7 – low Aboriginal archaeological potential is identified in green • Figure 8 – low European archaeological potential is the areas not identified 	Prior to Commencement / CPMP
	Aboriginal Cultural Heritage – Figure 7 Further assessment in the form of an ACHA is recommended if impacts to these sites cannot be avoided during the proposed works. If, as part of the ACHA, test excavations are required it will be necessary to apply for an AHIP. Under Requirement 14 of the Code, any test excavations in or within 50 metres of a known or suspected shell midden, or within 50 metres of an area where burial sites are known or likely to exist, require an AHIP (DECCW 2010b, pp. 24–5). It is recommended a test excavation methodology be developed in consultation with Heritage NSW and RAPs being consulted as part of the ACHA. AHIPs should be prepared by a qualified heritage consultant and lodged with Heritage NSW.	

Issue	Mitigation measure	Timing/Responsibility
European Cultural Heritage – Figure 8		
	Where trees to be removed are located in an area of archaeological potential the stump will be cut to ground level for public safety. If the stump is required to be cut below ground level stump grinding must be controlled and is to be limited to 100mm below the existing ground level of the stump only. When removing roots, only those on the surface, to remove trip hazards, can be removed by stump grinding. The trip hazards caused by surface roots may also be removed by increasing the surface area and covering the roots. The stump grinding machine should be hand held to ensure control. This should ensure any potential archaeology cannot be disturbed by the tree stump removal, and that the site can be made as safe and as usable as possible by removing potential trip hazards	
Pruning (must not involve ground disturbance)	<p>Undertake tree pruning (where required):</p> <ul style="list-style-type: none"> • To provide pedestrian clearance where these works are limited to the Crown lifting of branches up to 100mm in diameter to a maximum height of 2.5m • To provide utility clearance where these works are limited to the selective Reduction Pruning of branches up to 100mm in diameter to provide a maximum clearance of 1m to power and telecommunications lines or as required the relevant energy authority • To provide building clearance where these works are limited to the selective Reduction Pruning of branches up to 100mm in diameter to provide a maximum clearance of 2m to buildings (measured from the surface of the wall or roof of the building's edge) • To remove deadwood (>30mm) deemed to pose an unacceptable risk where the tree does not contain nesting hollows • To control the spread of clumps and remove dead canes of <i>Bambusa</i> spp. and <i>Phyllostachys</i> spp. (Bamboo species) • To control the spread of weed species listed in Appendix 5 of the Arboricultural Report • To improve the branching structure and reduce the encroachment on infrastructure/buildings of young and developing trees (formative pruning) • To remove snapped or failed branches following storms or severe weather events • For annual hedge maintenance where the branches to be pruned are less than 50mm in diameter <p>If pruning is not consistent with the general pruning requirements outlined above a Pruning Specification must be prepared by AQF level 5 Arborist for any pruning works not listed above. The Pruning Specification must be approved by a Greater Sydney Parklands Arborist (AQF Level 5) prior to the works being undertaken.</p> <p>Tree pruning must be undertaken in accordance with Australian Standard 4373 Pruning of Amenity Trees (2007) and Safe Work Australia Guide for Managing Risks of Tree Trimming and Removal Work (2016).</p>	Prior to commencement / CPMPT
	Heritage	
	Pruning of significant vegetation must not exceed 30% of the tree canopy within a period of two years.	
	Aboriginal Cultural Heritage	Prior to commencement / CPMPT
	Areas featuring mature vegetation identified as 'Vegetation for further assessment' in Figure 7 of this report must be reviewed by an arborist to identify the age, species, and any potential cultural modification prior to pruning (not including deadwooding).	

Issue	Mitigation measure	Timing/Responsibility
Tree Management Plan	<p>A Tree Management Plan should be prepared to provide an overview of the existing tree population, determine the major challenges affecting the trees at present and into the future, and set out the standardised protocols to guide the professional management of the Park's trees. Specifically, the Tree Management Plan should outline:</p> <ul style="list-style-type: none"> • Tree & risk assessment requirements • Tree maintenance protocols • Species and location selection (masterplan) of new trees and technical requirements for supply, installation and establishment • Pest and disease management • Development & events protocols • Significant & heritage trees identification and protocols for future assessment 	CPMPT

8. Conclusion

All relevant statutory planning instruments have been examined in relation to the Activity. Based on the review undertaken, the Activity does not require development consent pursuant to Section 2.73 of the T&I SEPP and is subject to environmental impact assessment under Part 5 of the EP&A Act.

The potential environmental impacts posed by the Activity have been thoroughly examined through this REF and the supporting specialist information in relation to Heritage, Aboriginal Cultural Heritage and Arboricultural Assessment.

While no substantive adverse environmental impacts are anticipated as a result of the Activity, a number of mitigation measures and safeguards are recommended to be implemented to help ensure that the extent of impacts is limited and that unavoidable impacts are managed and minimised.

In conclusion, it is considered that the Activity:

- (i) is justifiable taking into account the minimal potential environmental impacts and the measures and safeguards recommended to mitigate any possible impacts;
- (ii) supports the objectives of the Callan Park (Special Provisions) Act 2002;
- (iii) is consistent with the Conservation Policies of the Callan Park Conservation Management Plan (2011);
- (iv) is necessary to minimise risk and ensure ongoing public safety for the purpose of the recreation area; and
- (v) is consistent with the objects of the EP&A Act.

As the environmental impacts of the Activity are not significant it is not necessary for an EIS to be prepared.

On this basis, it is recommended that CPMPT approve the proposed Activity in accordance with Division 5.1 of the EPA Act and subject to the adoption and implementation of matters outlined in this report.