

ARBORICULTURAL IMPACT ASSESSMENT (AIA) REPORT

Prepared For:	Mr & Mrs J Turner
Site Address:	24 Lauderdale Ave Fairlight
Inspection Dates:	31 August 2021
Report Date	12 September 2021
Revised Report	21 March 2022



Image 1: The property C/- Nearmap accessed 13/9/2021

Prepared by: Margot Blues
B.App.Sc. (Horticulture)
Diploma in Horticulture (Arboriculture) AQF 5
TRAQ Qualified
0414991122



1 Executive Summary

- 1.1.1 This Arboricultural Impact Assessment (AIA) has been commissioned by the owner Mrs Turner for development application purposes. Alterations and additions to the rear of the dwelling inclusive of pool are proposed.
- 1.1.2 Eight (8) trees, inclusive of 2 neighbouring trees are plotted on the survey of which three trees are protected (Northern Beaches Council) being:
- 1 x *Callistemon viminalis* (Weeping Bottlebrush) – 24 Lauderdale Ave
 - 1 x *Camellia sasanqua* (Camellia) and 1 x *Macadamia integrifolia* (Macadamia) within 26 Lauderdale Ave

Based on the proposal, it is recommended: -

1.2 Trees for retention

High Retention	Moderate Retention	Low Retention	Exempt Species
	T5 [^] & T6 [^]		

Table 1: Trees retainable in line with the proposal. [^] denotes trees outside the property boundary.

1.3 Trees for removal

High Retention	Moderate Retention	Low Retention	Exempt Species
	T1		T2, T3, T4, T7 & T8

Table 2: Tree which require removal based on Exemption, significance, removed irrespective of the development and those which are significantly impacted by the proposal.

1.4 Pruning

- 1.4.1 No pruning should be required to any retained tree.

1.5 Tree Protection:

- 1.5.1 Ground protection is required to protect neighbouring trees T5 & T6. Protection can consist of:
- ❖ Fencing the respective TPZ areas of T5 – 4 metres and T6 – 3 metres.
 - ❖ Ground protection being either weight displacing boards placed on the ground to mitigate soil compaction during construction.
 - ❖ Leaf mulch maintained at a depth of 100mm throughout construction to mitigate soil compaction.



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2 Introduction

2.1 Background

2.1.1 Margot Blues Consulting Arborist has been engaged by Mrs Turner for Development Application purposes. Alterations and additions to the rear of the existing dwelling and landscaping upgrade inclusive of pool. This report has been based on plans dated 21/09/2021 with revised plans 8/3/2022 showing an increase in the RL roof height at the rear of the dwelling only. This height increase has not affected the outcome for protected trees within the property as per this report.

2.1.2 The report's aim was to:

- Conduct a visual assessment of trees protected in accordance with Northern Beaches Council's Development Control Plan (DCP) 2011 Part E.
- Determine the construction impact to protected trees based on the Australian Standard AS4970:2009 *Protection of trees on development sites*.
- Categorise the trees into retention priority (High/Medium/Low) based on published directive Schedule 4 Part A1 Tree Retention Assessment Manly Development Control Plan 2013.

2.1.3 Information supplied and relied upon in the preparation of this report included:

- Architectural suite of drawings by Noble Architecture Pty Ltd inclusive of Demolition; Site Analysis Ground Floor and East Elevation Plans (21.09.2021) and Revision C dated 8.3.22 being and elevation in the rear roof height.
- Survey dated 23/11/2020 and by Osum Surveying Pty Ltd
- Proposed Landscape Plan by Noble Architecture Pty Ltd dated July 2021.



3 Methodology

- 3.1.1 Trees were inspected using the Visual Tree Assessment (VTA) methodology derived by Mattheck and Breloer (1994) consisting of both the biological and mechanical characteristics being:-
- Biological assessment included leaves (volume and colour); the presence of pests and diseases, canopy dieback, deadwood and epicormic growth.
 - Tree mechanics included assessment of structural stability, previous pruning and any damage/disturbance which may have occurred.
- 3.1.2 No destructive, aerial or root investigations occurred.
- 3.1.3 Data on each tree shown on the plans is displayed in Appendix 1. Appendix 2 identifies tree location.
- 3.1.4 Tree Protection Zones (TPZ) and Structural Root Zones (SRZ) have been calculated in accordance with AS4970-2009 *Protection of trees on development sites*. Offset distances setbacks in accordance with this standard are outlined in Appendix 1: Tree data and Appendix 2: Tree Identification and construction impact.
- 3.1.5 Photographs are displayed in Appendix 3.
- 3.1.6 This report is reliant upon referenced documents and what could reasonably be seen from ground level. Any changes, past or present, which impact any tree, or its environment falls outside the scope of works.



4 Results

4.1 Desktop research

4.1.1 In accordance with published directives - NSW Planning portal the following applies to the property:

- Zoning: R1 – Low Density Residential
- Additional constraints: Foreshore Scenic Protection Area

4.1.2 In accordance with published directives – Northern Beaches Council – A Protected Tree is:

- Having attained a height of 5 metres or greater
- Not listed on Council's *Exempt tree species list* or *The Biosecurity Act 2015*.

4.2 Trees

4.2.1 A total of eight (8) trees were plotted of which three were protected. The remaining trees exempt listed or had not reached the prescribed height of 5 metres. No protected tree was within 2 metres of an approved structure. All trees are displayed in Appendix 1 and only trees protected assessed for construction impact.

4.3 The Development.

4.3.1 Proposed is modifications and extension to dwelling's rear, landscaping upgrade and the installation of an inground pool to be positioned towards the rear boundary.

4.4 Construction Impact for each Tree

In the assessment of tree impact both to root zone and canopy the following criteria has been considered:

- Tree species, retention value and the likely development impact
- Tree Protection Zones (TPZ)
- Structural Root Zones (SRZ)
- Canopy spread and height above ground
- Building offset distances to trees and associated ground works.



The following table is to be read in conjunction with Appendix 1 & 2.

Tree ID	Species	Comment	Recommendation
T1	<i>Callistemon viminalis</i> (Weeping bottlebrush)	A mature tree in good health and condition. Construction Impact: High TPZ and SRZ incursion totals 16.5%. Pool/trunk offset distance approximately 1 metre. Pool Safety Fence requires a minimum 90cm non climbable zone outside the pool fence.	<u>Retention Value:</u> Moderate Remove Tree is not retainable.
T5*	<i>Macadamia integrifolia</i> (Macadamia)	A mature tree in fair health: Construction Impact:- Low No impact will occur based on supplied plans.	<u>Retention Value:</u> Moderate Retain Ground protection
T6*	<i>Camellia sasanqua</i> (Camellia)	A mature tree which appeared in excellent health Construction Impact: Low Paving incursion 5% therefore tree is retainable under AS4970-2007	<u>Retention Value:</u> Moderate Retain Ground protection

Table 1: Construction impact to trees. *Denotes trees outside the property boundary. Trees T2, T3, T4, T5, T7 and T8 were not assessed for construction impact due to their exempt status.



5 Conclusion

Three (3) trees have been assessed for development application purposes. An additional five (5) trees shown on the survey and displayed in Appendix 1. are exempt as they had not reached a height of 5 metres or listed on Council's Exempt Species List.

T1 - a mature Bottle Brush is not retainable given the pools offset distance of approximately 1 metre and Pool Safety Fence regulations.

T5 & T6 – Macadamia and Camellia sp respectively are retainable as construction incursion is less than 10% for T6. Both trees fall outside the property boundary.

Building incursion calculated up to 10% is considered “minor” in accordance with AS4970-2009.

Details for pool service – in ground location (electricity/plumbing) had not been supplied at the time of reporting.

6 Recommendation

Based on the proposal, it is recommended: -

6.1 Trees for retention

High Retention	Moderate Retention	Low Retention	Exempt Species
	T5 [^] & T6 [^]		

Table 4: Trees retainable in line with the proposal. [^] denotes trees outside the property boundary.

6.2 Trees for removal

High Retention	Moderate Retention	Low Retention	Exempt Species
	T1		T2, T3, T4, T7 & T8

Table 5: Tree which require removal based on Exemption, significance, removed irrespective of the development and those which are significantly impacted by the proposal.

6.3 Pruning

6.3.1 No pruning should be required to any retained tree.

6.4 Tree Protection:

6.4.1 Ground protection is required to protect neighbouring trees T5 & T6. Protection can consist of:

- Fencing the respective TPZ areas of T5 – 4 metres and T6 – 3 metres.
- Ground protection being either weight displacing boards placed on the ground to mitigate soil compaction during construction.
- Leaf mulch maintained at a depth of 100mm throughout construction to mitigate soil compaction.

Tree Data Summary 24 Lauderdale Ave Fairlight - assessed 31/8/2021																
Tree ID	Species Common Name	Height (m)	DBH (cm)	DGL (cm)	Foliage condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Canopy dims n/s in metres	Stability	Vigour	Retention value	Notes	TPZ	SRZ
	<i>Callistemon citrinus</i> Crimson Bottlebrush	6	36	38	Excellent	Mature	Single	Lower trunk slight bias to west		N: 4 S: 8 E: 4 W: 8	Appears stable	Good	Moderate	Historical pruning cuts noted throughout otherwise tree within normal limits	4.3	2.2
1	<i>Loganstromia indica</i> Crepe Myrtle															
2	<i>Archontophœnix cunninghamiana</i> Bangalow Palm													A small tree, deciduous at the time of inspection. No apparent problems seen.	1.9	1.6
3	<i>Archontophœnix cunninghamiana</i> Bangalow Palm													Typical for species	1.7	1.6
4	<i>Archontophœnix cunninghamiana</i> Bangalow Palm													Typical for species	1.9	1.6
														Tree had decay on the upper surface of lower first order branches - typically old sunburn damage and associated tissue breakdown. Canopy a little sparse but otherwise no serious problems seen.		
5a	<i>Macadamia integrifolia</i> Macadamia															
6a	<i>Camellia sasanqua</i> Camellia													A moderately large tree which provides excellent screening from large unit block 28 Lauderdale Ave. No serious problems or defects seen.	2.8	1.9
7	<i>Acmena smithii</i> <i>Viburnum tinus</i>													Tall shrub in fair health and condition.	0.0	0.0
8														A tall shrub in fair health and condition.	1.4	0.0
															4.2	2.2
	Exempt															
	^ Denotes tree located outside property boundary.					DBH - Diameter at Breast height 1.4m above ground		DGL - Stem diameter measured above root flare.		High Moderate Low						



MARGOT BLUES

Margot Blues Consulting Arborist
Tree Identification
Title: 9/11/2021
Project: App2 24 Lauderdale Ave Fairlight.dwg
Scale: Relative to supplied documents

Key:

Tree Protection Zone (TPZ)
TPZ Encroachment



Structural Root Zone (SRZ)

41.0

35.0

4.5

57.0

3.0

5.0

1.5

107

SECTION

TALL FENCE - TIMBER RETAINING WALL
RL 21.430

MAIN FENCE TOP
RL 19.970

BENCH/EQUIPMENT STORE FL
RL 18.470

PLANTER TW
RL 18.670

PLANTER TW
RL 18.470

LANDING FFL
RL 17.500

PLANTER TW
RL 18.470

PLANTER TW
RL 18.470

PLANTER TW
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PLANTER TW
RL 18.470

T1: TPZ incursion
16.3% therefore
non-compliant

Pool fencing requires
a 900mm
nonclimbable zone
outside the pool
fence perimeter

Tree
removed

T4

T1

T2

T3

T8

T5

T6

T7

Incursion 5%

SP 528



Appendix 3 – Photographs



Photo 1: Trees T1 - T3



Photo 2: T4 in foreground - looking south east.



Photo 3: Neighbouring trees T5 & T6. Photo looking south west