



ARBORICULTURAL DEVELOPMENT IMPACT ASSESSMENT REPORT

Sydney Metro City and SouthWest Line Wide – Punchbowl NSW – Additional Works

REVISION A

18th of February 2022

**Prepared for
Systems Connect**

Prepared by

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Executive Summary

This Arboricultural Development Impact Assessment Report has been commissioned by Systems Connect to report on trees within the site of Sydney Metro City and SouthWest Line Wide site at Punchbowl NSW. Specifically this report has been commissioned to address the impact of the required conduit installation west of chainage 17+074 on the subject trees. It has been commissioned to outline the health, condition and stability of these trees as well as their viability for retention in the context of the proposed development. The scope of this report includes all trees within areas that may be impacted by the proposed conduit installation. This scope of works is additional to the scope of works that was defined for Birds Tree Consultancy Arboricultural Development Impact Assessment report for this site dated 07/11/2021.

The subject site is Sydney Metro City and SouthWest Line Wide - Punchbowl NSW. The subject trees are located within or adjacent to the boundaries of this site. The site is currently an undeveloped site within the Railway Corridor adjacent to the South Terrace, Punchbowl. Refer to Systems Connect Drawings SMCSWSWM-MTM-WEC-CE-DWG-623425 for greater detail of the proposed development.

The subject trees are in good health and condition.

The Tree Protection Zones (TPZ) of Trees A, 1295, 1296, 1297, 1298, and 1299 are encroached by the proposed conduit installation and required earthworks by a total or major encroachment as defined by *AS4970-2009 Protection of Trees on Development Sites*. These trees will not be viable to be retained and will be required to be removed due to the proposed conduit installation.

Selective pruning is required to provide canopy clearance for construction traffic and construction plant to the crowns of Trees 1300, 1302, 1304, 1307 and 1314. Minor crown reduction pruning to less than 10% of the crown is required on the northern side of these trees.

All pruning is to be carried out under the supervision of the Site Arborist (AQF Level 5) by an arborist with qualifications of AQF Level 3 or higher. All pruning is to be in accordance with AS4373-2007 Pruning of Amenity Trees.

Recommendations for tree retention or removal are summarised as follows:

Tree no.	Species	Recommendations	Comments
1295.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1296.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1297.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1298.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1299.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1300.	<i>Eucalyptus microcorys</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction

			pruning required to allow clearance for construction plant.
1302.	<i>Eucalyptus microcorys</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.
1304.	<i>Eucalyptus microcorys</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.
1307.	<i>Eucalyptus scoparia</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.
1314.	<i>Eucalyptus microcorys</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.
A	<i>Grevillea robusta</i>	Removed	Not viable to be retained due to proposed development.

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1.0 Scope of Works

This Arboricultural Development Impact Assessment Report has been commissioned by Systems Connect to report on trees within the site of Sydney Metro City and SouthWest Line Wide site at Punchbowl NSW. Specifically this report has been commissioned to address the impact of the required conduit installation west of chainage 17+074 on the subject trees. It has been commissioned to outline the health, condition and stability of these trees as well as their viability for retention in the context of the proposed development. The scope of this report includes all trees within areas that may be impacted by the proposed conduit installation. This scope of works is additional to the scope of works that was defined for Birds Tree Consultancy Arboricultural Development Impact Assessment report for this site dated 07/11/2021.

On the 4th of February 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 Sydney Metro City and SouthWest Line Wide - Punchbowl NSW. The subject trees are located within or adjacent to the boundaries of this site. The site is currently an undeveloped site within the Railway Corridor adjacent to the South Terrace, Punchbowl. Refer to Systems Connect Drawings SMCSWSWM-MTM-WEC-CE-DWG-623425 for greater detail of the proposed development.

2.2 Topography

The site is located adjacent to the railway corridor and on the side of a steep embankment. Refer to survey for greater detail of levels.

2.3 Identification

Trees are as identified in the attached inspection forms in Appendix C and shown in Tree location Plan A01 in Appendix D. The subject trees have previously been assessed within Urban Arbor Arboricultural Impact Assessment Report dated 12 May 2020 and tree numbering has been retained from this report for consistency.

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 1295. *Eucalyptus microcorys*

This mature tree is approximately 19m tall with a canopy spread of 6m. It has a single trunk with a diameter at breast height (DBH) of 280mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.2. Tree 1296. *Eucalyptus microcorys*

This mature tree is approximately 18m tall with a canopy spread of 4m. It has a single trunk with a DBH of 240mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.3. Tree 1297. *Eucalyptus microcorys*

This mature tree is approximately 19m tall with a canopy spread of 8m. It has a single trunk with a DBH of 380mm. This tree is in good health and condition with minimal deadwood and epicormic growth. There is evidence of a bark inclusion present within the primary junction.

3.4. Tree 1298. *Eucalyptus microcorys*

This mature tree is approximately 12m tall with a canopy spread of 4m. It has twin co-dominant trunks from the base with an aggregate DBH of 200mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.5. Tree 1299. *Eucalyptus microcorys*

This mature tree is approximately 19m tall with a canopy spread of 10m. It has a single trunk with a DBH of 480mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.6. Tree 1300. *Eucalyptus microcorys*

This mature tree is approximately 18m tall with a canopy spread of 10m. It has a single trunk with a DBH of 840mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.7. Tree 1302. *Eucalyptus microcorys*

This mature tree is approximately 16m tall with a canopy spread of 6m. It has a single trunk with a DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.8. Tree 1304. *Eucalyptus microcorys*

This semi-mature tree is approximately 14m tall with a canopy spread of 6m. It has a single trunk with a DBH of 250mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.9. Tree 1307. *Eucalyptus scoparia*

This mature tree is approximately 16m tall with a canopy spread of 6. It has twin co-dominant trunks from the base with an aggregate DBH of 300mm. This tree is in fair health and condition with a thinning canopy, moderate deadwood and minimal epicormic growth.

3.10. Tree 1314. *Eucalyptus microcorys*

This mature tree is approximately 16m tall with a canopy spread of 6m. It has a single trunk with a DBH of 300mm. This tree is in good health and condition with minimal deadwood and epicormic growth.

3.11. Tree A *Grevillea robusta*

This semi mature tree has been removed.

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
1295.	<i>Eucalyptus microcorys</i>	Medium
1296.	<i>Eucalyptus microcorys</i>	Medium
1297.	<i>Eucalyptus microcorys</i>	Medium
1298.	<i>Eucalyptus microcorys</i>	Medium
1299.	<i>Eucalyptus microcorys</i>	Medium
1300.	<i>Eucalyptus microcorys</i>	Medium
1302.	<i>Eucalyptus microcorys</i>	Medium
1304.	<i>Eucalyptus microcorys</i>	Medium
1307.	<i>Eucalyptus scoparia</i>	Medium
1314.	<i>Eucalyptus microcorys</i>	Medium
A	<i>Grevillea robusta</i>	Low

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
1295.	<i>Eucalyptus microcorys</i>	Medium
1296.	<i>Eucalyptus microcorys</i>	Medium
1297.	<i>Eucalyptus microcorys</i>	Medium
1298.	<i>Eucalyptus microcorys</i>	Medium
1299.	<i>Eucalyptus microcorys</i>	Medium
1300.	<i>Eucalyptus microcorys</i>	Medium
1302.	<i>Eucalyptus microcorys</i>	Medium
1304.	<i>Eucalyptus microcorys</i>	Medium
1307.	<i>Eucalyptus scoparia</i>	Medium
1314.	<i>Eucalyptus microcorys</i>	Medium
A	<i>Grevillea robusta</i>	Low

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)
1295.	<i>Eucalyptus microcorys</i>	3.36	100	2.15
1296.	<i>Eucalyptus microcorys</i>	2.88	100	1.94
1297.	<i>Eucalyptus microcorys</i>	4.68	100	2.37
1298.	<i>Eucalyptus microcorys</i>	2.4	100	1.75
1299.	<i>Eucalyptus microcorys</i>	5.76	100	2.59
1300.	<i>Eucalyptus microcorys</i>	10.08	0	3.30
1302.	<i>Eucalyptus microcorys</i>	3.6	0	2.13
1304.	<i>Eucalyptus microcorys</i>	2	0	2.00
1307.	<i>Eucalyptus scoparia</i>	3.6	0	2.18
1314.	<i>Eucalyptus microcorys</i>	3.6	0	2.13
A	<i>Grevillea robusta</i>		100	

6.3 Development Impact

6.3.1. Tree 1295. *Eucalyptus microcorys*

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. This tree will not be viable to be retained under the proposed development.

6.3.2. Tree 1296. *Eucalyptus microcorys*

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. This tree will not be viable to be retained under the proposed development.

6.3.3. Tree 1297. *Eucalyptus microcorys*

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. This tree will not be viable to be retained under the proposed development.

6.3.4. Tree 1298. *Eucalyptus microcorys*

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. This tree will not be viable to be retained under the proposed development.

6.3.5. Tree 1299. *Eucalyptus microcorys*

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. This tree will not be viable to be retained under the proposed development.

6.3.6. Tree 1300. *Eucalyptus microcorys*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 Protection of Trees on Development Sites will not be further encroached by the proposed development. This tree will be viable to be retained under the proposed development. The crown of this tree will be impacted by plant movements and construction traffic. Crown reduction pruning will be required to clear the crown of this tree from construction and plant movements.

6.3.7. Tree 1302. *Eucalyptus microcorys*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 Protection of Trees on Development Sites will not be further encroached by the proposed development. This tree will be viable to be retained under the proposed development. The crown of this tree will be impacted by plant movements and construction traffic. Crown reduction pruning will be required to clear the crown of this tree from construction and plant movements.

6.3.8. Tree 1304. *Eucalyptus microcorys*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 Protection of Trees on Development Sites will not be further encroached by the proposed development. This tree will be viable to be retained under the proposed development. The crown of this tree will be impacted by plant movements and construction traffic. Crown reduction pruning will be required to clear the crown of this tree from construction and plant movements.

6.3.9. Tree 1307. *Eucalyptus scoparia*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 Protection of Trees on Development Sites will not be further encroached by the proposed development. This tree will be viable to be retained under the proposed development. The crown of this tree will be impacted by plant movements and construction traffic. Crown reduction pruning will be required to clear the crown of this tree from construction and plant movements.

6.3.10. Tree 1314. *Eucalyptus microcorys*

The Tree Protection Zone (TPZ) of this tree in accordance with AS 4970-2009 Protection of Trees on Development Sites will not be further encroached by the proposed development. This tree will be viable to be retained under the proposed development. The crown of this tree will be impacted by plant movements and construction traffic. Crown reduction pruning will be required to clear the crown of this tree from construction and plant movements.

6.3.11. Tree A *Grevillea robusta*

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. This tree will not be viable to be retained under the proposed development.

7.0 Recommendations

The subject trees are in good health and condition.

The Tree Protection Zones (TPZ) of Trees A, 1295, 1296, 1297, 1298, and 1299 are encroached by the proposed conduit installation and required earthworks by a total or major encroachment as defined by *AS4970-2009 Protection of Trees on Development Sites*. These trees will not be viable to be retained and will be required to be removed due to the proposed conduit installation.

Selective pruning is required to provide canopy clearance for construction traffic and construction plant to the crowns of Trees 1300, 1302, 1304, 1307 and 1314. Minor crown reduction pruning to less than 10% of the crown is required on the northern side of these trees.

All pruning is to be carried out under the supervision of the Site Arborist (AQF Level 5) by an arborist with qualifications of AQF Level 3 or higher. All pruning is to be in accordance with AS4373-2007 Pruning of Amenity Trees.

Recommendations for tree retention or removal are summarised as follows:

Tree no.	Species	Recommendations	Comments
1295.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1296.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1297.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1298.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1299.	<i>Eucalyptus microcorys</i>	Remove	Not viable to be retained due to proposed development.
1300.	<i>Eucalyptus microcorys</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.
1302.	<i>Eucalyptus microcorys</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.
1304.	<i>Eucalyptus microcorys</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.

1307.	<i>Eucalyptus scoparia</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.
1314.	<i>Eucalyptus microcorys</i>	Retain	Viable to be retained and protected in accordance with 8.0. Crown reduction pruning required to allow clearance for construction plant.
A	<i>Grevillea robusta</i>	Removed	Not viable to be retained due to proposed development.

8.0 Pruning Specification

8.1 Crown Reduction Pruning

Crown Reduction pruning is required to provide canopy clearance for construction plant movement on the northern side of Trees 1300, 1302, 1304, 1307, 1314.

All pruning is to be carried out under the supervision of the Site Arborist (AQF Level 5) by an arborist with qualifications of AQF Level 3 or higher. All pruning is to be in accordance with *AS4373-2007 Pruning of Amenity Trees*.

9.0 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.

10.0 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*

11.0 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					
Legend for Matrix Assessment 						
		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
Punchbowl

4-Feb-22

Tree no.	Species	Height (m)	Spread(m)	DBH (mm)	TPZ Radius (m)	DAB Radius (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	Notes/Comments
A	Grevillea robusta																												
1295	Eucalyptus microcorys	19	6	280	3.36	360	2.15	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
1296	Eucalyptus microcorys	18	4	240	2.88	280	1.94	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
1297	Eucalyptus microcorys	19	8	390	4.68	450	2.37	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Bark inclusion	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
1298	Eucalyptus microcorys	12	4	200	2.4	220	1.75	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
1299	Eucalyptus microcorys	19	10	480	5.76	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	Medium	Medium	
1300	Eucalyptus microcorys	18	10	840	10.08	990	3.30	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
1302	Eucalyptus microcorys	16	6	300	3.6	350	2.13	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
1304	Eucalyptus microcorys	14	6	250	2	300	2.00	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	40y+	Medium	Medium	
1307	Eucalyptus scoparia	16	6	300	3.6	370	2.18	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Fair	Thinning	Normal	25%	<5%	No evidence	No evidence	15-40y	Medium	Medium	
1314	Eucalyptus microcorys	16	6	300	3.6	350	2.13	Mature	Single	NIL	Normal	Normal	Balanced	Stable	Stable	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Medium	Medium	

