

1. Executive Summary

This report is an assessment of the application submitted to Council for tree removal of a Quercus Robur (English Oak) located in the rear yard of the heritage listed property at 8 Broderick Street, Balmain. The application was notified to surrounding properties and one submission was received which objected to the removal to the tree to facilitate future development on the subject site.

The main issues that have arisen from the application include:

- Heritage; and
- · Tree Removal.

The proposal will not result in any adverse heritage or landscape amenity impacts and therefore the application is recommended for approval.

2. Proposal

The proposal involves the removal of the following trees:

Quercus Robur (English Oak) located in the rear yard.

The proposal involves the planting of two replacement canopy trees.

No other works are proposed as a part of this application.

The location of the subject tree to be removed is indicated in the aerial photo below.



Figure 1: Tree to be removed ay rear of subject sote (circled in yellow)



Figure 2: Proposed tree to be removed

Figure 3: Proposed tree to be removed

3. Site Description

The subject site is located at the end of Broderick Street on the western side. The site consists of one allotment and is irregular in shape with a total area of 486m² and is legally described as Lot 2 in DP 555123

The site has a frontage to Broderick Street of 9.2m and has a secondary frontage to the water. The site supports a three storey semi-detached dwelling. The adjoining to the north is a three storey semi-detached dwelling and to the south is a two storey dwelling at 1 Longview Street.

The subject site is located within a heritage conservation area and is a listed local heritage item – being Item No. I146 (Semi-detached house including interiors).

4. Background

4(a) Site history

The following section outlines the relevant development history of the subject site and any relevant applications on surrounding properties.

Subject Site

Application	Proposal	Decision & Date
D/2017/66	Alterations and additions to the existing	Deemed Refusal 30/06/2017
	home at Broderick St. Addition of a new	Approved on Appeal
	swimming pool and granny flat.	8/02/2018

Surrounding properties

There have been no recent planning determinations at 6 Broderick Street and 1 Longview Street.

4(b) Application history

Not applicable

5. Assessment

The following is a summary of the assessment of the application in accordance with Section 4.15 of the Environmental Planning and Assessment Act 1979.

5(a) Environmental Planning Instruments

The application has been assessed against the relevant Environmental Planning Instruments listed below:

- State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Leichhardt Local Environmental Plan 2013

The following provides further discussion of the relevant issues:

5(a)(i) State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

A permit under Part 3 of the Policy cannot be issued for the clearing of vegetation that is or forms part of a heritage item or that is within a heritage conservation area. An appropriate application for development consent relating to the subject tree removal has been made.

5(a)(ii)Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

An assessment has been made of the matters set out in Clause 20 of the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005. It is considered that the carrying out of the proposed development is generally consistent with the objectives of the Plan and would not have an adverse effect on environmental heritage, the visual environmental, the natural environment, and open space and recreation facilities.

5(a)(iii) Leichhardt Local Environment Plan 2013 (LLEP 2013)

The application was assessed against the following relevant clauses of the Leichhardt Local Environmental Plan 2013:

- Clause 1.2 Aims of the Plan
- Clause 2.3 Zone objectives and Land Use Table
- Clause 5.10 Heritage Conservation

The subject site is listed as an item of local heritage significance I146. It is part of a pair of semi-detached houses, including interiors, its pair at 6 Broderick Street (I145). The site is in the vicinity of a heritage listed house, including interiors, at 4 Broderick Street (I144) and is located within the Iron Cove Heritage Conservation Area and the Birchgrove Distinctive Neighbourhood, as defined in the Leichhardt Development Control Plan 2013.

The English Oak tree is growing close to the side boundary of the property. The tree does not contribute to the established gardens and plantings as it was planted by a subsequent owner and is within a garden landscape that has been modified over time. Its removal is not inconsistent with the desired future character of the Birchgrove Distinctive Neighbourhood as it will result in the removal of a specimen has a limited aesthetic contribution to the heritage item as it has been pruned to grow vertically because of its close proximity to the building,

rather than the characteristic spreading of the canopy. Its removal will improve views to the western corner of the building from Parramatta River.

Therefore, it is considered that the proposal will not result in any adverse heritage impacts.

5(b) Draft Environmental Planning Instruments

Draft State Environmental Planning Policy (Environment) 2018

The NSW government has been working towards developing a new State Environmental Planning Policy (SEPP) for the protection and management of our natural environment. The Explanation of Intended Effect (EIE) for the Environment SEPP was on exhibition from 31 October 2017 until 31 January 2018. The EIE outlines changes to occur, implementation details, and the intended outcome. It considers the existing SEPPs proposed to be repealed and explains why certain provisions will be transferred directly to the new SEPP, amended and transferred, or repealed due to overlaps with other areas of the NSW planning system.

This consolidated SEPP proposes to simplify the planning rules for a number of water catchments, waterways, urban bushland and Willandra Lakes World Heritage Property. Changes proposed include consolidating seven existing SEPPs including Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005. The proposed development would be consistent with the intended requirements within the Draft Environment SEPP.

5(c) Development Control Plans

The application has been assessed and the following provides a summary of the relevant provisions of Leichhardt Development Control Plan 2013.

Part	Compliance
Part A: Introductions	
Section 3 – Notification of Applications	Yes
Part B: Connections	
B1.1 Connections – Objectives	Yes
Part C	
C1.0 General Provisions	Yes
C1.1 Site and Context Analysis	Yes
C1.4 Heritage Conservation Areas and Heritage Items	Yes
C1.12 Landscaping	Yes
C1.14 Tree Management	Yes
Part C: Place – Section 2 Urban Character	
Suburb Profile	
C2.2.2.6 Birchgrove Distinctive Neighbourhood, Birchgrove	Yes
Part C: Place – Section 3 – Residential Provisions	
C3.1 Residential General Provisions	Yes

The following provides discussion of the relevant issues:

C1.12 - Landscaping

The objectives of C1.12 Residential Development are:

O1 Development includes on-site landscaped open space that:

- a. enhances the visual setting of buildings;
- contributes to the distinct landscape character within the neighbourhoods and preserves, retains and encourages vegetation and wildlife that is indigenous to the municipality and Sydney;
- c. preserves or retains natural features such as rock outcrops that contribute to the landscape of the area:
- d. conserves water resources by reducing the need for irrigation;
- e. maximises vegetation to regulate and increase rainwater infiltration, thereby increasing nutrient recycling and reducing surface runoff;
- f. is compatible with the heritage significance of the place;
- g. contributes to the amenity of the residents and visitors;
- h. where involving new plantings, benefit the building's energy efficiency;
- i. protects and retains existing trees on the subject and surrounding sites, including the street verge; and
- j. is designed to encourage the retention and enhancement of green corridors.

Removal of the tree is supported as it is located where the prevailing environmental conditions are unsuitable.

The applicant has proposed two x 75L replacement trees. Council's Tree Assessment Officer has recommended that replacement planting with one native tree attaining a minimum height of 8m upon maturity is sufficient to offset the loss of canopy cover and landscape amenity. This replacement tree, combined with retention of the remaining garden plants, will create a positive contribution to the surrounding landscape and enhance the visual appeal of the neighbourhood.

C1.14 - Tree Management

The proposed tree removal is consistent with the *Tree Management Control*s under C1.14.7 which provides the criteria under which the removal of a prescribed tree is to be assessed:

- a. the tree is located where the prevailing environmental conditions are unsuitable;
- b. the tree is in a state of irreversible decline or is dead;
- c. the tree poses a threat to human life or property:
- d. the tree is causing significant damage to public infrastructure which cannot be remediated by any other reasonable and practical means;
- e. the replacement of damaged or failed sewer pipes or storm water lines cannot reasonably be undertaken with the retention of the tree;
- f. the tree is not deemed to be a tree of landscape significance; and
- g. replacement planting can better achieve the objectives of this section of the Development Control Plan within a reasonable time.

A site inspection was undertaken by Council's Tree Assessment officer on 18 September 2018. The following observations were recorded and Arboricultural advice provided below.

- The subject tree was identified as Quercus robur (English Oak) and was seen to be growing at the rear of the site.
- The specimen had a more slender and upright form than what is normally seen for this species, likely due to being supressed from the subject dwelling and/or being a cultivated variety.
- The trunk flare of the tree was noted to be less than 300mm from the external wall of the dwelling. The specimen could be seen to be growing very close to the dwelling and was estimated to be 200 mm from the outer face of the first floor balcony.
- Signs or rubbing branches were evident against the outer walls of the dwelling.
- The area beneath the tree comprised of mainly hardstand. It is unknown how much available soil volume is accessible for the tree to support future growth.
- The estimated height and canopy spread of the specimen was estimated to be 11m x 3m with a trunk diameter measuring 275mm recorded at 1400mm from ground level.

• No major structural defects were detected at the time of inspection however, at least 40% of the total canopy of the tree consisted of epicormic shoots indicative that the tree is under stress or in decline. The specimen was noted to have average to poor extension growth. Leaf size and colour could not be recorded as the specimen was still mostly in a dormant state during the inspection and new leaves had not yet emerged.

Given the above, tree removal is supported in this instance as it is considered that the subject tree is located where prevailing environmental conditions are unsuitable and replacement planting can better achieve the objectives of Council's Tree Management Controls within a reasonable time frame.

It is noted that the submitted Arborist report, prepared by Lee Hancock, dated 30/07/2018, has incorrectly identified the specimen as a Quercus Rubra (Northern Red Oak).

Given the above, tree removal is supported subject to replacement planting.

C2.2.2.6 Birchgrove Distinctive Neighbourhood, Birchgrove

Whilst the *Desired Future Character Controls* do not specifically refer to trees on private property, due to the reasons outlined under C1.14, removal is supported and will not result in any adverse landscape or heritage impacts.

5(d) The Likely Impacts

The assessment of the Development Application demonstrates that, subject to the recommended conditions, the proposal will have minimal impact in the locality.

5(e) The suitability of the site for the development

The site is zoned R1 General Residential. Provided that any adverse effects on adjoining properties are minimised, this site is considered suitable to accommodate the proposed development, and this has been demonstrated in the assessment of the application.

5(f) Any submissions

The application was notified in accordance with Council's Policy for a period of 14 days from 23 August to 6 September 2018 to surrounding properties. One submission was received which objected to the removal to the tree to facilitate future development on the subject site. The application seeks consent to remove one tree only, any future development on the site will be subject site a separate development application.

5(g) The Public Interest

The public interest is best served by the consistent application of the requirements of the relevant Environmental Planning Instruments, and by Council ensuring that any adverse effects on the surrounding area and the environment are appropriately managed.

The proposal is not contrary to the public interest.

6 Referrals

6(a) Internal

The application was referred to the following internal sections/officers and issues raised in those referrals have been discussed in section 5 above.

- <u>Heritage Officer</u>: No objections to the proposed tree removal given the trees do not form part of the original plantings within the site and do not make a substantial contribution to the heritage significance of the site.
- <u>Landscape</u>: No objections to the proposed tree removal subject to standard conditions and replacement planting.

6(b) External

The Development Application was not required to be referred to any external body for comment.

7. Section 7.11 Contributions

Section 7.11 contributions are not payable for the proposal.

8. Conclusion

The proposal generally complies with the aims, objectives and design parameters contained in Leichhardt Local Environmental Plan 2013 and Leichhardt Development Control Plan 2013. The development will not result in any significant impacts on the amenity of adjoining premises and the streetscape. The application is considered suitable for approval subject to the imposition of appropriate conditions.

9. Recommendation

A. That the Inner West Local Planning Panel exercising the functions of the Council as the consent authority, pursuant to s4.16 of the Environmental Planning and Assessment Act 1979, grant consent to Development Application No: D/2018/431 for removal of 1 X English Oak tree at heritage listed site at 8 Broderick Street, Balmain subject to the conditions listed in Attachment A below.

Attachment A – Recommended conditions of consent

CONDITIONS OF CONSENT

1. Approval is given for the following works to be undertaken to trees on the site:

Tree/location	Approved works
Quercus Robur (English Oak)	Remove

Removal or pruning of any other tree (that would require consent of Council) on the site is not approved.

The approved works shall not be carried out unless this letter, or copy of it, is kept on the site. It shall be shown to any authorised Council Officer upon request.

All All tree work shall be undertaken by an experienced Arborist with a minimum qualification of Level 3 under the Australian Qualification Framework (AQF). The work shall be undertaken in accordance with AS4373 – 2007 'Pruning of amenity trees' and in compliance with the Safe Work Australia Code of Practice 'Guide to Managing Risks of Tree Trimming and Removal Work'.

2. The following replacement trees must be planted:

Tree/species	Quantity	Location	
Native specimen capable of attaining a minimum	1	Suitable	location
mature height of 8m upon maturity		on site	

The minimum container size of the new tree shall be 75 litres at the time of planting, and shall comply with AS 2303—*Tree Stock for Landscape Use*.

Replacement trees (as specified above) are to be planted within 30 days of the removal. Council is to be notified when the replacement tree has been planted within the timeframe specified above and an inspection arranged with Council's Tree Assessment Officer. If the replacement is found to be faulty, damaged, dying or dead prior to being protected under the Tree Management Controls of the Leichhardt Development Control Plan 2013, the replacement tree shall be replaced with the same species, which will comply with the criteria above.

Council encourages the uses of replacement trees that are endemic to the Sydney Basin to increase biodiversity in the local environment and provide a natural food source for native birds and marsupials. Note: Any replacement tree species must not be a palm tree species or be a plant declared to be a noxious weed, or a tree species listed as an exempt species under Section C1.14 (Tree Management) of the Leichhardt Development Control Plan 2013.

- 3. No activities, storage or disposal of materials taking place beneath the canopy of any tree protected under Council's Tree Management Controls at any time.
- 4. No trees on public property (footpaths, roads, reserves etc) are to be removed or damaged during works unless specifically approved in this consent or marked on the approved plans for removal.

Prescribed trees protected by Council's Management Controls on the subject property and/or any vegetation on surrounding properties must not be damaged or removed during works unless specific approval has been provided under this consent.

5. The canopy replenishment trees required by this consent are to be maintained in a healthy and vigorous condition until they attain a height of 6 metres whereby they will be protected by Council's Tree Management Controls. Any of the trees found faulty, damaged, dying or dead shall be replaced with the same species within 2 months.

NOTES

- 1. This Determination Notice operates or becomes effective from the endorsed date of consent.
- 2. Section 8.2 of the Environmental Planning and Assessment Act 1979 provides for an applicant to request Council to review its determination. This does not apply to applications made on behalf of the Crown, designated development or a complying development certificate. The request for review must be made within six (6) months of the date of determination or prior to an appeal being heard by the Land and Environment Court. Furthermore, Council has no power to determine a review after the expiration of these periods. A decision on a review may not be further reviewed under Section 8.2.
- 3. If you are unsatisfied with this determination, Section 8.7 of *the Environmental Planning and Assessment Act 1979* gives you the right of appeal to the Land and Environment Court within six (6) months of the determination date.
- 4. Failure to comply with the relevant provisions of *the Environmental Planning and Assessment Act 1979* and/or the conditions of this consent may result in the serving of penalty notices or legal action.
- 5. Works or activities other than those approved by this Development Consent will require the submission of a new development application or an application to modify the consent under Section 4.55 of the *Environmental Planning and Assessment Act* 1979.
- 6. This decision does not ensure compliance with the *Disability Discrimination Act 1992*. Applicants should investigate their potential for liability under that Act.
- 7. This development consent does not remove the need to obtain any other statutory consent or approval necessary under any other Act.

Attachment B - Statement of Environmental Effects



Statement of Environmental Effects – Removal of Tree/s from Heritage Items or Heritage Conservation Areas

About this form:	This form is provided to assist applicants in the preparation of Development
	Application to remove one or more trees from heritage listed properties or
	properties located within a Heritage Conservation Area.
How to complete:	Ensure that all fields have been filled out correctly.
	2. Please print clearly.
	3. Once completed, please refer to the lodgement details section for further
	information.

Development Application Details:			
Address:	8 BBODELICK STIET, BALMAN		
Proposed Development:	KEMOUND OF ONE OGK TREE		
Prepared By:	FOR JOHNSTON DEP LEE HANCORK.		

What is the Heritage Status of the Subject Site:	
N Heritage Item	
Heritage Conservation Area	

Tree Characteristics	:
Species	QUEKCUS RUBKA
Approximate Height and Spread:	12m Sm
Approximate Age:	15-20 YEARS

Inner West Council Statement of Environmental Effects Trees

council@innerwest.nsw.gov.au PO Box 14, Petersham, NSW 2049 Updated May 2018 Page 1 of 5



Statement of Environmental Effects – Removal of Tree/s from Heritage Items or Heritage Conservation Areas

Is the Tree a Prescribed Tree:
☐ Yes ☑ No
Approval for removal is sought as:
The tree is located where the prevailing environmental conditions are unsuitable;
☐ The tree is in a state of irreversible decline or is dead;
☐ The tree poses a threat to human life or property;
☐ The tree is causing significant damage to public infrastructure which cannot be remediated by any other reasonable and practical means;
☐ The replacement of damaged or failed sewer pipes or storm water lines cannot reasonably be undertaken with the retention of the tree;
The tree is not deemed to be a tree of landscape significance; and
Replacement planting can better achieve the objectives of this section of the Development Control Plan within a reasonable time.
Please provide further details/justification:
KEFER THE HERITAGE KEPORT.
Is the application accompanied by specialist consultant report/s ? ☑ Yes ☐ No



Statement of Environmental Effects – Removal of Tree/s from Heritage Items or Heritage Conservation Areas

	cts vironmental impacts associated with the proposal and o mitigate the impacts:
Context	DAK THEE COLATED TOWN FROM FROM EXISTING HOUSE.
Significance of the Heritage Item/Conservation Area:	REFER HELLTAGE REPORT ATTACHED
Flora and Fauna:	REFER ALBORISTS KEPORT.
Is Replacement Plan	ting proposed:
☑ Yes – Please specify:	2 x 7 FLT TREES IN LOCATION) SHOWN ON tHE ATTACHED DIAGRAM.
☐ No – Please specify:	

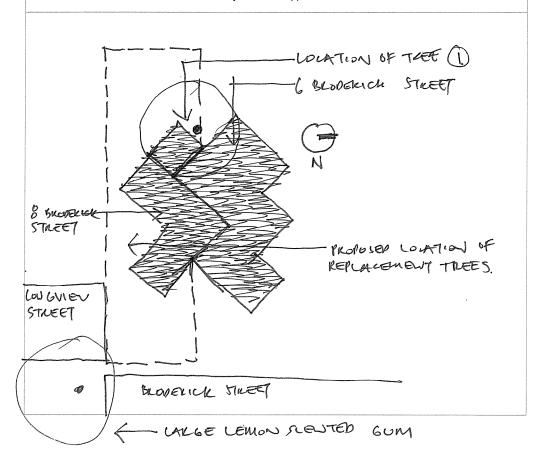


Statement of Environmental Effects – Removal of Tree/s from Heritage Items or Heritage Conservation Areas

Site Plan:

In the space provided below, please include:

- A diagram of the subject site, indicating street frontage, general location of any buildings, the location of all trees that are the subject of this application and any other trees on the property.
- Approximate height, trunk diameter, canopy width and species of each tree that is the subject of this
 application.
- Please number the trees which are subject to this application.



Inner West Council Statement of Environmental Effects Trees council@innerwest.nsw.gov.au PO Box 14, Petersham, NSW 2049 Updated May 2018 Page 4 of 5



Statement of Environmental Effects – Removal of Tree/s from Heritage Items or Heritage Conservation Areas

Declaration

I understand that information provided with this application (including the application form) and any subsequent information submitted as part of this application may be disclosed under the provisions of the Government Information (Public Access) Act 2009 and correspondence from Council may be made available for viewing by the general public.

Applicant's signature:

Date:

5,08,2018

Privacy statement

Application forms and/or names and addresses of people making an application is information that is publicly available. In accordance with section 18(1)(b) of the *Privacy and Personal Information Protection Act 1998 (NSW)*, you are advised that all application forms received by Council will be placed on the appropriate Council file and may be disclosed to Councillors, Council officers, consultants to Council or members of the public. Pursuant to the provisions of the *Government Information (Public Access) Act 2009*, Council is obliged to allow inspection of its documents, including any application you make. However, should you wish for your contact details to be suppressed, please indicate on this application form.

Instructions for applicants

This form must be lodged with your Development Application. Both an electronic and hard copy should be provided.

Incomplete/illegible applications will not be accepted and will be returned to you.

Lodge in person:

Inner West Council's Customer Service Centres:

- Ashfield 260 Liverpool Road Ashfield.
- Leichhardt 7-15 Wetherill Street Leichhardt.
- Petersham 2-14 Fisher Street Petersham.

Opening hours: Monday-Friday, 8:30am-5:00pm

www.innerwest.nsw.gov.au/ContactUs

Cashiering: 8:30am-4:30pm.

Lodge by mail: Inner West Council, PO Box 14, Petersham NSW 2049

Inner West Council Statement of Environmental Effects Trees council@innerwest.nsw.gov.au PO Box 14, Petersham, NSW 2049 Updated May 2018 Page 5 of 5

Attachment C – Statement of Heritage Impact



Statement of Heritage Impact

Removal of Oak Tree

8 Broderick Street Balmain

Prepared for: Conrad Johnston August 2018

PO Box 230 Pennant Hills NSW 1715 | P 02 9980 6933 | www.dfpplanning.com.au

15 August 2018

File Name: Projects/9960A 8 Broderick St, Balmain/Reports/9960A SoHI

Project Manager: Brian McDonald Conrad Johnston 9960A Project Number:

Document Control

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1 Introduction

1.1 Commission

DFP has been commissioned by Conrad Johnston to prepare a heritage impact statement for removal of an Oak tree at 8 Broderick Street. This heritage statement should be read in conjunction with the Heritage Impact Statement dated 31 July 2017 which accompanied an amended application for proposed additions and alterations at 8 Broderick Street, Balmain (the Site), a local heritage item in Schedule 5 of Leichhardt Environmental Plan 2013.

This statement assesses the impacts of the proposed removal of the Oak tree against the assessed significance of the place. For information on the historical background, physical description and of the property and assessment of its significance refer to the Heritage Impact Statement dated 31 July 2017, which accompanied the amended development application for alterations and additions.

The report has been prepared by Brian McDonald, Principal Urban Designer and Heritage Consultant, DFP Planning and reviewed by Amy Cropley, Urban Designer, DFP Planning.

1.2 Purpose of Report

Consent to development application D/2016/497 by a Section 34(3)(a) agreement pursuant the Land and Environment Court Act 1979.

Condition 3 of the consent granted approval for the following works in relation to the existing trees on the site:

Tree/location	Approved works
T1 – Archontophoenix cunninghamiana (Bangalow Palm) located adjacent tree 10	Removal
T4 - Ulmus parvifolia (Chinese Elm) located on the western side of the garage.	Removal
	Removal
T7 - Quercus robur (English Oak) located at the rear of the site	Pruning
T8 - Schinus areira (Peppercorn) located at the rear of the site.	Pruning
T10 – Erythrina x sykesii (Coral Tree) located in the garden bed adjacent the front entrance to the dwelling	Pruning

Removal or pruning of any other tree (that would require consent of Council) on the site is not approved.

The purpose of the current application is to seek approval for removal of T7 Quercus robur (English Oak) at the rear of the site. This report has been written to address heritage issues arising from removal of the Oak tree.

1 Introduction

1.3 Site Identification



Figure 1 Site Location



Figure 2 Aerial Photograph. Subject site shown outlined in blue. Source Google Maps

The site comprises the house and gardens of one of a pair of attached dwellings, three storeys in height. The existing structures are positioned with a generous setback from the shoreline of the Parramatta River. The plan geometry sets the floor plates at 45 degrees to the side boundaries of the site creating inset areas of well landscaped space. The site's character is derived from a well-proportioned work of Post War period architecture glimpsed from the adjacent narrow streets through well-established trees and shrubs. The building is more visible from the waterway.

1 Introduction

1.4 Abbreviations and Definitions

SoHI Statement of Heritage Impact

ICOMOS International Council on Monuments and

Sites

Burra Charter refers to 'The Burra Charter' prepared by

Australia ICOMOS October 2013

The conservation terms used throughout this report are based on the terms and definitions adopted by *The Burra Charter*, *The Australia ICOMOS Charter for places of cultural significance* (Australia ICOMOS October 2013). *The Burra Charter* forms the basis for cultural conservation with in Australia and is acknowledged by government heritage agencies around Australia. Terms used in this plan are defined below:

Place, means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

Cultural Significance, means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.

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

Conservation means all the processes of looking after a place so as to retain its cultural significance, as listed in the History Section of this report.

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

Integrity (not a Burra Charter definition) means the degree to which a place or component of a place retains the form and completeness of its physical fabric, historical associations, use or social attachments that give the place its cultural significance.

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

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

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

Adaptation means modifying a place to suit the existing use or a proposed use. [Article 7.2 states regarding use that: a place will have a compatible use]

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

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

2 Historical Background

See the Heritage Impact Statement by DFP dated 31 July for the historical background, which has been extracted from Section 3 of a previous Heritage Impact Statement by Urbis Pty Ltd December 2016 and the NSW Office of Environment and Heritage database listing form for the subject site, which accompanied the application for the original design.

3 Heritage Significance

3.1 What is heritage significance

Before making decisions to change a heritage item, it is important to understand its values. This leads to decisions that will retain these values in the future. Statements of heritage significance summarise a place's heritage values – why it is important, why a statutory listing was made to protect these values.

The conservation principles set out in *The Burra Charter, The Australia ICOMOS Charter for Places of Cultural Significance (October 2013)* have been utilised to undertake this heritage assessment. The following provides definitions that assist in the interpretation of the conservation principles set-out in the *'The Burra Charter'*.

Cultural significance means aesthetic, historic, scientific or social or spiritual value for past, present or future generations.¹

The cultural significance of 8 Broderick Street has been assessed against evaluation criteria set out by the NSW Department of Planning, NSW Heritage Branch.

3.2 Significance Assessment

See Section 3 of the Heritage Impact Assessment by DFP Planning dated 31 July 2017 for the assessment of significance of the entire property. This assessment of significance did not make any specific reference to tree T& English Oak. The following assessment against the established criteria set by the Department of Planning; NSW Heritage Branch discusses how each criterion relates to the subject tree only.

3.2a Criterion (A) Evolutional Significance

An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)

Guidelines for Inclusion	Guidelines for Exclusion
Shows evidence of a significant human activity	Has incidental or unsubstantiated connections with historically important activities or processes
Is associated with a significant activity or historical phase.	Provides evidence of activities or processes that are of dubious historical importance
Maintains or shows the continuity of a historical process or activity	Has been so altered that it can no longer provide evidence of a particular association

Comment:

The tree is understood to have been 20 years ago by a previous owner.² It does not reflect the original design intention for eth landscaping of the property.

¹ The Burra Charter, the Australian ICOMOS Charter for Places of Cultural Significance, (1999), p2.

² Information from owner of adjacent part of duplex who observed the tree planting.

3.2b Criterion (B) Associational Significance

An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural History (or the cultural or natural history of the local area).

Guidelines for Inclusion	Guidelines for Exclusion
Shows evidence of a significant human occupation	Has incidental or unsubstantiated connections with historically important people or events
Is associated with a significant event, person or group of persons	Provides evidence of people or events that are of dubious historical importance
	Has been so altered that it can no longer provide evidence of a particular association

Comment:

The English Oak tree does not meet this criterion.

3.2c Criterion (C) Aesthetic Significance

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (State significance);

OR

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area (local significance).

Guidelines for Inclusion	Guidelines for Exclusion
Shows or is associated with, creative or technical innovation or achievement	is not a major work by an important designer or artist
Is the inspiration for a creative or technical innovation or achievement	
Is aesthetically distinctive	its positive visual or sensory appeal or landmark and scenic qualities have been more than temporarily degraded
Has landmark qualities	has only a loose association with a creative or technical achievement
Exemplifies a particular taste, style or technology	

Comment:

The English Oak tree was assessed by Lee Hancock, Consulting Arborist, in an Arboricultural Impact Assessment dated October 2017, to have moderate landscape significance, moderate amenity value and low retention value. Due to the close proximity of the tree to the building, it has been pruned to grow vertically rather than the characteristic spreading canopy of Oak trees.

The English Oak tree does not meet this criterion.

3.2d Criterion (D) Social Significance

An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons

Guidelines for Inclusion	Guidelines for Exclusion
Is important for its association with an identifiable group	Is only important to the community for amenity reasons
Is important to a community's sense of place	Is retained only in preference to a proposed alternative

Comment:

The English Oak tree does not meet this criterion

3.2e Criterion (E) Archaeological / Research Potential

An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)

Guidelines for Inclusion	Guidelines for Exclusion
Has the potential to yield new or further substantial scientific and/or archaeological information	The knowledge gained would be irrelevant to research on science, human history or culture
Is an important benchmark or reference site or type	Has little archaeological potential
Provides evidence of part human cultures that is unavailable elsewhere	Only contains information that is readily available from other resources or archaeological sites

Comment:

This criterion does not apply the the English Oak tree.

3.2f Criterion (F) Comparative Cultural History

An item possesses uncommon, rare or endangered aspects of NSWs cultural or natural history (or the cultural or natural history of the local area).

Guidelines for Inclusion	Guidelines for Exclusion
Provides evidence of a defunct custom, way of life or process	Is not rare
Demonstrates a process, custom or other human activity that is in danger of being lost	Is numerous but under threat
Show unusually accurate evidence of a significant human activity	
Is the only example of its type	
Demonstrates designs or techniques of exceptional interest	
Shows rare evidence of a significant human activity important to a community	

Comment:

This criterion does not apply the the English Oak tree.

3.2g Criterion (G) Comparative Places

An item is important in demonstrating the principal characteristics of a class of NSW's

- cultural or natural places; or
- cultural or natural environments.

Guidelines for Inclusion	Guidelines for Exclusion
Is a fine example of its type	Is a poor example of its type
Has the principal characteristics of an important class or group of items	Does not include or has lost the range of characteristics of a type
Has attributes typical of a particular way of life, philosophy, custom, significant process, design, technique or activity	Does not represent well the characteristics that make up a significant variation of a type
Is significant variation to a class of items	
Is part of a group which collectively illustrates a representative type	
Is outstanding because of its setting, condition or size	
Is outstanding because of its integrity or the esteem in which it is held	

Comment:

The result of pruning has been to create a vertical form, rather than the wide canopy spread which is a major characteristic of the Quercus robur (English Oak) species.

3.3 Statement of Significance

The English Oak at the rear of the site is a poor and misshapen specimen planted in an inappropriate location. It makes a minimal contribution to the landscape setting of the heritage significant house.

4 Proposed Development

4.1 Original Application

Consent to development application D/2016/497 was granted by a Section 34(3)(a) agreement pursuant the Land and Environment Court Act 1979.

Condition 37 of the consent set requirements to be met prior to commencement of any works in relation to the existing trees on the site:

37. To preserve the following tree/s no work shall commence nor shall a Construction Certificate be issued (whichever occurs first) until the trunk/s/branches are protected (in accordance with AS4970-Protection of trees on development sifes) by the placement of 2 metres lengths of 50 x 100mm timbers spaced at 150mm centres and secured by wire/hoop strap over suitable protective padding material (i.e. underlay or carpet). The trunk/branch protection shall be maintained intact until the completion of all work on site.

Tree/Location
T10 - Grove of Erythrina x sykesii (Coral Tree) located on the north western side of the garage.
T2, T3, T5, T6, T7, T8, T9, and 2 x Lemon Scented Gum Trees.

Requirements of this condition are to be met prior to works commencing or prior to release of a Construction Certificate (whichever occurs first). Details demonstrating compliance with the requirements of this condition are to be submitted by the Project Arborist to the Principal Certifying Authority prior to the issue of any Construction Certificate.

4.2 Proposed Tree Removal



Figure 3: Aerial Photograph. Quercus robur (English Oak) outlined in yellow, showing limited canopy spread due to proximity to the building. Source Six Maps



Figure 4: Quercus robur (English Oak), showing limited canopy spread due to proximity to the building. Source: Brian McDonald

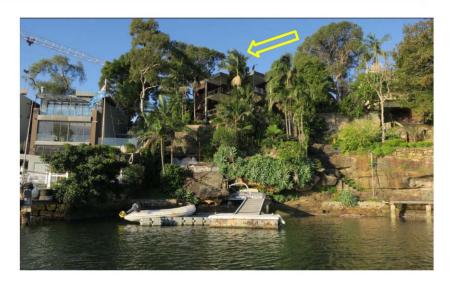


Figure 5: View of the site from the water. The Quercus robur (English Oak) is indicated by a yellow arrow, showing limited contribution it =makes to the waterfront landscape character. Source: Conrad Johnston

It is proposed to remove Tree T7, Quercus robur (English Oak) for the following reasons:

- The tree is a very poor specimen of the species with a vertical form rather than a spreading canopy;
- The very limited leaf canopy makes negligible contribution to the landscape quality of the site;
- The tree is not associated with the original landscape intentions of the designer and original occupants for the site as it was planted by a subsequent owner;
- The tree has negligible heritage value;
- The Arborist's report by Lee Hancock states that "due to the proximity of the existing building wall, it is likely that damage to the structure will occur in the future as the tree grows"

5.1 Introduction

The subject site is as a heritage item in Schedule 5 of Leichhardt Local Environmental Plan 2013

The proposed removal of T7 Quercus robur (English Oak) has been assessed against the following impact assessment criteria:

The New South Wales Heritage Council Guidelines and Statements of Heritage Impact

5.2 Leichhardt Local Environmental Plan 2013

The proposed works are addressed in **Table 1** in relation to the relevant clauses in the Leichhardt LEP 2013.

Table 1 Review against relevant clauses of Leichhardt LEP 2013	
LEP Clause	Discussion
5.10 Heritage conservation Note. Heritage items (if any) are listed and described in Schedule 5. Heritage conservation areas (if any) are shown on the Heritage Map as well as being described in Schedule 5. (1) Objectives The objectives of this clause are as follows: (a) to conserve the environmental heritage of Leichhardt, (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views, (c) to conserve Aboriginal objects and Aboriginal places of heritage significance.	The amended proposal has been assessed as being consistent with the objectives of the LEP. (a) The overall setting to the waterfront will be conserved. The subject tree makes a very limited contribution to the setting of the house and makes no contribution to the Balmain conservation area. It can be seen as detrimental to appreciation of the architectural qualities of the house because it was inappropriately planted where it obscures the house from views in the garden area. (b) See above. A (c) and (d) The site is not a known archaeological site and has been substantially disturbed.
(2) Requirement for consent Development consent is required for any of the following: (a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance): (i) a heritage item, (ii) an Aboriginal object, (iii) a building, work, relic or tree within a heritage conservation area, (e) erecting a building on land: (i) on which a heritage item is located or that is within a heritage conservation area, or (ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance	This statement assesses the heritage impacts of removal of T7 Quercus robur (English Oak). The application affects a heritage item in Schedule 5 of Leichhardt LEP 2013 and will take place within the Balmain conservation area (Iron Cove HCA).

(4) Effect of proposed development on heritage significance

The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation management plan is submitted under subclause (6).

This statement considers the effects of removal of T7 Quercus robur (English Oak) on the item concerned and the heritage conservation area as set out below.

- The tree is a very poor specimen of the species with a vertical form rather than a spreading canopy;
- The very limited leaf canopy makes negligible contribution to the landscape quality of the site;
- The tree is not associated with the original landscape intentions of the designer and original occupants for the site as it was planted by a subsequent owner;
- The tree has negligible heritage value because it is not an integral part of an intentional landscape plane for the site, is not visible from public areas and properties outside the site and is not noticeable in views from the water;
 The Arborist's report by Lee Hancock states that
- The Arborist's report by Lee Hancock states that "due to the proximity of the existing building wall, it is likely that damage to the structure will occur in the future as the tree grows".

(5) Heritage assessment

The consent authority may, before granting consent to any development:

- consent to any development:
 (a) on land on which a heritage item is located, or
 (b) on land that is within a heritage conservation
- (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.
- (6) Heritage conservation management plans The consent authority may require, after considering the heritage significance of a heritage item and the extent of change proposed to it, the submission of a heritage conservation management plan before granting consent under this clause

This Statement of Heritage Impact submitted with the tree removal application is a heritage management document.

The consent authority has not requested a conservation management plan.

Not applicable.

5.3 Leichhardt Development Control Plan 2013

The proposed works are addressed in **Table 2** in relation to the relevant clauses in the Leichhardt DCP 2013.

Controls	Discussions
C1.4 Heritage Conservation Areas and	I
Heritage Items	
Controls General	
C1 Development maintains the characteristics	See following discussion for Appendix 2 -
and is consistent with the objectives and	Building Typologies.
controls for the relevant building type	
contained in Appendix 2 – Building Typologies of this Development Control Plan.	
a. not include the demolition of the internal	a. The entire existing house is maintained.
walls and roof form, including any existing	
chimneys, of the front two rooms of the dwelling:	
b. retain the major form, scale and materials	b. Removal of of T7 Quercus robur (English
of the existing structure as described in	Oak) will enhance appreciation of the
(a); c. be for a rear addition which does not	characteristics of the building. c. Not applicable
dominate the existing building or	c. Not applicable
substantially change the relationship of	
the building to the street when viewed from the street; and	
d. retain significant, established gardens and	d. The gardens and planting have been
plantings including early fences.	heavily modified over time. T7 Quercus
	robur (English Oak) was inappropriately planted hard against the building resultin
	in a poorly shaped vertical growth of the
	canopy instead of the characteristic
	spreading canopy. The English Oak tree was assessed by Lee Hancock, Consulting
	Arborist, in an Arboricultural Impact
	Assessment dated October 2017, to have
	moderate landscape significance, moderate amenity value and low retention
	value.
C2.2.2.6 Birchgrove Distinctive	
Neighbourhood.	
Desired Future Character	
Objective	
O1 To facilitate development that is consistent	Removal of T7 Quercus robur (English Oak)
with the Desired Future Character and	retains the character of the heritage listed late
Controls for the Distinctive Neighbourhood.	Twentieth century building. The tree is not a significant contributor to the landscape quality
Holyhoddillood.	of the site.
Controls	Not applicable
C1 Development should follow the topography of the area and maintain the single storey	Not applicable.
scale on the mid slopes and mixed one	
and two storey scales at the top and	
bottom of the slopes. C2 Conserve and promote the consistent	Not applicable.
rhythm within the streetscape created by	Troc applicable.
regular lot sizes, subdivision pattern and	
the predominance of detached and semi- detached houses with a prevalence of	
hipped, pitched and gable roof forms.	
Preserve the established setbacks for	
each street.	The audeline landers were the second of
C3 Preserve and where practicable, enhance public and private views over Snails Bay	The existing landscape character on the waterfront will not change. T7 Quercus robur

Table 2 Review against relevant control	ols of Leichhardt DCP 2013
waterfront should follow the slope and help preserve view lines by stepping	the landscape quality of the site, which is well landscaped. See Figure 5.
down with the contours. C4 Promote a balance of landscape to built form in the view of the neighbourhood	See above.
when viewed from the water. C5 Conserve the single and double storey, freestanding form, style and materials	Not applicable
characteristic to each street. C6 Where a consistent pattern of architectural style and form exists, preserve this	Not applicable.
consistency on each street. C7 Retain stone cottages and stone walls where they occur throughout the	Not applicable.
neighbourhood. C8 Maintain the diverse character of the area by ensuring new development is complementary in terms of its architectural style, built form and	Not applicable.
materials. C9 Former shops and corner shops should be preserved. Posted balconies and verandahs over the footpath should be	Not applicable.
reconstructed or restored, where they were an original feature of the building. C10 Fences should be low open picket style with iron or timber pickets and with metal	Not applicable
timber or stone posts. C11 Ensure that any development does not overwhelm the capacity of adjacent laneways; any development utilising laneways should include provision for upgrading of laneways to current	Not applicable.
engineering standards. C12 Conserve and complement the established streetscape with regard to setbacks, street trees and general lack of	Not applicable.
driveway crossings. C13 Maintain sandstone outcrops and remnant stone wall footings.	Not applicable.
C14 Retain and encourage street trees on the wider streets C15 A maximum wall height of 6m applies to the neighbourhood.	Not applicable.
C16 Changes to the front façades of existing dwellings shall be kept to a minimum with additions to the rear of dwellings	Not applicable.
preferred. C17 New/expanded driveway crossings shall be discouraged. Driveway crossings will only be supported where they are servicing single width garages and they do not involve excavation of sandstone	Not applicable.
features such as gutters. C18 New development shall maintain the use of hipped, pitched or gabled roof forms and designs shall be complementary to the existing unadomed built form. Flat roofs may be appropriate where the style	Not applicable.
of architecture is contemporary and view lines may be affected. C19 Building materials used shall be consistent with the existing character of the streetscape, including rendered and painted surfaces and roof materials such as corrugated iron as well as timber	Not applicable
windows. C20 Retain existing stone houses and walls and exposed rock face. C21 Development visible from the water is to be designed to preserve the conservation	Not applicable.

Table 2 Review against relevant controls of Leichhardt DCP 2013

values of the area. When viewed from the water a balance between built form and landscape is to be achieved/maintained through side setbacks and landscaping. Additionally, the rear elevation must be designed so it does not detract from the form, character and scale of the conservation area. The amount of glazing to solid ratio on the rear elevation must be sympathetic to the immediately surrounding development.

T7 Quercus robur (English Oak) is barely visible from the water due to its poor canopy form and close proximity to the building. See Figure 5.

surrounding development. 22 Development is to be consistent with any relevant Sub Area objective(s) and condition(s)

This neighbourhood character area does not have sub areas.

5.4 NSW Heritage Office Guidelines

The proposed works are addressed in relation to the relevant questions posed in the NSW Heritage Office's 'Statement of Heritage Impact' guidelines (**Table 3**).

Table 3 Review against NSW Heritage Office guidelines	
Question	Discussion
The following aspects of the proposal respect or enhance the heritage significance of the item or conservation area for the following reasons:	T7 Quercus robur (English Oak), located in a corner where the dual occupancies coincide, currently partly obscures the building. It makes a negligible contribution to the landscape quality of the setting. Removal will enhance appreciation of the building form and detail design.
The following aspects of the proposal could detrimentally impact on heritage significance. The reasons are explained as well as the measures to be taken to minimise impacts:	Removal of T7 Quercus robur (English Oak) will enhance heritage significance. It is poorly located, and it is not part of the original landscape concept.
The following sympathetic solutions have been considered and discounted for the following reasons:	Not applicable
Have all options for retention and adaptive re-use been explored? Can all of the significant elements of the heritage item be kept and any new development be located elsewhere on the site?	Not applicable
Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?	Removal of T7 Quercus robur (English Oak) is necessary to avoid future damage to the building from the root system and continual pruning as it grows.
Has the advice of a heritage consultant been sought?	Yes.
Have the consultant's recommendations been implemented? If not, why not?	Yes

6 Conclusion and Recommendation

6.1 Conclusion

Removal of T7 Quercus robur (English Oak) will cause negligible impact on the4 heritage significance of the building at 9 8 Broderick Street band its setting. Positive aspects of removal of the tree are elimination of potential future damage to the building and allowing the form and architectural building to be unobscured. The impact of removal of the tree in views from the waterway would be negligible.

6.2 Recommendation

Condition 8 of the Development Consent requires one (1) replacement tree to be planted:

The following replacement trees must be planted:

A minimum of 1 x 75 litre size additional tree is to be provided and which will attain a minimum mature height of 6 metres, shall be planted in a more suitable location within the property. The tree is to conform to AS2303—Tree stock for landscape use.

Details of the species and planting locations of the replacement plants must be included on the landscape plan and site plan prior to the issue of a Construction Certificate.

The original angular floor plan of the house was generated to retain large trees on the site within the re-entrant angles. This is a matter of heritage interest. Some of these trees have been removed over time by previous owners. It is recommended that a tree of 75 litre pot size be planted in addition to the tree required by condition 8. Both trees should be planted within the exiting triangular courtyard on the south side of the house to re-interpret the grove of trees that originally influenced the geometry of the plan.

7 Bibliography and References

ICOMOS Australia, The Burra Charter: The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (Burra Charter), Canberra, Australia ICOMOS, 2013

NSW Heritage Office and Department of Infrastructure Planning and Natural Resources, NSW Heritage Manual, Sydney 2001

NSW Heritage Office and Department of Infrastructure Planning and Natural Resources, The New South Wales Heritage Council Guidelines, *Altering Heritage Assets and Statements of Heritage Impact.*

NSW Heritage Office, Interpreting Heritage Places and Items Guidelines, NSW

State Heritage Inventory Datasheet for 8 Broderick Street Balmain

Leichhardt Local Environmental Plan 2013

Leichhardt Development Control Plan 2013

Heritage Impact Statement by Urbis Pty Ltd December 2016

Attachment D - Arborist Advice



DEVELOPMENT APPLICATION

8 Broderick Street, Balmain 30.**7**.2018

Prepared for Fox Johnston

Prepared by Lee Hancock Consulting Arborist AQF Level 5

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1.Introduction

On the 20th March 2018 at the request of Fox Johnston Architects, Lee Hancock Consulting Arborist was commissioned to prepare a Development Application to remove a *Quercus rubra* (Northern Red Oak Tree) from the rear of the property. The site 8 Broderick Street, Balmain, also known as Lot 2 DP 555123 which falls within a Heritage Conservation area and is listed as a Heritage item.

The author is aware of and will comply with the determining authorities Inner West Council Leichardt Council LLEP 2013, Tree Management and C.2.2.2.6- Birchgrove Distinctive Neighbourhood of the LDCP2013.

1.1 The applicant seeks approval to remove a *Quercus rubra* (Northern Red Oak) located within 70mm of the existing dividing walls of the adjacent building.

2. Aim

The purpose of this report is to assess the subject trees health and vigour, significance in the landscape, amenity value, useful life expectancy (ULE) and make recommendations.

Lee Hancock Consulting Arborist does not remove or prune trees in the Inner West local government area

3. Site Analysis

The site is a semi-detached 3 storey residence measuring 486.03m2. Access is by an elevated walkway from Broderick Street, to the left of the walkway is the existing garage roof and the right overlooks a sunken garden with numerous Bangalow Palms and large mature Coral Tree. The existing vegetation is a mix of native palms and exotic trees. Red circle indicates location of the *Quercus rubra* (Northern Red Oak)



Soils and Geology - Hawkesbury Sandstone, which is a medium to coarse-grained quartz sandstone with minor shale and laminite lenses. Very poor. The soils of this unit are generally shallow, stony, moderately acid and highly permeable with low available water capacities. They also have a low to very low nutrient status with very low phosphorus and nitrogen levels and very low CEC

Location - Occurs extensively throughout the Hornsby Plateau and along the foreshores of Sydney Harbour and the Parramatta and Georges Rivers. Examples include areas of Northbridge, Forestville, Drummoyne, Balmain, Arcadia and Berrilee.

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4. Discussion

An assessment of the subject tree was made using the Visual Tree Assessment (VTA) procedure. The tree was assessed from the ground. No aerial inspection or diagnostic testing has been undertaken as part of this assessment.

4.1 The subject tree is located against a double brick wall between No. 8 and No. 6 Broderick Street, the space between the dividing wall and tree is 70mm. The tree appears in good health and vigour located in a very small garden bed, tree has an elongated growth habit where the normal growth habit is broad domed.

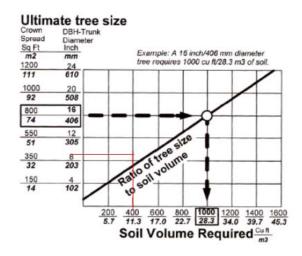
4.2 Quercus rubra (Northern Red Oak)

A brief description, Northern *red oak* is a medium to tall *tree*, reaching a potential height of approximately 10m at maturity. The trunk is broad, reaching two to three m in diameter on the largest of trees, and may flair outward slightly at the base. Intolerant to salt winds, poor soils, cool climate tree. Cone shaped in youth becoming rounded in maturity.

Table 2. Tree Health and Retention Values.

Tree	Genus & Species	Height	DBH /DAGL	Crown Spread	Maturity	Health and Vigour	Landscape Significance Rating	Useful Life Expectancy	Retention Value
1	Quercus rubra (Northern Red Oak)	9m	270/310	2m width	Semi mature	Good	Moderate	Medium 15 – 40 years	Low

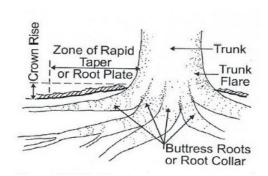
4.3 Table 3. Soil Volume Calculations



DBH 270mm Crown Spread 15m2 = Tree requires 400cu / 11.3m3 soil volume to achieve ongoing growth into the future. Red line is subject trees projected soil volume requirement.

4.3.1 This diagram shows the relationship between tree size and the amount of soil volume required for establishment and ongoing growth. The calculation suggests that Tree 1 when fully mature will not have enough soil volume to support itself. Over time the existing soil resources will become depleted affecting nutrient and water uptake. Bearing in mind the tree is situated on sandstone outcrops with already very little soil to achieve its full potential.

4.4 Another limiting factor is the *Zone of rapid taper*. Tree root growth is opportunistic and will proliferate wherever moisture, aeration, nutrition and soil structure are favourable. Tree root growth in the urban environment is highly modified and is not governed by property boundaries. Although no damage has occurred to the dividing wall, the future of this happening by way of the trees growth cannot be discounted. An average tree root can exert one megapascal pressure to an object.



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5. Conclusion

The site analysis has collected all relevant data in assessing the condition of trees on site, an assessment of their health and vigour, estimated life expectancy and their significance in the landscape and amenity value have been recorded.

6. Recommendation

After all the relevant data has been collected the soil volume is one of the limiting factors, eventually the tree will outgrow its current environment, another limiting factor is the ongoing growth of trees roots by the zone of rapid taper. The tree will never develop into a worthwhile specimen.

It is recommended that the tree is removed, by an experienced Certified AQF Level 3 Arborist in accordance with Safe Work Australia Code of Practice 'Guide to Managing Risks of Tree Trimming and Removal Work'.

6.1 To compensate for the loss of amenity of Tree 1 replacement planting as specified by Inner West Council should be considered. Replacement planting should consider the heritage significance of the site and be sympathetic in terms of species selection and layout.

- The trees should have a minimum 10m height at maturity to compensate for the loss of existing trees.
- The planting size shall be 75litres and compliant with the AS2373 Tree Stock and Specifications for Landscape Use.
- Planted by a qualified horticulturalist or arborist AQF Certificate 3.
- The replacement plantings must be planted in such a manner as to promote good health during the
 establishment period, and must be maintained, as far as practicable to ensure tree growth into
 maturity.

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7. Images

Quercus rubra (Northern Red oak) in situ



Quercus rubra (Northern Red oak) proximity to dividing wall



8. References

Mattheck, C. & Breloer, H. (1994) The Body Language of Trees.

Morton, A. Earthscape Horticultural Services -Tree Retention Values

www.innerwestcouncil.gov.nsw.au

https://www.leichhardt.nsw.gov.au/.../324/part-a-suburb-profiles-balmain

https://www.bellarmine.edu/faculty/drobinson/RedOak.

Disclaimer

The author, Lee Hancock Consulting Arborist takes no responsibility for actions taken and their consequences, contrary to those expert and professional instructions given as recommendations pertaining to safety by way of exercising our responsibility to our client and the public as our duty of care commitment to mitigate or prevent hazards from arising, from a failure moment in full or part, from a structurally deficient or unsound tree or a tree likely to be rendered thus by its retention and subsequent modifications to its growing environment either above or below ground contrary to our advice.

This report is a recommendation only. In no way, does it guarantee any actions by the determining authorities.

9. Methodologies

9.1 Visual Tree Assessment (VTA)

A technique developed by (Mattheck & Breloer) was carried out on all trees from the ground. The technique involves, identification of the Genus and Species of trees on the site. The Diameter at Breast Height (DBH) 1.4m above ground level determined from the circumference of the trunk divided by pi (π). Tree height (m) Diameter at Ground Level (DAGL), Canopy spread (m) in four cardinal points (north, south, east, west) Structural integrity, Amenity value, Indigenous/ Endemic value, Health and vigor of trees.

9.2 Useful Life Expectancy (ULE)

An assessment procedure has been developed by (Barrell, J.D.) 1993 'by which trees on a site are accurately recorded and designated according to their suitability for retention in the short, medium or long term'. This methodology is a measure of the "sustainability" of the remaining contribution in years that the tree can provide in the context of the site.

9.3 Landscape Significance

The significance of trees in the landscape is assessed in determining their retention values in 3 categories. Heritage Value reflects Historical significance, Ecological Value maintains biodiversity values and Amenity value contributes to the character of the landscape.

10.4 Tree Retention Values

A rating was given to each tree on site; the information gathered was then processed by evaluating the health and vigour, the remaining useful life expectancy (ULE), plus their significance in the landscape. A retention value for each tree was then evaluated ranging from High, Moderate, Low and Very Low.

Table 4. Tree Health and Retention Value

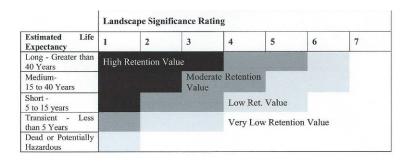


Table 5. Tree Retention Values

RETENTION VALUE	RECOMMENDED ACTION					
"High"	These trees considered worthy of preservation; as such careful consideration, should be given to their retention as a priority. Proposed site design and placement of buildings and infrastructure should consider lessening any mitigating issues in relation to trees. In addition, the extent of the canopy (canopy drip-line) should also be considered, particularly in relation to high rise developments. Significant pruning of the trees to accommodate the building envelope or temporary scaffolding is generally not acceptable.					
"Moderate"	The retention of these trees is desirable. These trees should be retained as part of any potential development if possible however they trees are considered less critical for retention. If these trees must be removed, replacement planting should be considered in accordance wire Council's Tree Replacement Policy to compensate for loss of amenity.					
"Low"	4. These trees are not considered to worthy of any special measures to ensure their preservation, due to current health, condition or suitability. They do not have any special ecological, heritage or amenity value, or these values are substantially diminished due to their ULE. 5. These trees should not be considered as a constraint to the potential development of the site.					
"Very Low"	These trees are considered potentially hazardous or very poor specimens, or may be environmental or noxious weeds. The removal of these trees is therefore recommended regardless of the implications of any proposed development.					

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