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PRELIMINARY ARBORICULTURAL ASSESSMENT REPORT

Manly Village Public School NSW

REVISON B 26th of May 2022

Prepared for NBRS

Prepared by

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Executive Summary

This Preliminary Arboricultural Assessment Report has been commissioned by NBRS to report on two trees within the site of Manly Village Public School NSW. The subject trees are located adjacent to the school buildings and existing car park on the eastern side of the site. This report has been commissioned to outline the health, condition and stability of these trees as well as the development requirements for retention within the scope of any proposed development. The scope of this report includes two trees adjacent to the existing car park as identified by NBRS.

The subject trees are preserved under Section 3.3.2 of Manly Development Control Plan 2013 with the exception of Tree 1 which is exempt in accordance with clause 3.3.2.3. c) iv) due to proximity to the existing school building.

The subject trees are self-sown trees of a species that is common in the area. These trees are in good health and condition with no evidence of structural defects.

All other trees are viable to be retained and are to be protected as defined below.

Tree no.	Species	Recommendations	Comments
1.	Casuarina cunninghamiana	Retain	Viable to be retained and protected. Exempt from Manly DCP 2013.
2.	Casuarina cunninghamiana	Retain	Viable to be retained and protected.

Recommendations for tree retention or removal are summarised as follows:

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1.0 Scope of Works

This Preliminary Arboricultural Assessment Report has been commissioned by NBRS to report on two trees within the site of Manly Village Public School NSW. It has been commissioned to outline the health, condition and stability of these trees as well as the development requirements for retention within the scope of any proposed development. The scope of this report includes two trees adjacent to the existing car park as identified by NBRS.

On the 26th of May 2022, Glenn Bird of Birds Tree Consultancy attended site and inspected the subject trees from the ground. There was no aerial inspection carried out. A Visual Tree Assessment was undertaken in accordance with Visual Tree Assessment (VTA) guidelines (Mattheck and Breloer, 1994). Tree heights were measured using a Nikon Forestry 550 Heightmeter.

2.0 Site Analysis

2.1 Site

The subject site is Manly Village Public School NSW. The subject trees are located adjacent to the school buildings and existing car park on the eastern side of the site.

2.2 Documentation

This Development Impact Assessment Report has been compiled based on the following documentation provided:

1. CMS Surveyors Detail Survey 19602A Issue 2 dated 22/02/2022.

2.3 Topography

The site is relatively flat. Refer to detailed survey for detailed levels. The subject trees are within 3m of the existing school buildings. Tree 1 is approximately 1.5m from the building and Tree 2 is approximately 2.5m away from the building.

2.4 Identification

Trees are as identified in the attached inspection forms in Appendix C and shown in Tree location Plan A01 in Appendix D.

2.5 Soils

Soil material and horizons were not tested for this report.

3.0 Existing Trees

The following trees were inspected from the ground and the following items identified. Please refer also to the attached inspection data in Appendix C.



Figure 1 - Trees 1 and 2 proximity to existing buildings

3.1. Tree 1. Casuarina cunninghamiana

This mature tree is approximately 16m tall with a canopy spread of 6m. It has a single trunk with a diameter at breast height (DBH) of 440mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.2. Tree 2. Casuarina cunninghamiana

This mature tree is approximately 16m tall with a canopy spread of 5m. It has a single trunk with a DBH of 420mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

4.0 Landscape Significance of Trees

4.1 Landscape Significance

The significance of a tree within the landscape is a factor of the health and condition of the tree, vitality, the form of the tree, environmental, cultural, amenity and heritage value.

4.2 Methodology of Determining Landscape Significance

For the purpose of this report, the Significance of a Tree, Assessment Rating System (STARS) as developed by the Institute of Australian Consulting Arborists (IACA) has been implemented. Please refer to Appendix A for greater detail of this assessment system. This system defines Landscape Significance for individual trees as High, Medium or Low Significance.

4.3 Landscape Significance of Subject Trees

Based on our assessment of the subject trees and implementation of the IACA Significance of a Tree, Assessment Rating System, the Landscape Significance of the Subject Trees was determined as shown in Table 1.

Tree no.	Species	Landscape Significance
1.	Casuarina cunninghamiana	Medium
2.	Casuarina cunninghamiana	Medium

 Table 1 - Landscape Significance

5.0 Subject Tree Retention Value

5.1 Tree Retention Value Methodology

For the purpose of this report, the Tree Retention Values have been assessed by incorporating Landscape Significance Values as determined in 4.0 with the Useful Life Expectancy of the subject trees and assessing the retention values based on the Tree Retention Value Priority Matrix as developed by the Institute of Australian Consulting Arborists (IACA). Please refer to Appendix B for greater detail on this Tree Retention Value Priority Matrix. This matrix defines Landscape Significance for individual trees as High, Medium or Low Retention Value as well as Priority for Removal.

5.2 Retention Value of Subject Trees

Based on our assessment of the subject trees and implementation of the IACA Tree Retention Value Priority Matrix, the Retention Values of the Subject Trees were determined as shown in Table 2.

Tree no.	Species	Retention Value
1.	Casuarina cunninghamiana	Medium
2.	Casuarina cunninghamiana	Medium

Table 2 – Tree Retention Value

6.0 Impact of Development

6.1 Tree Protection Zone

Tree Protection Zones (TPZs) have been defined for the subject trees in order to define the encroachment of the proposed development in accordance with *AS4970-2009*. The TPZs required have been taken as a circular area with a radius 12 x the diameter at breast height of the tree. This requirement is in line with Australian Standard AS 4970-2009 Protection of Trees on Development Sites. This standard defines a maximum of 10% encroachment to be minimal encroachment. Any encroachment over 10% requires the site arborist to give consideration as to the viability of the tree due to the proposed development.

6.2 Structural Root Zone

Structural Root Zone (SRZs) are defined by AS4970-2009 as the area of root development required for the structural stability of the tree. The SRZ is required to be assessed only when an encroachment greater than 10% is considered.

Tree no.	Species	TPZ Radius (m)	SRZ Radius (m)				
1.	Casuarina cunninghamiana	5.28	2.57				
2.	Casuarina cunninghamiana	5.04	2.47				

7.0 Recommendations

The subject trees are preserved under Section 3.3.2 of Manly Development Control Plan 2013 with the exception of Tree 1 which is exempt in accordance with clause 3.3.2.3. c) iv) due to proximity to the existing school building.

The subject trees are self-sown trees of a species that is common in the area. These trees are in good health and condition with no evidence of structural defects.

All other trees are viable to be retained and are to be protected as defined below.

Recommendations for tree retention or removal are summarised as follows:

Tree no.	Species	Recommendations	Comments
3.	Casuarina cunninghamiana	Retain	Viable to be retained and protected. Exempt from Manly DCP 2013.
4.	Casuarina cunninghamiana	Retain	Viable to be retained and protected.

8.0 References

Mattheck, C. Breloer, K. 1993, The Body Language of Trees: A Handbook for Failure Analysis, 12th Impression 2010 The Stationery Office.

AS4970-2009 Protection of Trees on Development Sites: Standards Australia

9.0 Disclaimer

This Appraisal has been prepared for the exclusive use of the Client and Birds Tree Consultancy.

Birds Tree Consultancy accepts no responsibility for its use by other persons. The Client acknowledges that this Appraisal, and any opinions, advice or recommendations expressed or given in it, are based on the information supplied by the Client and on the data inspections, measurements and analysis carried out or obtained Birds Tree Consultancy and referred to in the Appraisal. The Client should rely on the Appraisal, and on its contents, only to that extent.

Every effort has been made in this report to include, assess and address all defects, structural weaknesses, instabilities and the like of the subject trees. All inspections were made from ground level using only visual means and no intrusive or destructive means of inspection were used. For many structural defects such as decay and inclusions, internal inspection is required by means of Resistograph or similar. No such investigation has been made in this case. Trees are living organisms and are subject to failure through a variety of causes not able to be identified by means of this inspection and report.

Appendix A Landscape Significance

IACA Significance of a Tree, Assessment Rating System (STARS) © (IACA 2010) ©

In the development of this document IACA acknowledges the contribution and original concept of the Footprint Green Tree Significance & Retention Value Matrix, developed by Footprint Green Pty Ltd in June 2001.

The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree. To assist this process all definitions for terms used in the *Tree Significance - Assessment Criteria* and *Tree Retention Value - Priority Matrix*, are taken from the IACA Dictionary for Managing Trees in Urban Environments 2009.

This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of *High*, *Medium* and *Low* significance in the landscape. Once the landscape significance of an individual tree has been defined, the retention value can be determined.

Tree Significance - Assessment Criteria

1. High Significance in landscape



- The tree is in good condition and good vigour;
- The tree has a form typical for the species;
- The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age;
- The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils significant Tree Register;
- The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity;
- The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values;
- The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa *in situ* tree is appropriate to the site conditions.

2. Medium Significance in landscape

- The tree is in fair-good condition and good or low vigour;
- The tree has form typical or atypical of the species;
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street,
- The tree provides a fair contribution to the visual character and amenity of the local area,
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

3. Low Significance in landscape

- The tree is in fair-poor condition and good or low vigour;
- The tree has form atypical of the species;
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings,
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area,
 The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen.
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa *in situ* - tree is inappropriate to the site conditions,
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- The tree has a wound or defect that has potential to become structurally unsound. Environmental Pest / Noxious Weed Species

- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
- The tree is a declared noxious weed by legislation.
- Hazardous/Irreversible Decline
- The tree is structurally unsound and/or unstable and is considered potentially dangerous,
- The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

Note: The assessment criteria are for individual trees only, however, can be applied to a monocultural stand in its entirety e.g. hedge.

Appendix B Tree Retention Values



REFERENCES

Australia ICOMOS Inc. 1999, The Burra Charter – The Australian ICOMOS Charter for Places of Cultural Significance, International Council of Monuments and Sites, www.icomos.org/australia

Draper BD and Richards PA 2009, Dictionary for Managing Trees in Urban Environments, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

Footprint Green Pty Ltd 2001, Footprint Green Tree Significance & Retention Value Matrix, Avalon, NSW Australia, www.footprintgreen.com.au

Appendix C - Tree Inspection Data

Appendix D - Tree Location Plan

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Inspectior Manly Vill	n Data age Public School	26-May-22				-									
			Spread(m		TPZ Radius	Dia at	SRZ Radius		Trunk (single, twin, multiple		Form/Crown	Branching	Crown		Branching
Tree no.	Species	Height (m))	DBH (mm)	(m)	base	(m)	Maturity	@)	Trunk lean	shape	Habit	Distribution	Stability	Structure
1	Casuarina cunninghamiana	16	6	440	5.28	550	2.57	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable
2	Casuarina cunninghamiana	16	5	420	5.04	500	2.47	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable

					Overall							Life	Env. &		
		Pruning			Health &	Canopy		Deadwoo	Epicormic	Pest		expectanc	Landcape	Retention	Notes/Co
Tree no.	Species	History	Defects	Damage	Vigour	Density	Foliage	d	Growth	Infestation	Disease	у	significance	Value	mments
										No					
1	Casuarina cunninghamiana	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	evidence	No evidence	15-40y	Medium	Medium	
										No					
2	Casuarina cunninghamiana	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	evidence	No evidence	15-40y	Medium	Medium	

