

Birds Tree Consultancy

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ARBORICULTURAL DEVELOPMENT IMPACT ASSESSMENT REPORT

Surry Hills Bulk Power Supply Route

30 July 2020

Prepared for
AMBS Ecology & Heritage Pty Ltd

Prepared by

Birds Tree Consultancy
Glenn Bird Dip. Hort (Arboriculture) (AQF5)
PO Box 6048 DURAL NSW 2158
PH 0438 892 634
glenn@birdstrees.com.au
www.birdstrees.com.au
ABN 31 105 006 657



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Author(s):	Glenn Bird, Birds Tree Consultancy
Reviewed by:	Glenn Muir, AMBS Ecology & Heritage
Approved by:	Glenn Muir, AMBS Ecology & Heritage

Executive Summary

This Arboricultural Development Impact Assessment Report has been commissioned by AMBS Ecology & Heritage Pty Ltd to report on trees within the site of Systems Connect Line Wide Works, Surry Hills NSW. The site is the location of a 33-kilovolt electricity cable that will be part of the infrastructure for the Systems Connect Line Wide works. Installation of the cable will generally involve trenching along the alignment. In some places this will require the clearing or trimming of trees or other vegetation. This Report outlines the health, condition and stability of all trees within areas that may be impacted by the proposed development as well as their viability for retention within the context of the proposed works.

The Tree Protection Zone (TPZ) of Trees 6, 11, 12, 13, 39, 43, 44, 45, and 52 are encroached by the proposed construction and required earthworks by a major or total encroachment as defined by *AS4970-2009 Protection of Trees on Development Sites*. The Structural Root Zones of these trees will be impacted by the proposed excavation which will impact the stability of these trees. These trees will not be viable to be retained and will be required to be removed due to the proposed development.

The TPZ of Tree 40 will be encroached by the proposed development by greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of the impediment to root development posed by the compacted road base of the existing roadway and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development with supervision and direction by the Site Arborist.

The Tree Protection Zone (TPZ) of Trees 7, 8, 27, 28, 30, 31, 32 and 35 will be encroached by a major encroachment which has the potential to significantly impact the viability of these trees. The proposed excavation is outside of the Structural Root Zone (SRZ) being the area of root development required for the stability of the tree. Revised design and construction methods will be required in order for these trees to be retained. These revisions include:

1. Re-alignment of proposed line and trench outside of the TPZ of the tree where possible.
2. All excavation within the TPZ to be carried out by non-destructive excavation techniques under the supervision of the Site arborist (minimum qualification AQF Level 5). Approved non destructive techniques include a Vacuum truck strictly limited to pressures less than 1000Psi.
3. No tree roots greater than 30mm are to be cut within the TPZ and the new cable is to be threaded either through or under the roots.
4. Encroachment within the TPZ is to be to the maximum extent shown on the drawings.

If these revised methods are not able to be implemented the viability of these trees will be reduced and we would recommend the removal of these trees.

The location of Trees 11, 33 and 43 have not been included in the survey drawings provided and this report has approximated locations for these trees and made assessments based on these approximations. The accurate location of these trees is required to be determined to confirm viability of these trees.

All other trees are viable to be retained and are to be protected as defined in section 8.0 of this report.

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1.0 Scope of Works

1.1 Background

This Arboricultural Development Impact Assessment Report has been commissioned by AMBS Ecology & Heritage Pty Ltd to report on trees within the site of Systems Connect Line Wide Works, Surry Hills NSW. The site is the location of a 33-kilovolt electricity cable that will be part of the infrastructure for the Systems Connect Line Wide works. Installation of the cable will generally involve trenching along the alignment. In some places this will require the clearing or trimming of trees or other vegetation. This Report outlines the health, condition and stability of all trees within areas that may be impacted by the proposed development as well as their viability for retention within the context of the proposed works.

This report has been prepared in response to Condition E6 of the Conditions of Approval, which requires that:

*The CSSI must be designed to retain as many trees as possible and provide replacement trees such that there a net increase in the number of trees. The Proponent must commission an independent, experienced and suitably qualified arborist to prepare a comprehensive **Tree Report** before removing any trees as detailed in the EIS, as amended by the PIR and the terms of this approval. The **Tree Report** must include:*

(a) a visual assessment to note the condition of the tree(s) with inputs from the Design Review

Panel, landscape architect, and construction team;

(b) consideration of all options to avoid tree removal, including relocation of services, redesign or relocation of ancillary components (such as substations, fencing etc.) and reduction of standard offsets to underground services; and

(c) measures to avoid tree removal, minimise damage to, and ensure the health and stability of those trees to be retained and protected. This includes details of any proposed canopy or root pruning, root protection zone, excavation, site controls on waste disposal, vehicular access, materials storage and protection of public utilities.

In the event that tree removal cannot be avoided, then replacement trees are to be planted within, or in close proximity to the CSSI or other location in consultation with the Relevant Councils and agreed by the Secretary. Replacement trees will be no smaller than a 75 litre pot size. A copy of the Tree Report must be submitted to the Secretary before the removal, damage and/or pruning of any trees, including those affected by the site establishment works. All recommendations of the Tree Report must be implemented by the Proponent, unless otherwise agreed by the Secretary.

The Tree Report may be prepared for the entire CSSI or separate reports may be prepared for individual areas where tree removal and/or pruning is proposed.

1.2 Methods

On the 12th March 2020, 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. Glenn was accompanied by Systems Connect personnel including Dean Kellet and Chris Riley. The entire length of the route was traversed on foot and input was provided regarding minimising adverse impacts on trees and other flora.

1.3 Structure

The structure of this report is as follows:

- Sections 3, 4 and 5 respond to Condition E6 (a). Section 3 provides a brief description of each tree assessed. Section 4 provides an assessment of the Landscape Significance of each tree, based on the standardised rating system developed by the Institute of Australian Consulting Arborists, and is a factor of the health and condition of the tree, vitality, the form of the tree, environmental, cultural, amenity and heritage value. Section 5 provides the Tree Retention Value of each tree.
- Sections 6 and 7 respond to Condition E6 (b). Options to avoid tree removal along the proposed route were discussed on-site during the inspection on 12 March 2020. Section 6.1 defines Tree Protection Zones (TPZs) for each tree and assesses the encroachment of the route on the TPZs. Section 6.2 considers the likely impact on each tree and makes recommendations on which trees can be retained and which trees will need to be removed. Section 7 summarises the outcome and makes recommendations regarding revised design and construction methods that may be able to be implemented to protect trees of high retention value.
- Section 8 responds to Condition E6 (c) and provides a range of tree protection measures to be implemented prior to and during construction.

2.0 Site Analysis

2.1 Site

The subject site is the Systems Connect Line Wide Works, Surry Hills NSW. The subject trees are located within or adjacent to the boundaries of this site. The works include the installation of new electrical cables including trenching to the extent shown on drawings.

2.2 Topography

Refer to detail survey for greater detail of levels. All of the trees are in close proximity to the existing kerbs and roadways.

2.3 Identification

Trees were defined in accordance with the definition provided in the Conditions of Approval, i.e. "Long lived woody perennial plant greater than (or usually greater than) 3m in height with one of relatively few main stems or trunks". Trees are as identified in the attached inspection forms in Appendix C and shown in Tree location Plan A01 in Appendix D.

2.4 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 A.

- 3.1. Tree 1 *Platanus x hybrida***
This mature tree is approximately 16m tall with a canopy spread of 10m. It has a single trunk with a diameter at breast height (DBH) of 500mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.2. Tree 2 *Platanus x hybrida***
This mature tree is approximately 18m tall with a canopy spread of 10m. It has a single trunk with a DBH of 420mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.3. Tree 3 *Platanus x hybrida***
This mature tree is approximately 18m tall with a canopy spread of 10m. It has a single trunk with a DBH of 370mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.4. Tree 4 *Platanus x hybrida***
This semi-mature tree is approximately 6m tall with a canopy spread of 3m. It has a single trunk with a DBH of 50mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.5. Tree 5 *Platanus x hybrida***
This semi-mature tree is approximately 5m tall with a canopy spread of 3m. It has a single trunk with a DBH of 50mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.6. Tree 5 *Platanus x hybrida***
This mature tree is approximately 28m tall with a canopy spread of 14m. It has a single trunk with a DBH of 600mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.7. Tree 7 *Platanus x hybrida***
This mature tree is approximately 22m tall with a canopy spread of 12m. It has a single trunk with a DBH of 590mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.8. Tree 8 *Platanus x hybrida***
This mature tree is approximately 25m tall with a canopy spread of 14m. It has a single trunk with a DBH of 680mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.9. Tree 9 *Platanus x hybrida***

This mature tree is approximately 23m tall with a canopy spread of 9m. It has a single trunk with a prominent lean to the south and a DBH of 470mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.10. Tree 10 *Platanus x hybrida*

This mature tree is approximately 30m tall with a canopy spread of 16m. It has a single trunk with a DBH of 650mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.11. Tree 11 *Platanus x hybrida*

This mature tree is approximately 27m tall with a canopy spread of 16m. It has a single trunk with a DBH of 690mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.12. Tree 12 *Platanus x hybrida*

This mature tree is approximately 25m tall with a canopy spread of 14m. It has a single trunk with a DBH of 780mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.13. Tree 13 *Platanus x hybrida*

This mature tree is approximately 19m tall with a canopy spread of 12m. It has a single trunk with a DBH of 480mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.14. Tree 14 *Platanus x hybrida*

This mature tree is approximately 12m tall with a canopy spread of 8m. It has a single trunk with a DBH of 150mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.15. Tree 15 *Platanus x hybrida*

This mature tree is approximately 27m tall with a canopy spread of 14m. It has a single trunk with a DBH of 750mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.16. Tree 16 *Platanus x hybrida*

This mature tree is approximately 14m tall with a canopy spread of 9m. It has a single trunk with a DBH of 280mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.17. Tree 17 *Platanus x hybrida*

This mature tree is approximately 20m tall with a canopy spread of 14m. It has a single trunk with a DBH of 880mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.18. Tree 18 *Jacaranda mimosifolia*

This mature tree is approximately 11m tall with a canopy spread of 8m. It has a single trunk with a DBH of 140mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

- 3.19. Tree 19 *Jacaranda mimosifolia***
This mature tree is approximately 13m tall with a canopy spread of 8m. It has a single trunk with a DBH of 190mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.20. Tree 20 *Liquidambar styraciflua***
This mature tree is approximately 18m tall with a canopy spread of 12m. It has a single trunk with a DBH of 540mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.21. Tree 21 *Liquidambar styraciflua***
This mature tree is approximately 16m tall with a canopy spread of 12m. It has a single trunk with a DBH of 440mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.22. Tree 22 *Jacaranda mimosifolia***
This semi-mature tree is approximately 7m tall with a canopy spread of 5m. It has a single trunk with a DBH of 110mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.23. Tree 23 *Jacaranda mimosifolia***
This semi-mature tree is approximately 5m tall with a canopy spread of 4m. It has a single trunk with a DBH of 110mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.24. Tree 24 *Jacaranda mimosifolia***
This mature tree is approximately 12m tall with a canopy spread of 12m. It has a single trunk with a DBH of 280mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.25. Tree 25 *Jacaranda mimosifolia***
This mature tree is approximately 11m tall with a canopy spread of 11m. It has a single trunk with a DBH of 320mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.26. Tree 26 *Jacaranda mimosifolia***
This mature tree is approximately 10m tall with a canopy spread of 7m. It has a single trunk with a DBH of 230mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.27. Tree 27 *Liquidambar styraciflua***
This mature tree is approximately 21m tall with a canopy spread of 12m. It has a single trunk with a DBH of 570mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.28. Tree 28 *Liquidambar styraciflua***
This mature tree is approximately 15m tall with a canopy spread of 12m. It has a single trunk with a DBH of 410mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.29. Tree 29 *Liquidambar styraciflua***

This mature tree is approximately 19m tall with a canopy spread of 14m. It has a single trunk with a DBH of 580mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

- 3.30. Tree 30** *Liquidambar styraciflua*
This mature tree is approximately 20m tall with a canopy spread of 14m. It has a single trunk with a DBH of 630mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.31. Tree 31** *Liquidambar styraciflua*
This mature tree is approximately 22m tall with a canopy spread of 15m. It has a single trunk with a DBH of 670mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.32. Tree 32** *Liquidambar styraciflua*
This mature tree is approximately 22m tall with a canopy spread of 14m. It has a single trunk with a DBH of 700mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.33. Tree 33** *Jacaranda mimosifolia*
This semi-mature tree is approximately 3m tall with a canopy spread of 1m. It has a single trunk with a DBH of 50mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.34. Tree 34** *Liquidambar styraciflua*
This mature tree is approximately 11m tall with a canopy spread of 8m. It has a single trunk with a DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.35. Tree 35** *Platanus x hybrida*
This mature tree is approximately 18m tall with a canopy spread of 12m. It has a single trunk with a prominent lean to the east and a DBH of 750mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.36. Tree 36** *Jacaranda mimosifolia*
This mature tree is approximately 5m tall with a canopy spread of 3m. It has a single trunk with a DBH of 100mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.37. Tree 37** *Liquidambar styraciflua*
This mature tree is approximately 15m tall with a canopy spread of 8m. It has a single trunk with a DBH of 360mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.38. Tree 38** *Liquidambar styraciflua*
This mature tree is approximately 16m tall with a canopy spread of 8m. It has a single trunk with a DBH of 340mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

- 3.39. Tree 39 *Melaleuca stypheloides***
This mature tree is approximately 14m tall with a canopy spread of 8m. It has a single trunk with a DBH of 520mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.40. Tree 40 *Melaleuca stypheloides***
This mature tree is approximately 12m tall with a canopy spread of 7m. It has a single trunk with a DBH of 310mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.41. Tree 41 *Melaleuca stypheloides***
This mature tree is approximately 13m tall with a canopy spread of 8m. It has a single trunk with a DBH of 470mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.42. Tree 42 *Melaleuca stypheloides***
This mature tree is approximately 12m tall with a canopy spread of 8m. It has a single trunk with a DBH of 470mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.43. Tree 43 *Platanus x hybrida***
This mature tree is approximately 16m tall with a canopy spread of 13m. It has a single trunk with a DBH of 290mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.44. Tree 44 *Platanus x hybrida***
This mature tree is approximately 16m tall with a canopy spread of 13m. It has a single trunk with a DBH of 310mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.45. Tree 45 *Platanus x hybrida***
This mature tree is approximately 15m tall with a canopy spread of 9m. It has a single trunk with a DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.46. Tree 46 *Lophostemon confertus***
This mature tree is approximately 16m tall with a canopy spread of 8m. It has a single trunk with a DBH of 470mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.47. Tree 47 *Angophora costata***
This mature tree is approximately 13m tall with a canopy spread of 8m. It has a single trunk with a DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.48. Tree 48 *Lophostemon confertus***
This mature tree is approximately 15m tall with a canopy spread of 8m. It has a single trunk with a DBH of 470mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

- 3.49. Tree 49 *Angophora costata***
This semi-mature tree is approximately 13m tall with a canopy spread of 10m. It has a single trunk with a DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.50. Tree 50 *Angophora costata***
This semi-mature tree is approximately 11m tall with a canopy spread of 9m. It has a single trunk with a DBH of 220mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.51. Tree 51 *Angophora costata***
This semi-mature tree is approximately 15m tall with a canopy spread of 12m. It has a single trunk with a DBH of 280mm. This tree is in good health and condition with minimal deadwood and epicormic growth.
- 3.52. Tree 52 *Macadamia spp.***
This semi-mature tree is approximately 8m tall with a canopy spread of 5m. It has a single trunk with a DBH of 150mm. This tree is in poor health and condition with the majority of the foliage in the canopy dead.
- 3.53. Tree 53 *Angophora costata***
This semi-mature tree is approximately 3m tall with a canopy spread of 1m. It has a single trunk with a DBH of 40mm. 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.	<i>Platanus x hybrida</i>	High
2.	<i>Platanus x hybrida</i>	High

3.	<i>Platanus x hybrida</i>	High
4.	<i>Platanus x hybrida</i>	Medium
5.	<i>Platanus x hybrida</i>	Medium
6.	<i>Platanus x hybrida</i>	High
7.	<i>Platanus x hybrida</i>	High
8.	<i>Platanus x hybrida</i>	High
9.	<i>Platanus x hybrida</i>	High
10.	<i>Platanus x hybrida</i>	High
11.	<i>Platanus x hybrida</i>	High
12.	<i>Platanus x hybrida</i>	High
13.	<i>Platanus x hybrida</i>	High
14.	<i>Platanus x hybrida</i>	High
15.	<i>Platanus x hybrida</i>	High
16.	<i>Platanus x hybrida</i>	High
17.	<i>Platanus x hybrida</i>	High
18.	<i>Jacaranda mimosifolia</i>	Medium
19.	<i>Jacaranda mimosifolia</i>	Medium
20.	<i>Liquidambar styraciflua</i>	Medium
21.	<i>Liquidambar styraciflua</i>	Medium
22.	<i>Jacaranda mimosifolia</i>	Medium
23.	<i>Jacaranda mimosifolia</i>	Medium
24.	<i>Jacaranda mimosifolia</i>	Medium
25.	<i>Jacaranda mimosifolia</i>	Medium
26.	<i>Jacaranda mimosifolia</i>	Medium
27.	<i>Liquidambar styraciflua</i>	Medium
28.	<i>Liquidambar styraciflua</i>	Medium
29.	<i>Liquidambar styraciflua</i>	Medium
30.	<i>Liquidambar styraciflua</i>	Medium
31.	<i>Liquidambar styraciflua</i>	Medium
32.	<i>Liquidambar styraciflua</i>	Medium
33.	<i>Jacaranda mimosifolia</i>	Medium
34.	<i>Liquidambar styraciflua</i>	Medium
35.	<i>Platanus x hybrida</i>	Medium
36.	<i>Jacaranda mimosifolia</i>	Medium
37.	<i>Liquidambar styraciflua</i>	Medium
38.	<i>Liquidambar styraciflua</i>	Medium
39.	<i>Melaleuca stypheloides</i>	High
40.	<i>Melaleuca stypheloides</i>	High
41.	<i>Melaleuca stypheloides</i>	High
42.	<i>Melaleuca stypheloides</i>	High
43.	<i>Platanus x hybrida</i>	High
44.	<i>Platanus x hybrida</i>	High
45.	<i>Platanus x hybrida</i>	Medium
46.	<i>Lophostemon confertus</i>	Medium

47.	<i>Angophora costata</i>	Medium
48.	<i>Lophostemon confertus</i>	Medium
49.	<i>Angophora costata</i>	Medium
50.	<i>Angophora costata</i>	Medium
51.	<i>Angophora costata</i>	Medium
52.	<i>Macadamia spp.</i>	Medium
53.	<i>Angophora costata</i>	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 of 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.	<i>Platanus x hybrida</i>	High
2.	<i>Platanus x hybrida</i>	High
3.	<i>Platanus x hybrida</i>	High
4.	<i>Platanus x hybrida</i>	High
5.	<i>Platanus x hybrida</i>	High
6.	<i>Platanus x hybrida</i>	High
7.	<i>Platanus x hybrida</i>	High
8.	<i>Platanus x hybrida</i>	High
9.	<i>Platanus x hybrida</i>	High
10.	<i>Platanus x hybrida</i>	High
11.	<i>Platanus x hybrida</i>	High
12.	<i>Platanus x hybrida</i>	High
13.	<i>Platanus x hybrida</i>	High
14.	<i>Platanus x hybrida</i>	High
15.	<i>Platanus x hybrida</i>	High
16.	<i>Platanus x hybrida</i>	High

17.	<i>Platanus x hybrida</i>	High
18.	<i>Jacaranda mimosifolia</i>	Medium
19.	<i>Jacaranda mimosifolia</i>	Medium
20.	<i>Liquidambar styraciflua</i>	Medium
21.	<i>Liquidambar styraciflua</i>	Medium
22.	<i>Jacaranda mimosifolia</i>	High
23.	<i>Jacaranda mimosifolia</i>	High
24.	<i>Jacaranda mimosifolia</i>	Medium
25.	<i>Jacaranda mimosifolia</i>	Medium
26.	<i>Jacaranda mimosifolia</i>	Medium
27.	<i>Liquidambar styraciflua</i>	Medium
28.	<i>Liquidambar styraciflua</i>	Medium
29.	<i>Liquidambar styraciflua</i>	Medium
30.	<i>Liquidambar styraciflua</i>	Medium
31.	<i>Liquidambar styraciflua</i>	Medium
32.	<i>Liquidambar styraciflua</i>	Medium
33.	<i>Jacaranda mimosifolia</i>	High
34.	<i>Liquidambar styraciflua</i>	Medium
35.	<i>Platanus x hybrida</i>	Medium
36.	<i>Jacaranda mimosifolia</i>	High
37.	<i>Liquidambar styraciflua</i>	Medium
38.	<i>Liquidambar styraciflua</i>	Medium
39.	<i>Melaleuca stypheloides</i>	High
40.	<i>Melaleuca stypheloides</i>	High
41.	<i>Melaleuca stypheloides</i>	High
42.	<i>Melaleuca stypheloides</i>	High
43.	<i>Platanus x hybrida</i>	High
44.	<i>Platanus x hybrida</i>	High
45.	<i>Platanus x hybrida</i>	Medium
46.	<i>Lophostemon confertus</i>	Medium
47.	<i>Angophora costata</i>	Medium
48.	<i>Lophostemon confertus</i>	Medium
49.	<i>Angophora costata</i>	High
50.	<i>Angophora costata</i>	High
51.	<i>Angophora costata</i>	High
52.	<i>Macadamia spp.</i>	Low
53.	<i>Angophora costata</i>	High

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 when an encroachment greater than 10% is considered.

Tree no.	Species	TPZ Radius (m)	Encroachment (%)	SRZ Radius (m)	SRZ Encroached
1	<i>Platanus x hybrida</i>	6	0	2.67	No
2	<i>Platanus x hybrida</i>	5.04	0	2.45	No
3	<i>Platanus x hybrida</i>	4.44	0	2.37	No
4	<i>Platanus x hybrida</i>	2	0	1.15	No
5	<i>Platanus x hybrida</i>	2	0	1.15	No
6	<i>Platanus x hybrida</i>	7.2	30	2.87	Yes
7	<i>Platanus x hybrida</i>	7.08	20	2.81	No
8	<i>Platanus x hybrida</i>	8.16	25	2.95	No
9	<i>Platanus x hybrida</i>	5.64	0	2.55	No
10	<i>Platanus x hybrida</i>	7.8	0	2.92	No
11	<i>Platanus x hybrida</i>	8.28	30	2.93	Yes
12	<i>Platanus x hybrida</i>	9.36	35	3.08	Yes

13	<i>Platanus x hybrida</i>	5.76	30	2.55	Yes
14	<i>Platanus x hybrida</i>	2	0	1.79	No
15	<i>Platanus x hybrida</i>	9	0	3.08	No
16	<i>Platanus x hybrida</i>	3.36	0	2.10	No
17	<i>Platanus x hybrida</i>	10.56	0	3.08	No
18	<i>Jacaranda mimosifolia</i>	2	0	1.65	No
19	<i>Jacaranda mimosifolia</i>	2.28	0	1.82	No
20	<i>Liquidambar styraciflua</i>	6.48	0	2.69	No
21	<i>Liquidambar styraciflua</i>	5.28	0	2.45	No
22	<i>Jacaranda mimosifolia</i>	2	0	1.36	No
23	<i>Jacaranda mimosifolia</i>	2	0	1.36	No
24	<i>Jacaranda mimosifolia</i>	3.36	0	2.13	No
25	<i>Jacaranda mimosifolia</i>	3.84	0	2.15	No
26	<i>Jacaranda mimosifolia</i>	2.76	0	1.97	No
27	<i>Liquidambar styraciflua</i>	6.84	25	2.76	No
28	<i>Liquidambar styraciflua</i>	4.92	25	2.53	No
29	<i>Liquidambar styraciflua</i>	6.96	13	2.76	No
30	<i>Liquidambar styraciflua</i>	7.56	25	2.83	No
31	<i>Liquidambar styraciflua</i>	8.04	30	2.88	No
32	<i>Liquidambar styraciflua</i>	8.4	30	2.95	No
33	<i>Jacaranda mimosifolia</i>	2	0	1.26	No
34	<i>Liquidambar styraciflua</i>	3.6	0	2.10	No

35	<i>Platanus x hybrida</i>	9	22	3.11	No
36	<i>Jacaranda mimosifolia</i>	2	0	1.36	No
37	<i>Liquidambar styraciflua</i>	4.32	0	2.37	No
38	<i>Liquidambar styraciflua</i>	4.08	0	2.37	No
39	<i>Melaleuca stypheloides</i>	6.24	35	2.73	Yes
40	<i>Melaleuca stypheloides</i>	3.72	15	2.39	No
41	<i>Melaleuca stypheloides</i>	5.64	0	2.59	No
42	<i>Melaleuca stypheloides</i>	5.64	0	2.63	No
43	<i>Platanus x hybrida</i>	3.48	30	2.2	Yes
44	<i>Platanus x hybrida</i>	3.72	40	2.30	Yes
45	<i>Platanus x hybrida</i>	3.6	100	2.23	Yes
46	<i>Lophostemon confertus</i>	5.64	0	2.55	No
47	<i>Angophora costata</i>	3.6	17	2.15	No
48	<i>Lophostemon confertus</i>	5.64	0	2.51	No
49	<i>Angophora costata</i>	3.6	0	2.23	No
50	<i>Angophora costata</i>	2.64	0	2.02	No
51	<i>Angophora costata</i>	3.36	15	2.15	Yes
52	<i>Macadamia spp.</i>	2	30	1.82	Yes
53	<i>Angophora costata</i>	2	0	1.20	No

6.3 Development Impact

Trees that have been identified in 6.2 as impacted by the proposed works are as follows:

6.3.1 Tree 6 *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. The Structural Root Zone of the tree is impacted by the proposed trench excavation. With the trench in this location, this tree will not be viable to be retained under the proposed development.

6.3.2 Tree 7 *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 20% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance and the impediment to root development of the existing structures, in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

6.3.3 Tree 8 *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 25% which is greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance and the impediment to root development of the existing structures, in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

6.3.4 Tree 11 *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. The Structural Root Zone of the tree is impacted by the proposed trench excavation. With the trench in this location, this tree will not be viable to be retained under the proposed development.

6.3.5 Tree 12 *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 35% which is significantly greater than the minor encroachment as defined by AS 4970-2009. The Structural Root Zone of the tree is impacted by the proposed trench excavation. With the trench in this location, this tree will not be viable to be retained under the proposed development.

- 6.3.6 Tree 13 *Platanus x hybrida***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. The Structural Root Zone of the tree is impacted by the proposed trench excavation. With the trench in this location, this tree will not be viable to be retained under the proposed development.
- 6.3.7 Tree 27 *Liquidambar styraciflua***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 25% which is greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance and the impediment to root development of the existing structures, in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 6.3.8 Tree 31 *Liquidambar styraciflua***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance and the impediment to root development of the existing structures, in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 6.3.9 Tree 32 *Liquidambar styraciflua***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance and the impediment to root development of the existing structures, in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.
- 6.3.10 Tree 35 *Platanus x hybrida***
The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 22% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance and the impediment to root development of the existing structures, in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

6.3.11 Tree 39 *Melaleuca stypheloides*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. The Structural Root Zone of the tree is impacted by the proposed trench excavation. With the trench in this location, this tree will not be viable to be retained under the proposed development.

6.3.12 Tree 40 *Melaleuca stypheloides*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 15% which is slightly greater than the minor encroachment as defined by AS 4970-2009. Based on this species tolerance to root disturbance and the impediment to root development of the existing structures, in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development.

6.3.13 Tree 43 *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. The trench excavation will impact on the Structural Root Zone of this tree. This tree will not be viable to be retained under the proposed development.

6.3.14 Tree 44 *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. The trench excavation will impact on the Structural Root Zone of this tree. This tree will not be viable to be retained under the proposed development.

6.3.15 Tree 45 *Platanus x hybrida*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be totally encroached by the proposed development. The trench excavation will impact on the Structural Root Zone of this tree. This tree will not be viable to be retained under the proposed development.

6.3.16 Tree 52 *Macadamia spp.*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 *Protection of Trees on Development Sites* will be encroached by the proposed development by 30% which is significantly greater than the minor encroachment as defined by AS 4970-2009. The Structural Root Zone of the tree is impacted by the proposed trench excavation. With the trench in this location, this tree will not be viable to be retained under the proposed development.

7.0 Recommendations

The Tree Protection Zone (TPZ) of Trees 6, 11, 12, 13, 39, 43, 44, 45, and 52 are encroached by the proposed construction and required earthworks by a major or total encroachment as defined by *AS4970-2009 Protection of Trees on Development Sites*. The Structural Root Zones of these trees will be impacted by the proposed excavation which will impact the stability of these trees. These trees will not be viable to be retained and will be required to be removed due to the proposed development.

The TPZ of Tree 40 will be encroached by the proposed development by greater than the minor encroachment as defined by AS 4970-2009. Based on consideration of the impediment to root development posed by the compacted road base of the existing roadway and this species tolerance to root disturbance in accordance with clause 3.3.4 of AS 4970-2009, this tree will be viable to be retained under the proposed development with supervision and direction by the Site Arborist.

The Tree Protection Zone (TPZ) of Trees 7, 8, 27, 28, 30, 31, 32 and 35 will be encroached by a major encroachment which has the potential to significantly impact the viability of these trees. The proposed excavation is outside of the Structural Root Zone (SRZ) being the area of root development required for the stability of the tree. Revised design and construction methods will be required in order for these trees to be retained. These revisions include:

1. Re-alignment of proposed line and trench outside of the TPZ of the tree where possible.
2. All excavation within the TPZ to be carried out by non-destructive excavation techniques under the supervision of the Site arborist (minimum qualification AQF Level 5). Approved non destructive techniques include a Vacuum truck strictly limited to pressures less than 1000Psi.
3. No tree roots greater than 30mm are to be cut within the TPZ and the new cable is to be threaded either through or under the roots.
4. Encroachment within the TPZ is to be to the maximum extent shown on the drawings.

If these revised methods are not able to be implemented the viability of these trees will be reduced and we would recommend the removal of these trees.

The location of Trees 11, 33 and 43 have not been included in the survey drawings provided and this report has approximated locations for these trees and made assessments based on these approximations. The accurate location of these trees is required to be determined to confirm viability of these trees.

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
1	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.

2	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
3	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
4	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
5	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
6	<i>Platanus x hybrida</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
7	<i>Platanus x hybrida</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
8	<i>Platanus x hybrida</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
9	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
10	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
11	<i>Platanus x hybrida</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
12	<i>Platanus x hybrida</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
13	<i>Platanus x hybrida</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
14	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
15	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
15	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.
17	<i>Platanus x hybrida</i>	Retain	Viable to be retained and protected in accordance with 8.0.

18	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
19	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
20	<i>Liquidambar styraciflua</i>	Retain	Viable to be retained and protected in accordance with 8.0.
21	<i>Liquidambar styraciflua</i>	Retain	Viable to be retained and protected in accordance with 8.0.
22	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
23	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
24	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
25	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
26	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
27	<i>Liquidambar styraciflua</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
28	<i>Liquidambar styraciflua</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
29	<i>Liquidambar styraciflua</i>	Retain	Viable to be retained and protected in accordance with 8.0.
30	<i>Liquidambar styraciflua</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
31	<i>Liquidambar styraciflua</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
32	<i>Liquidambar styraciflua</i>	Retain if possible	Viable to be retained with revised design and construction methods in

			accordance with section 7.0 of this report.
33	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
34	<i>Liquidambar styraciflua</i>	Retain	Viable to be retained and protected in accordance with 8.0.
35	<i>Platanus x hybrida</i>	Retain if possible	Viable to be retained with revised design and construction methods in accordance with section 7.0 of this report.
36	<i>Jacaranda mimosifolia</i>	Retain	Viable to be retained and protected in accordance with 8.0.
37	<i>Liquidambar styraciflua</i>	Retain	Viable to be retained and protected in accordance with 8.0.
38	<i>Liquidambar styraciflua</i>	Retain	Viable to be retained and protected in accordance with 8.0.
39	<i>Melaleuca stypheloides</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
40	<i>Melaleuca stypheloides</i>	Retain	Viable to be retained and protected in accordance with 8.0.
41	<i>Melaleuca stypheloides</i>	Retain	Viable to be retained and protected in accordance with 8.0.
42	<i>Melaleuca stypheloides</i>	Retain	Viable to be retained and protected in accordance with 8.0.
43	<i>Platanus x hybrida</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
44	<i>Platanus x hybrida</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
45	<i>Platanus x hybrida</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
46	<i>Lophostemon confertus</i>	Retain	Viable to be retained and protected in accordance with 8.0.
47	<i>Angophora costata</i>	Retain	Viable to be retained and protected in accordance with 8.0.
48	<i>Lophostemon confertus</i>	Retain	Viable to be retained and protected in accordance with 8.0.

49	<i>Angophora costata</i>	Retain	Viable to be retained and protected in accordance with 8.0.
50	<i>Angophora costata</i>	Retain	Viable to be retained and protected in accordance with 8.0.
51	<i>Angophora costata</i>	Retain	Viable to be retained and protected in accordance with 8.0.
52	<i>Macadamia spp.</i>	Remove	Not viable to be retained due to encroachment by the proposed works.
53	<i>Angophora costata</i>	Retain	Viable to be retained and protected in accordance with 8.0.

8.0 Pre-Construction Tree Protection Measures

8.1 General

All tree protection works shall be carried out before excavation, grading and site works commence. Tree protection works shall be inspected and approved by a Consulting Arborist meeting AQF Level 5 prior to construction works commencing.

Storage of materials, mixing of materials, vehicle parking, disposal of liquids, machinery repairs and refueling, site office and sheds, and the lighting of fires, stockpiling of soil, rubble or any debris shall not be carried out within the TPZ of existing trees. No backfilling shall occur within the TPZ of existing trees. Trees shall not be removed or lopped unless specific instruction is given in writing by the Superintendent.

8.2 Identification

All trees to be protected shall be clearly identified and all TPZs surveyed.

8.3 Protective Fence

Fencing is to be erected around existing trees to be retained. In addition to this protective fencing within the site, Protective Fencing is to be installed to the full extent of the TPZs within the site. This fencing is to be erected prior to any materials being brought on site or before any site, civil works or construction works commence. The fence shall enclose a sufficient area so as to prevent damage to the TPZ as defined on Appendix D Tree Protection Plan and as defined in 5.1 above. Fence to comprise 1800mm high chain wire mesh fixed to 50mm diameter Galvanised steel posts. Panels should be securely fixed top and bottom to avoid separation. No storage of building materials, tools, paint, fuel or contaminants and the like shall occur within the fenced area.

Where a tree is to be retained and a Tree Protection Zone cannot be adequately established due to restricted access such as the case of Trees 1, 2 and 3, the trunk and branches in the lower crown will be protected by wrapping 2 layers of hessian or carpet underfelt around the trunk and branches for a minimum of 2 m or as lower branches permit, then metal strapping secures 38x50 x2000 mm timber battens together around the trunk (do not nail or screw to the trunk or branches). The number of battens to be used is as required to encircle the trunk and the battens are to extend to the base of the tree (AS4970 2009 Protection of trees on development sites, Figure 3 Examples of Trunk, Branch and ground protection).

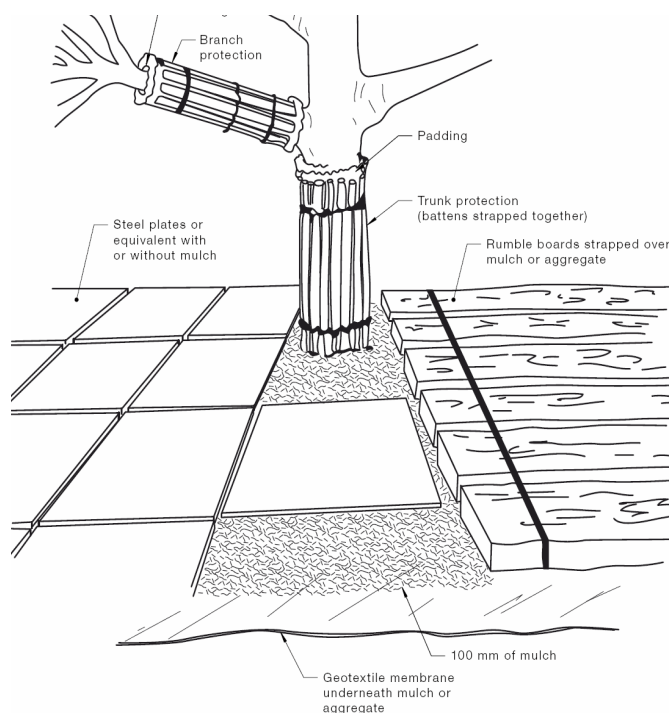


Figure 1 - Trunk Protection

8.4 Mulching

Install mulch to the extent of all tree protection fencing. Use a leaf mulch conforming to AS 4454 which is free of deleterious and extraneous matter such as soil, weeds, sticks and stones and consisting of a minimum of 90% recycled content compliant with AS 4454 (1999) and AS 4419 (1998). All trees marked as to be removed on the proposed development are to be chipped and reused for this purpose. Place mulch evenly and to a depth of 100mm.

8.5 Signage

Prior to works commencing, tree protection signage is to be attached to each tree protection zone, displayed in a prominent position and the sign repeated at 10 metres intervals or closer where the fence changes direction. Each sign shall contain in a clearly legible form, the following information:

Tree protection zone.

- This fence has been installed to prevent damage to the trees and their growing environment both above and below ground and access is restricted.
- No Access within Tree Protection Zone

- The name, address, and telephone number of the developer.
The name and telephone number of the Site Arborist.

9.0 Site Management Issues

9.1 Soil Compaction

Plant and pedestrian traffic during the construction period has the potential to cause soil compaction. Compaction of the soil within the TPZ will reduce the voids between soil peds or particles therefore will reduce the gaseous exchange capacity of the root system and water percolation. No pedestrian or plant access is permissible to the TPZ.

9.2 Site Access

Sufficient access is required to enable efficient construction. It is essential to delineate access zones or corridors which will provide suitable access without damaging the existing trees to be retained or causing compaction to the root zone. All construction traffic, both vehicular and pedestrian will be diverted outside of the Tree Protection Zones by Tree Protection Fencing to the trees defined in 8.3.

9.3 Excavation within Tree Protection Area

No excavation is to be carried out within the TPZs of retained trees without the permission and supervision of the site arborist (AQF5)

9.4 Possible Contamination / Storage of Materials

The construction site will require the use of many chemicals and materials that are possible contaminants which if not managed will pose a risk to the existing trees. These possible contaminants include fuels, herbicides, solvents and the like. A Site Environmental Plan shall be provided, and this specific risk identified and addressed.

10.0 Tree Protection Measures During Construction

10.1 Possible Contaminants

Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations within the TPZs. Prevent wind-blown materials such as cement from harming trees. All possible contaminants are to be stored in a designated and appropriate area with secure chemical spill measures such as a bund in place.

10.2 Physical Damage

Prevent damage to tree. Do not attach stays, guys and the like to trees. No personnel, plant, machinery or materials are to be allowed within the tree protection fencing.

10.3 Compaction

No filling or compaction shall occur over tree roots zones within tree protection fenced areas. Where construction occurs close to or the TPZ of trees to be retained it shall be necessary to install protection to avoid compaction of the ground surface. This protection is to be planks supported clear of the ground fixed to scaffolding.

10.4 Trenching

Trenching is necessary within the TPZs of trees as defined in 6.1. All trenching works within TPZ's is to be carried out under the supervision of the AQF Level 5 qualified Site Arborist.

10.5 Site Sheds / Amenities/ Storage

Site sheds, site amenities, ablutions and site storage shall be in the area clear of all TPZ. Chemicals and potential contaminants are to be stored appropriately and this storage area is to be enclosed by a chemical spill bund to prevent the potential run off of contaminants in the event of a spillage or accident.

11.0 Environmental / Heritage/ Legislative Considerations

None of the subject trees are identified as threatened species or elements of endangered ecological communities within the Threatened Species Conservation Act 1995.

12.0 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

13.0 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.

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

		Significance				
		1. High	2. Medium	3. Low		
		Significance in Landscape	Significance in Landscape	Significance in Landscape	Environmental Pest / Noxious Weed Species	Hazardous / Irreversible Decline
Estimated Life Expectancy	1. Long >40 years					
	2. Medium 15-40 Years					
	3. Short <1-15 Years					
	Dead					
<u>Legend for Matrix Assessment</u> 						
		Priority for Retention (High) - These trees are considered important for retention and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4970 <i>Protection of trees on development sites</i> . Tree sensitive construction measures must be implemented e.g. pier and beam etc if works are to proceed within the Tree Protection Zone.				
		Consider for Retention (Medium) - These trees may be retained and protected. These are considered less critical; however their retention should remain priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.				
		Consider for Removal (Low) - These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.				
		Priority for Removal - These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.				

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

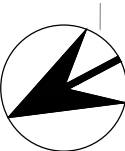
Birds Tree Consultancy

Consulting Arborist• Project Management • Horticultural Consultancy • Landscape Management

Inspection Data
Surry Hills

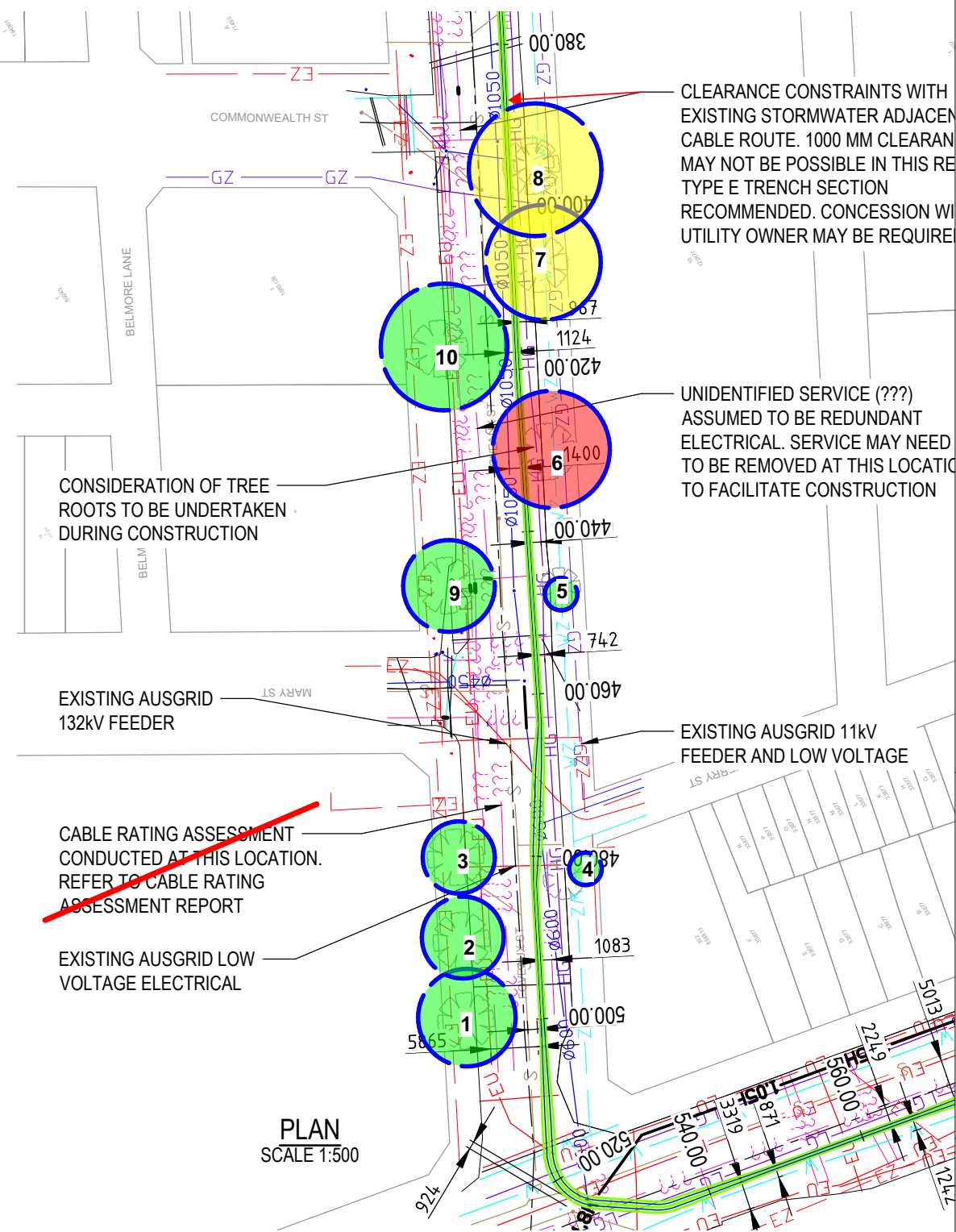
Tree no.	Species	Height (m)	Spread(m)	DBH (mm)	TPZ Radius (m)	DAB (mm)	SRZ Radius (m)	Maturity	Trunk (single, twin, multiple @)	Trunk lean	Form/Crown shape	Branching Habit	Crown Distribution	Stability	Branching Structure	Pruning History	Defects	Damage	Overall Health & Vigour	Canopy Density	Foliage	Deadwood	Epicormic Growth	Pest Infestation	Disease	Life expectancy	Env. & Landscape significance	Retention Value
1	Platanus x hybrida	16	10	500	6	600	2.67	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
2	Platanus x hybrida	18	10	420	5.04	490	2.45	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
3	Platanus x hybrida	18	10	370	4.44	450	2.37	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
4	Platanus x hybrida	6	3	50	2	80	1.15	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	High
5	Platanus x hybrida	5	3	50	2	80	1.15	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	High
6	Platanus x hybrida	28	14	600	7.2	710	2.87	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
7	Platanus x hybrida	22	12	590	7.08	680	2.81	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
8	Platanus x hybrida	25	14	680	8.16	760	2.95	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
9	Platanus x hybrida	23	9	470	5.64	540	2.55	Mature	Single	Prominent S	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
10	Platanus x hybrida	30	16	650	7.8	740	2.92	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
11	Platanus x hybrida	27	16	690	8.28	750	2.93		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
12	Platanus x hybrida	25	14	780	9.36	840	3.08		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
13	Platanus x hybrida	19	12	480	5.76	540	2.55		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
14	Platanus x hybrida	12	8	150	2	230	1.79		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
15	Platanus x hybrida	27	14	750	9	840	3.08		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
16	Platanus x hybrida	14	9	280	3.36	340	2.10		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
17	Platanus x hybrida	20	14	880	10.56	840	3.08		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
18	Jacaranda mimosifolia	11	8	140	2	190	1.65		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
19	Jacaranda mimosifolia	13	8	190	2.28	240	1.82		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
20	Liquidambar styraciflua	18	12	540	6.48	610	2.69		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
21	Liquidambar styraciflua	16	12	440	5.28	490	2.45		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
22	Jacaranda mimosifolia	7	5	110	2	120	1.36	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	High
23	Jacaranda mimosifolia	5	4	110	2	120	1.36	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	High
24	Jacaranda mimosifolia	12	12	280	3.36	350	2.13		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
25	Jacaranda mimosifolia	11	11	320	3.84	360	2.15		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
26	Jacaranda mimosifolia	10	7	230	2.76	290	1.97		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
27	Liquidambar styraciflua	21	12	570	6.84	650	2.76		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
28	Liquidambar styraciflua	15	12	410	4.92	530	2.53		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
29	Liquidambar styraciflua	19	14	580	6.96	650	2.76		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
30	Liquidambar styraciflua	20	14	630	7.56	690	2.83		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
31	Liquidambar styraciflua	22	15	670	8.04	720	2.88		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
32	Liquidambar styraciflua	22	14	700	8.4	760	2.95		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium

Tree no.	Species	Height (m)	Spread(m)	DBH (mm)	TPZ Radius (m)	DAB (mm)	SRZ Radius (m)	Maturity	Trunk (single, twin, multiple @)	Trunk lean	Form/Crown shape	Branching Habit	Crown Distribution	Stability	Branching Structure	Pruning History	Defects	Damage	Overall Health & Vigour	Canopy Density	Foliage	Deadwood	Epicormic Growth	Pest Infestation	Disease	Life expectancy	Env. & Landscape significance	Retention Value
33	Jacaranda mimosifolia	3	1	50	2	100	1.26	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	High
34	Liquidambar styraciflua	11	8	300	3.6	340	2.10		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
35	Platanus x hybrida	18	12	750	9	860	3.11		Single	Prominent E	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
36	Jacaranda mimosifolia	5	3	100	2	120	1.36		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	High
37	Liquidambar styraciflua	15	8	360	4.32	450	2.37		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
38	Liquidambar styraciflua	16	8	340	4.08	450	2.37		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
39	Melaleuca stypheloides	14	8	520	6.24	630	2.73	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
40	Melaleuca stypheloides	12	7	310	3.72	460	2.39	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
41	Melaleuca stypheloides	13	8	470	5.64	560	2.59	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
42	Melaleuca stypheloides	12	8	470	5.64	580	2.63	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
43	Platanus x hybrida	16	13	290	3.48	380	2.20	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
44	Platanus x hybrida	16	13	310	3.72	420	2.30	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High
45	Platanus x hybrida	15	9	300	3.6	390	2.23		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
46	Lophostemon confertus	16	8	470	5.64	540	2.55		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
47	Angophora costata	13	8	300	3.6	360	2.15		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
48	Lophostemon confertus	15	8	470	5.64	520	310.00		Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium
49	Angophora costata	13	10	300	3.6	390	2.23	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	High
50	Angophora costata	11	9	220	2.64	310	2.02	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	High
51	Angophora costata	15	12	280	3.36	360	2.15	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	High
52	Macadamia spp.	8	5	150	2	240	1.82	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	High
53	Angophora costata	3	1	40	2	90	1.20	Semi-mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	High



ALBION ST

COMMONWEALTH ST



- Legend**
- Tree to be Retained and Protected
 - Tree viable to be retained with design/construction amendments
 - Tree to be Removed/Not Viable to be retained
 - Tree Protection Zone (TPZ) in accordance with AS4970-2009

Birds Tree Consultancy
0438 892 634
glenn@birdstrees.com.au
www.birdstrees.com.au

Project: Surry Hills - Systems Connect
Client: AMBS
DWG: A01 V3
Plan: Tree Location Plan 01
Date: 30 July 2020 Scale : 1:750 @ A3

