Part 3a Arboricultural Assessment

TCN 9.

Artarmon

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Introduction

Summary

This assessment has been requested by SJB Architects to detail the significant trees located within the grounds of the TCN 9 Television Network, Artarmon Road Willoughby and to make recommendations for retention or removal based on the proposed construction footprints and the significance of selected trees.

This report has identified several individual trees that should been seen as being a material consideration to the development process based on their age, species and arboricultural significance. These trees will require construction setbacks and the implementation of a range of tree preservation measures to ensure their preservation throughout any proposed construction.

The proposed development will alter the existing site use from commercial television production, to residential housing. The proposed layout and construction footprint is yet to be finally determined but will focus on providing five multi-level residential developments with underground parking. This development will also provide three substantial open space parklands to allow for the establishment of mature native trees to replace those required for removal.

The current proposal has provided setbacks from all boundary lines to allow for the preservation of all significant trees located on the perimeter of the site. The development of the site however will require substantial alterations to ground levels throughout the central portion of the site and will require the removal of a number of mature and significant trees.

This report has assessed these trees and has made recommendations to retain only those that are of sufficient size and arboricultural significance to be seen as being a material constraint to the development process. These include a mature Bloodwood, located within the lower carpark as well as mature Eucalyptus saligna, or Sydney Blue Gum located adjacent to the boundary of the carpark and a remnant Livistonia palm located on the properties northern boundary.

The remainder of the native trees located outside the proposed construction impact zone will be recommended for preservation to maintain the arboricultural amenity where applicable. The retention of all trees will be done with the implementation of the appropriate tree preservation recommendations based on our Australian Standard for the Retention of Trees on Development Sites AS4970.

The indirect impacts of the construction can be accumulative and will require site specific management throughout the course of the construction process. The details of this is beyond the scope of this report and will be detailed following the completion of the construction layout. These will again be done in accordance with our Australian Standard for the Protection of Trees on Development Site AS4970 and all pruning and removal works will be done to comply with our Pruning Standard AS4373 for the Pruning of Amenity Trees.

Background

This assessment has been requested by SJB Architects NSW Pty Ltd on behalf of the property owners as part of a submission to alter the existing site use and create substantial housing opportunities in this urban environment. This will require a large scale alteration to the ground levels and lead to the removal of a large number of trees located centrally within the site.

The design process has recognized the significance of many of the sites largest and most well established trees and has provided construction setbacks that will allow for their retention. The focus will be on only those trees that have a high landscape significance. All non native species, and trees that have been planted within the last thirty years do not attract a high landscape significance value and will be considered for removal given the size and scale of the proposed works.

All trees located outside the proposed construction impact zone will be preserved to maintain arboricultural amenity where considered appropriate given the focus on preserving and maintaining native tree amenity.

Aims

The aims of this report are to;

- Conduct a visual assessment of the documented trees and their growing environment;
- Assess the impacts of the proposed construction on those trees recommended for preservation;
- Provide a site specific list of recommendations based on AS4970 for the Preservation of Trees on Development Sites.

There is no warranty or guarantee, expressed or implied that health, pests, disease, deficiencies, decay or any structural failures may occur at any time following documentation. Information contained in this report covers only the documented trees and reflects their health and condition at the time of inspection.

Methodology

A Visual Tree Assessment (VTA) was performed from ground level and consideration was given to the overall health of each tree, percentage of canopy, epicormic growth, deadwood and form for the species. The tree heights and canopy spreads have been estimated and where relevant the orientation of the canopy spread noted. The trunk diameters of each tree has been estimated at breast height of 1.4 meters (DBH) and measured with a diameter tape where required to calculate Tree Protection Zones.

The site was inspected by consulting arborist George Palmer initially in July 2013 and subsequently. This initial site inspection was done with representatives from SJB to detail the broad objectives of the proposal.

Tree Data

This report has detailed the health and condition of 98 trees located within and adjacent to the site. Only trees over 4 meters in height were documented. Only those trees with a high landscape significance have been considered for retention. Non native tree species and trees that have been planted within the last thirty years have not been considered to be of sufficient arboricultural significance to be seen as being a material constraint to the development process and will be considered for removal based on the size and extent of the proposed construction footprint.

As such there were only three trees that have been seen as being a material constraint to the development process. These are two mature Bloodwood trees (Tree 25 an 26), a mature Blue Gum (Tree 32) and a remnant Cabbage Palm(Tree 96).

The locations of these trees have been documented and appropriate construction setbacks have been calculated based on our Australian Standard for the Preservation of Trees on Development Sites AS4970.

In the case of the Blue Gum, this setback has been modified due to its location, adjacent to an existing driveway, and the affect that this piece of constructed infrastructure will have had on the development of its underlying root system. This will have limited the spread of the trees root system to the west and will allow construction adjacent to the edge of the existing driveway less than 1.5 meters from the base of this tree.

The remaining stand of Eucalyptus documented, appear to be part of more recent planting works. It will be assumed that these will have been planted as part of more recent landscape works and are estimated to be less than 30 years of age. These trees are well established and structurally sound examples of their species located within the dividing landscape bed within the southern portion of the carpark area as detailed.

The stand of Eucalyptus trees located on the verge along Scott Street are similarly well established examples of their species. These provide a significant arboricultural amenity and the revised construction footprint has been set back to allow for their retention.

Those trees located on the corner of Scott and Artarmon roads are a highly visible component of the sites arboricultural amenity. They have developed to a height of over 12 meters and provide a visual barrier from the existing and proposed site.

The mature Bloodwood may be part of the remnant Sydney Sandstone Gully Forest plant community and therefore attract a high landscape significance rating. The tree is over 18 meters in height and is supported on a trunk of over 800mm. As such it can be estimated to be over 80 years of age and of high arboricultural significance. This tree has been seen as being a material constraint to the development process and should be retained.

The remaining Cabbage Palm is also part of the Sydney Sandstone Gully Forest plant community and based on its size and growth rate, can be assumed to be a remnant tree. These are similarly arboriculturally significant and should be considered to be a material consideration to the development process. This is however, a monocotyledon, or palm species and can be transplanted relatively easily.

Discussion

The existing site comprises extensive surface car parking facilities as well as a large number of residential housing blocks that have been converted into production studios for the various television programs produced by the network. The largest construction footprints are associated with the existing studious located in the central north eastern portion of the site and the surrounding surface car parking areas.

The bulk of the sites arboricultural amenity is located on the street verges that surround the site, including those trees located on Scott street and Richmond avenue. There are a total of 48 trees located on or adjacent to these street frontages, all of which have been documented for retention.

The proposed development will require the removal of 27 trees to allow the construction to occur. Of these, 11 have been considered to have a high landscape value. The remainder are of low to moderate landscape retention value and should not be considered to be a material constraint to the development process.

Construction footprints have been set back from Scott Street, Artarmon Road and Richmond Avenue to allow for the retention of those trees. This will provide a partial green screen for the bulk of the vehicular and pedestrian traffic that passes the site.

The current proposal provides two large open spaces that will allow for the retention of those tree located within it. These areas will, or can be planted out with additional native and appropriate tree species to replace those required for removal.

There is also a large open space area to the south of the block that does not appear to have been accessed for many years. This area is currently overgrown with a range of invasive “weed” species including Privet and Lantana. It is hoped that this area will be cleared and replanted with a range of native tree species, to again provide an opportunity to replace the arboricultural amenity lost with the removal of those trees required for removal to allow the construction to occur.

Recommendations

The proposed development will require the removal of 27 trees. Of these 9 have been assigned a high landscape retention value and 2 have been allocated a AA retention value. The remainder are of limited arboricultural amenity and should not be considered for retention in light of the significance of the proposed development.

A Construction Impact Assessment will need to carried out accurately determine the arboricultural impacts of the construction on those trees located adjacent to the construction impact zone. This may require root mapping to locate and identify those roots potentially affected by the construction process. This may lead to a requirement for additional pruning or removals to occur.

This, and the remainder of the construction impacts will be addressed with the implementation of the following Tree Preservation Recommendations. These will include, but not be limited to the following;

- All excavation within the SRZ or TPZ must be done with all due consideration for the retention of the affected tree
- All roots greater than 50 mm in diameter should be considered as structural and preserved.
- All roots required for removal must be cut cleanly to limit the spread of decay.
- All soil levels within the SRZ of will retained and mulched.

The remainder Tree Protection measures are a generic list of tree preservation recommendations that will limit the accumulative impacts of the construction process.

1.0 Appointment of Site Arborist

A site arborist shall be appointed prior to the commencement of works on site. The Site Arborist shall clearly mark out all trees to be removed and ensure that all trees documented for retention are preserved with the implementation of the following tree protection measures. The Site Arborist shall have a minimum qualification equivalent to a NSW TAFE Certificate Level 5 or above in Arboriculture.

1.1 Inspection Points

Give five working days notice to allow inspections to be undertaken at the following stages;

Inspection Point	Inspection Personnel
Installation of Tree Protection Zones including Tree Protection Fencing, Silt Fencing and Signage	Site Arborist
Modification of the Tree Protection Zone	Site Arborist
Works within the Tree Protection Zone	Site Arborist
Completion of Construction Works	Site Arborist Site Supervisor.

1.2 Education

Contractors and site workers shall receive a copy of these specifications prior to the commencement of work. Contractors and site workers undertaking any works within a TPZ shall sign the site log to confirm that they have read and understand these specifications prior to their undertaking.

1.3 Tree Protection Zones

Where applicable, all trees to be retained through the construction process shall be protected from mechanical damage and the indirect impacts of the construction process with the installation of Tree Protection Zones. Unless otherwise stated, the following activities must not be carried out within a TPZ;

- modification of existing soil levels
- excavation or trenching
- cultivation of soil
- mechanical removal of vegetation
- movement of natural rock
- storage of materials, plant or equipment
- erection of site sheds
- affixing signage or boarding to trees
- disposal of chemical waste or construction material
- any activity that may directly or indirectly affect the health of these or surrounding trees.

Note: If access to a TPZ is required as part of the approved development, prior authorization is required by the Site Arborist.

1.4 Tree Protection Fencing

Tree Protection Fencing shall be installed at the perimeter of the TPZ. As a minimum the Tree Protection Fencing shall be 1.8 meter high temporary chain supported by steel stakes. This shall be fastened and supported to prevent sideways movement. The trees woody roots shall not be damaged during the installation of this Tree Protection Fencing.
This Tree Protection Fencing shall be erected prior to the commencement of works on site and shall be maintained for the duration of the construction process.

1.5 Signage

Tree Protection Signage shall be attached the the PTZ and displayed in a prominent location. These signs shall be repeated in 10m intervals or closer where the fence changes direction. These shall be a minimum of a 72 font size and each sign at-least 600 x 500mm.

1.6 Mulching

The area within the TPZ shall be mulched and maintained with 80mm of leaf litter mulch for the duration of the construction process. This mulch shall be spread by hand to limit the impact on underlying roots and shall be installed prior to the commencement of works on site.

The Site Arborist shall inspect and approve the TPZ including mulching. signage, Tree ProtectionFencing, Silt fencing and Signage prior to the commencement of works on site.

1.7 Site Management

Materials and waste storage, site sheds and temporary services shall not be located within the TPZ unless specified. Storage points shall be covered when not in use and be no greater than 2 meters in height.

1.8 Works within the TPZ

The TPZ may need to be modified during the works to allow access between the protected tree and the proposed construction. The TPZ shall remain as specified and only those works detailed in the proposed construction undertaken.

1.9 Completion of Works within specified TPZ

Upon the completion of works within a TPZ the protective fencing shall be reinstated as specified. Where the construction of new structures does not allow for the reinstallation of fencing the TPZ shall be modified by the Site Arborist.

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Associate Diploma Horticulture- Landscape.

Disclaimer

All care has been taken to assess potential hazards. Trees are however inherently dangerous. This assessment was carried out from ground level and covers what was reasonable to assess at the time of inspection. No aerial or underground inspections were carried out unless specifically stated. Structural weakness may exist within the roots, trunk or branches. Any protection or preservation methods recommended are not a guarantee for the trees survival. They are recommendations to improve and reduce risk only. No responsibility is accepted for the damage or injury by trees to people or places.
This report is to be used in its entirety only. Any written or verbal submissions must reference the report in its entirety.
Botanics has relied on information provided by others. This includes plans, documents and verbal submissions. Botanics can neither guarantee or be responsible for the accuracy of this information.
Information contained in this report only covers those trees documented and reflects their health and structure at the time of inspection only. There is no warranty or guarantee expressed or implied that problems may not arise at any time in the future.

T#	Species	Height and canopy spread	DBH	Health Rating	Structural Rating	Comments	Retention Value	TPZ (m)	Implications
1	Eucalyptus microcorys (Tallowwood)	14 x 11	89cm	1	1	Mature and significant tree. Part of the local plant community.	1	10plus	Retain through construction with implementation of the TMP setbacks.
2	Corymbia maculata (Spotted Gum)	11 x 4	41cm	2	1	Mature and significant tree. Part of the local plant community.	1	6m	Retain through construction with implementation of the TMP setbacks.
3	Eucalyptus microcorys (Tallowwood)	12 x 6	63cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Retain through construction with implementation of the TMP setbacks.
4	Corymbia maculata (Spotted Gum)	12 x 6	65cm	2	2	Mature and significant tree. Part of the local plant community. Decay at the base.	2	7m	Retain through construction with implementation of the TMP setbacks.
5–8	Casuarina glauca (Swamp She-oak)	7 x 5	30cm	2	3	A more recent planting adjacent to the sites eastern boundary. Planted under power lines and directionally pruned.	3	6m	Retain through construction with implementation of the TMP setbacks.
9	Casuarina glauca (Swamp She-oak)	10 x 5	43cm	1	1	The largest of this stand of She-oaks that has not been directionally pruned.	2	6m	Retain through construction with implementation of the TMP setbacks.
10	Eucalyptus haemastoma (Scibbly Gum)	6 x 5	25cm	2	2	A semi mature to mature example of this native tree species.	2	4m	Retain through construction with implementation of the TMP setbacks.
11	Jacaranda mimosifolia (Jacaranda)	6 x 5	25cm	1	2	A semi mature to mature example of this exotic tree species.	3	4m	Retain through construction with implementation of the TMP setbacks if deemed appropriate.
12	Corymbia maculata (Spotted Gum)	14 x 11	63cm	1	1	Mature and significant tree. Part of the local plant community.	1	12m	Retain through construction with implementation of the TMP setbacks.
13	Corymbia maculata (Spotted Gum)	11 x 4	55cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Retain through construction with implementation of the TMP setbacks.
14	Eucalyptus haemastoma (Scibbly Gum)	6 x 3	28cm	2	2	Mature and significant tree. Part of the local plant community.	1	4m	Retain through construction with implementation of the TMP setbacks.
15	Acacia longifolia (Coastal Wattle)	9 x 5	25cm	3	2	A mature tree that has a limited on going life expectancy.	3	NA	Remove due to limited ongoing life expectancy.
16	Eucalyptus microcorys Tallowwood)	11 x 5	56cm	1	1	Mature and significant tree. Part of the local plant community. Co-dominant and included @ 6m.	1	6m	Retain through construction with implementation of the TMP setbacks.
17	Eucalyptus gummifera (Bloodwood)	12 x 6	39cm	1	2	Mature and significant tree. Part of the local plant community.	1	5m	Retain through construction with implementation of the TMP setbacks.

T#	Species	Height and canopy spread	DBH	Health Rating	Structural Rating	Comments	Retention Value	TPZ (m)	Implications
18	Eucalyptus gummifera (Bloodwood)	12 x 7	78cm	1	1	Mature and significant tree. Part of the local plant community.	1	10plus	Retain through construction with implementation of the TMP setbacks.
19	Eucalyptus gummifera (Bloodwood)	16 x 4	90 plus	1	1	Mature and significant tree. Part of the local plant community.	AA	12m	Retain through construction with implementation of the TMP setbacks. Will need additional assessment to detail construction.
20	Eucalyptus gummifera (Bloodwood)	12 x 6	54cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Retain through construction with implementation of the TMP setbacks.
21	Melaleuca quinquenervia (Paperbark)	9 x 4	45cm	1	2	A semi mature tree located on the street verge.	1	6m	Retain through construction with implementation of the TMP setbacks.
22	Eucalyptus haemastoma (Scibbly Gum)	10 x 8	73cm	2	2	Mature and significant tree. Part of the local plant community. Co dominant @ 1m and in fair condition.	2	8m	Retain through construction with implementation of the TMP setbacks.
23	Jacaranda mimosifolia (Jacaranda)	8 x 8	22 + 32	2	2	A semi mature example of an exotic tree species.	2	6m	Retain through construction with implementation of the TMP setbacks.
24	Banksia integrifolia (Coastal Banksia)	6 x 5	25cm	1	1	A semi mature to mature example of this native tree species.	2	4m	Retain through construction with implementation of the TMP setbacks if deemed appropriate.
25	Eucalyptus gummifera (Bloodwood)	12 x 8	35 + 47	1	1	Mature and significant tree. Part of the local plant community. Co-dominant @ 1m and suppressed.	AA	10m	Required for removal.
26	Eucalyptus gummifera (Bloodwood)	16 x 12	90+	1	1	Mature and significant tree. Part of the local plant community. Co-dominant @ 4m.	AA	12m	Required for removal.
27	Corymbia maculata (Spotted Gum)	11 x 4	20 +14	1	2	Mature and significant tree. Part of the local plant community. Co-dominant @ 1m.	1	5m	Required for removal.
28	Ficus benjamina (Benjamins Fig)	6 x 6	28cm	2	2	A more recent planting of this exotic tree species.	3	NA	Required for removal.
29	Banksia integrifolia (Coastal Banksia)	7 x 3	25cm	1	1	A semi mature and native tree species.	3	NA	Required for removal.
30	Eucalyptus haemastoma (Scibbly Gum)	12 x 7	56cm	2	2	Mature and significant tree. Part of the local plant community. Decay @ 4m	2	6m	Required for removal.
31	Eucalyptus gummifera (Bloodwood)	12 x 6	28cm	2	1	Mature and significant tree. Part of the local plant community.			Required for removal.

T#	Species	Height and canopy spread	DBH	Health Rating	Structural Rating	Comments	Retention Value	TPZ (m)	Implications
32	Eucalyptus saligna (Sydney Blue Gum)	16 x 12	83cm	1	1	Mature and significant tree. Part of the local plant community.	AA	10plus	Retain through construction with implementation of the TMP setbacks.
33	Eucalyptus saligna (Sydney Blue Gum)	12 x 5	54cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Retain through construction with implementation of the TMP setbacks.
34	Eucalyptus gummifera (Bloodwood)	15 x 8	65cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Retain through construction with implementation of the TMP setbacks.
35	Eucalyptus saligna (Sydney Blue Gum)	12 x 9	34cm	1	2	Mature and significant tree. Part of the local plant community. Partially suppressed.	1	6m	Retain through construction with implementation of the TMP setbacks.
36	Eucalyptus saligna (Sydney Blue Gum)	8 x 7	73cm	2	2	Mature and significant tree. Part of the local plant community.	2	8m	Retain through construction with implementation of the TMP setbacks.
37	Eucalyptus gummifera (Bloodwood)	9 x 6	26cm	2	2	A semi mature example of an exotic tree species.	2	6m	Retain through construction with implementation of the TMP setbacks.
38	Eucalyptus saligna (Sydney Blue Gum)	11 x 7	49cm	1	1	A semi mature to mature example of this native tree species.	2	NA	Required for removal.
39	Phoenix canariencis (Canary Island Date Palm)	4 x 6	60cm	1	1	A self seeded “weed” species that should not be considered for retention.	3	NA	Required for removal.
40	Angophora costata (Smooth Barked Apple)	9 x 9	62cm	1	1	Mature and significant tree. Part of the native plant community.	1	8m	Required for removal.
41	Corymbia maculata (Spotted Gum)	13 x 9	54cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Located outside the CIZ and recommended for retention.
42	Lophostemon confertus (Brush Box)	9 x 6	28cm	1	1	A semi mature to mature example of this native tree species.	2	NA	Required for removal.
43	Eucalyptus haemastoma (Scibbly Gum)	11 x 7	41cm	1	1	A semi mature to mature example of this native tree species. Sparse canopy and in decline.	3	NA	Required for removal.
44	Eucalyptus haemastoma (Scibbly Gum)	8 x 4	15cm	2	2	A semi mature to mature example of this native tree species. In decline due to compaction.	2	4m	Required for removal.
45 -46	Poplar nigra	12 x 6	28cm	2	2	A semi mature to mature example of this exotic tree species.	3		Recommended for removal.

T#	Species	Height and canopy spread	DBH	Health Rating	Structural Rating	Comments	Retention Value	TPZ (m)	Implications
47 – 49	Robinia pseudoacacia (Golden Robinia)	4 x 4	40cm	2	2	A stand of 3 trees located at the front entrance. Possible historical significance.	2	NA	Required for removal.
50	Podocarpus elatus (Brown Pine)	8 x 4	24cm	2	1	A more recent planting located adjacent to the existing building footprint.	2	NA	Required for removal.
51	Lophostemon confertus (Brush Box)	9 x 7	27cm	2	2	Mature and significant tree. Part of the local plant community.	2	NA	Required for removal.
52	Syzgium leumanii (Lilli Pilli)	6 x 3	24cm	1	2	A semi mature example of the species recently planted in this location.	3	NA	Required for removal.
53	Eucalyptus haemastoma (Scibbly Gum)	6 x 6	37 + 35	2	2	Mature and significant tree. Part of the local plant community. Co dominant with decay at the base.	3	NA	Required for removal.
54	Melaleuca armillaris (Honey myrtle)	5 x 4	26cm	2	2	A semi mature example of this native tree species.	2	NA	Required for removal.
55	Lophostemon confertus (Brush Box)	7 x 6	49cm	2	2	A semi mature to mature example of this native tree species.	2	NA	Required for removal.
56	Eucalyptus haemastoma (Scibbly Gum)	12 x 6	60cm	1	1	A mature native tree located adjacent to the proposed development.	1	8m	Located adjacent to the proposed construction footprint. A more detailed assessment is required to determine retention.
57	Eucalyptus microcorys (Tallowwood)	14 x 9	72cm	1	1	Mature and significant tree. Part of the native plant community.	1	8m	Located adjacent to the proposed construction footprint. A more detailed assessment is required to determine retention.
58	Eucalyptus saligna (Sydney Blue Gum)	13 x 9	54cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Located adjacent to the proposed construction footprint. A more detailed assessment is required to determine retention.
59	Eucalyptus saligna (Sydney Blue Gum)	9 x 6	28cm	1	1	A semi mature to mature example of this native tree species.	2	4m	Located adjacent to the proposed construction footprint. A more detailed assessment is required to determine retention.
60	Eucalyptus saligna (Sydney Blue Gum)	11 x 7	54cm	2	2	Mature and significant tree. Part of the local plant community. Poor structure @ 5m.	3	6m	Located adjacent to the proposed construction footprint. A more detailed assessment is required to determine retention.
61	Eucalyptus saligna (Sydney Blue Gum)	10 X 5	52cm	1	1	A semi mature to mature example of this native tree species.	2	4m	Located adjacent to the proposed construction footprint. A more detailed assessment is required to determine retention.

T#	Species	Height and canopy spread	DBH	Health Rating	Structural Rating	Comments	Retention Value	TPZ (m)	Implications
63	Casuarina glauca (She Oak)	10 x 4	30cm	1	1	A semi mature example of this native tree species.	2	5m	Retain through construction with implementation of the TMP setbacks.
64	Eucalyptus microcorys (Tallowwood)	14 x 7	55cm	1	1	A semi mature example of this species. Estimated to have been planted less than 30 years ago. Co dominant with visible surface decay.	1	6m	Retain through construction with implementation of the TMP setbacks.
65	Eucalyptus microcorys (Tallowwood)	15 x 6	68cm	1	1	A mature and significant example of this native tree species.	1	8m	Retain through construction with implementation of the TMP setbacks.
66	Populus nigra (Cottonwood)	12 x 8	57cm	2	3	A semi mature example of this species. Estimated to have been planted less than 30 years ago. Decay at base and through trunk.	3	4m	Remove irrespective to the proposed development due to poor species characteristics.
67	Eucalyptus microcorys (Tallowwood)	12 x 8	34cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Retain through construction with implementation of the TMP setbacks.
68	Eucalyptus microcorys (Tallowwood)	15 x 6	68cm	1	1	Mature and significant tree. Part of the native plant community.	1	8m	Retain through construction with implementation of the TMP setbacks.
69	Eucalyptus saligna (Sydney Blue Gum)	12 x 12	35cm x 4	1	1	Mature and significant tree. Part of the local plant community. Lopped at the base and has developed with 4 co dominant trunks.	2	10m	Retain through construction with implementation of the TMP setbacks.
70	Lophostemon confertus (Brush Box)	9 x 5	42cm	1	1	A mature and significant native tree species	1	NA	Required for removal.
71	Eucalyptus botryoides (Bangalay)	9 x 8	28cm	1	1	A mature and significant native tree species	1	NA	Required for removal.
72	Brachychiton acerifolius (Illawarra Flame Tree)	7 x 4	26cm	1	1	A semi mature to mature example of this native tree species. Co dominant at 3m and partially suppressed.	1	NA	Required for removal.
73	Eucalyptus botryoides (Bangalay)	12 x 7	73cm	1	1	A semi mature to mature example of this native tree species.	2	NA	Required for removal.
74	Eucalyptus microcorys (Tallowwood)	11 x 7	22cm + 43 +18cm	1	2	Mature and significant tree. Part of the local plant community. Lopped at the base and has developed with 3 co dominant trunks.	1		Required for removal.
75	Eucalyptus haemastoma (Scibbly Gum)	12 x 12m	42cm + 38 + 35cm	2	2	Mature and significant tree. Part of the local plant community.	2	10m	Required for removal.

T#	Species	Height and canopy spread	DBH	Health Rating	Structural Rating	Comments	Retention Value	TPZ (m)	Implications
76	Eucalyptus gummifera (Bloodwood)	14 x 7	49cm	1	1	A mature and significant native tree.	2	5m	Retain through construction with implementation of the TMP setbacks.
77	Cupressus macrocarpa (Monterey cypressus)	8 x 7	80+	1	3	An over mature and poorly formed tree recommended for removal irrespective of the proposed development.	4	NA	Remove.
78	Eucalyptus gummifera (Bloodwood)	12 x 4	39cm	2	2	A semi mature example of the native tree species.	1	8m	Retain through construction with implementation of the TMP setbacks.
79	Melaleuca armillaris (Honey myrtle)	9 x 5	45cm	1	1	A semi mature example of this native tree species. Will have been planted as part of ongoing landscape works.	2	6	Retain through construction with implementation of the TMP setbacks.
80	Schinus molle (Pepper tree)	8 x 8	34cm	2	2	A semi mature example of this exotic tree species.	3	NA	Remove.
81	Corymbia maculata (Spotted Gum)	11 x 10	68cm	1	1	Mature and significant tree. Part of the native plant community.	1	8m	Retain through construction with implementation of the TMP setbacks.
82	Eucalyptus gummifera (Bloodwood)	12 x 12	53cm	1	1	Mature and significant tree. Part of the local plant community. Co dominant @ 3m.	1	10m	Retain through construction with implementation of the TMP setbacks.
83	Eucalyptus gummifera (Bloodwood)	13 x 10	57cm	1	1	A mature and significant native tree species. Co dominant @ 2m	1	8m	Retain through construction with implementation of the TMP setbacks.
84	Eucalyptus gummifera (Bloodwood)	11 x 10	65cm	1	1	A mature and significant native tree species	1	8m	Retain through construction with implementation of the TMP setbacks.
85	Eucalyptus saligna (Sydney Blue Gum)	8 x 6	38cm	2	2	A semi mature to mature example of this native tree species.	1	8m	Retain through construction with implementation of the TMP setbacks.
86	Eucalyptus saligna (Sydney Blue Gum)	7 x 5	25cm	1	2	A semi mature to mature example of this native tree species. Poor form. Suppressed.	2	6m	Retain through construction with implementation of the TMP setbacks.
87	Eucalyptus saligna (Sydney Blue Gum)	11 x 7	37cm	1	1	Mature and significant tree. Part of the local plant community.	1	6m	Retain through construction with implementation of the TMP setbacks.
88	Eucalyptus saligna (Sydney Blue Gum)	14 x 7	70cm	1	1	Mature and significant tree. Part of the local plant community.	1	10m	Retain through construction with implementation of the TMP setbacks.

T#	Species	Height and canopy spread	DBH	Health Rating	Structural Rating	Comments	Retention Value	TPZ (m)	Implications
89	Eucalyptus saligna (Sydney Blue Gum)	10 x 8	65cm	1	1	A mature and significant native tree. Co dominant @ 6m.	1	8m	Retain through construction with implementation of the TMP setbacks.
90	Eucalyptus haemastoma (Scibbly Gum)	14 x 12	80+	1	1	A mature and significant native tree.	1	8m	Retain through construction with implementation of the TMP setbacks.
91	Melaleuca quinquinervia (Papperbark)	8 x 6	25 + 25	1	1	A semi mature example of the native tree species.	1	8m	Retain through construction with implementation of the TMP setbacks.
92	Eucalyptus saligna (Sydney Blue Gum)	9 x 5	32 + 34cm	1	1	A semi mature example of the native tree species.	1	8m	Retain through construction with implementation of the TMP setbacks.
93	Eucalyptus saligna (Sydney Blue Gum)	9 x 5	34cm	2	2	A semi mature example of this exotic tree species.	3	8m	Retain through construction with implementation of the TMP setbacks.
94	Eucalyptus saligna (Sydney Blue Gum)	11 x 10	68cm	1	1	Mature and significant tree. Part of the native plant community.	1	8m	Retain through construction with implementation of the TMP setbacks.
95	Eucalyptus saligna (Sydney Blue Gum)	12 x 12	53cm	1	1	Mature and significant tree. Part of the local plant community. Co dominant @ 3m.	1	10m	Retain through construction with implementation of the TMP setbacks.
96	Livistona australis (Cabbage Palm)	8 x 4	30cm	1	1	Part of a remnant plant community.	AA	4m	Retain through construction with implementation of the TMP setbacks. May require transplantation.
97	Eucalyptus saligna (Sydney Blue Gum)	11 x 10	65cm	1	1	A mature and significant native tree species	1	8m	Retain through construction with implementation of the TMP setbacks.
98	Eucalyptus saligna (Sydney Blue Gum)	12 x 8	53cm	1	1	A semi mature to mature example of this native tree species.	1	8m	Retain through construction with implementation of the TMP setbacks.

Tree Protection Zone
Retention Value AA
Retention Value 1
Retention Value 2
Retention Value 3
Retention Value 4

Project
Channel 9 Environmental Assessment
24 Artarmon Road, Willoughby, NSW

Drawing
0000_Significant Tree Locations
Date 19.08.13 Rev 01

Scale
1:1000 @ A3
1:500 @ A1
0 20 30 40 50

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