

TREE TABLE: 189 Riverview Road, Avalon Beach.

T#	Species	Remnant Native, Exotic.	Age Class	Canopy Height and Spread.	Trunk Diameter DBH	Basal Diameter DGL	Significance	Amenity value	Ecological Value	Defects	SRZ	TPZ	Implications
T1-T3	Ligustrum lucidum (Broad leafed Privet)	E	J	6 x 4m	10cm	15cm	Low	Low	Low		2m	3m	A well recognised environmental weed species recommend for removal irrespective of the proposed development. https://weeds.dpi.nsw.gov.au/Weeds/PrivetBroadleaf
T3b	Allocasuarina torulosa (Rose She Oak)	R	SM	9 x 4	30cm	35cm	Low	Low	Moderate		2m	3m	Part of a stand of Rose She oaks that form the lower canopy throughout this portion of the site. All affected by borer and die back. Remove.
T4	Corymbia maculata (Spotted Gum)	R	M	25 x 10m	52cm	60cm	High	High	High		2.7m	6.2m	A well established endemic tree species located adjacent to the site's front boundary.
T5	Eucalyptus umbra (White Mahogany)	R	SM	14 x 6m	22cm	30cm	Moderate	Moderate	Moderate	S	2m	4m	A semi mature example of the species located under the neighbouring canopy. Retain.
T6	Cupaniopsis anacardioides (Tuckeroo)	N	SM	10 x 5m	32cm	40cm	Moderate	Moderate	Moderate		2.25m	3.6m	The largest of a stand of Tuckeroo's located within the neighbouring residence.
T7	Corymbia maculata (Spotted Gum)	R	M	14 x 6m	31cm	45cm	Moderate	Moderate	Moderate		2.5m	4m	A well established endemic tree species located centrally within this upper portion of the site. Retain.
T8	Corymbia maculata (Spotted Gum)	R	SM	9 x 5	32cm	35cm	Moderate	Moderate	Moderate		2.2m	4.5m	A semi mature example of the species located adjacent to the sites southern boundary. Retain.

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T9	Stenocarpus sinuatus (Firewheel Tree)	N	M	12 x 6	32cm	35cm	Moderate	Moderate	Low		2.2m	4.5m	A semi mature example of the species located centrally within this portion of the site. Remove.
T10	Allocasuarina torulosa (Rose She Oak)	R	SM	8 x 4	30cm	32cm	Low	Low	Low		2m	4.3m	A poor example of the species with significant upper canopy die back. Remove.
T11	Allocasuarina torulosa (Rose She Oak)	R	SM	8 x 4	20cm	25cm	Low	Low	Low	D	3.7m	10m	A poor example of the species with a section of visible surface decay noted at base. Borer and die back. Remove.
T12	Livistona australis (Cabbage-tree palm)	R	M	8 x 3m	30cm	30cm	High	High	High		2.5m	4.5m	An important locally native palm species located within the neighbouring residence. Retain.
T13	Corymbia maculata (Spotted Gum)	R	M	28 x 14m	82cm	1.3m	High	High	High		3.5m	9.6m	The dominant Spotted Gum in the stand. Located centrally within this portion of the site. Retain.
T14	Eucalyptus paniculata (Grey Ironbark)	E	M	22 x 8	37cm	40cm	Moderate	High	High		2.5m	6m	Co dominant at 5m with fair health only. Retain.
T15	Toona ciliata (Australian Red Cedar)	E	M	22 x 8	50cm	65cm	Moderate	Moderate	Low		2.5m	6m	A well established tree located within the neighbouring residence. Retain.
T16	Pittosporum undulatum (Sweet Pittosporum)	N	J	6 x 4m	10cm	14cm	Low	Low	Low		2m	4m	A contentious native species that has become invasive. Remove irrespective.
T17	Corymbia maculata (Spotted Gum)	E	M	24 x 12m	62cm	80cm	High	High	High		3m	7m	A mature and significant example of the species located within the neighbouring residence. Retain.

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T18	Eucalyptus umbra (White Mahogany)	R	M	18 x 8	55cm	78cm	Low	Low	Low		2.5m	6m	An over mature tree that appears to have entered a cycle of decline. Termite mound noted at 6m. Dead wood throughout the upper canopy. Remove.
T19	Ceratopetalum gummiferum (Christmas bush)	N	SM	6 x 3	15cm	15cm	Low	Low	Low		2m	4m	A small native tree. Low Value.
T20	Allocasuarina torulosa (Rose She Oak)	N	Sm	6 x 3	35cm	40cm	Low	Low	Low		2m	4m	A poor example of the species with a section of visible surface decay noted at base. Borer and die back. Remove.
T21	Allocasuarina torulosa (Rose She Oak)	N	SM	9 x 3	18cm	25cm	Low	Low	Low		2m	4m	Extensive upper canopy die back. Large section of visible surface decay as a result of limb failure. Remove.
T22	Corymbia maculata (Spotted Gum)	R	SM	18 x 8m	32cm	40cm	Moderate	Moderate	Moderate		2.5m	6m	A semi mature example of the species located within 2.5m of the existing construction footprint. Retain.
T23	Corymbia maculata (Spotted Gum)	R	M	22 x 8	48cm	60cm	High	High	High		3m	8m	Part of a stand of 3 C.maculata located within the neighbouring residence. This one is located within 1m of boundary. Retain.
T24	Corymbia maculata (Spotted Gum)	R	M	22 x 8	50cm	60cm	High	High	High		3m	8m	As above. T24 and T25 set back from the boundary and unlikely to be directly affected by the proposed. Retain.

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T25	Corymbia maculata (Spotted Gum)	E	M	22 x 8	50cm	60cm	High	High	High		3m	8m	As above.
T26	Syzygium australe (Creek lilly-pilly)	N	SM	12 x 6	22cm	30cm	Moderate	Low	Moderate		2.5m	6m	A semi mature example of the species that is likely to have been planted here to provide screening. Co dominate at 6m. Located within the neighbouring residence and documented for retention.
T27	Eucalyptus paniculata (Grey Ironbark)	R	M	24 x 8m	52cm	58cm	High	Moderate	Moderate	DW	3m	9m	A well established example of the species located within 2m of a significant contour change. Retain.
T28	Corymbia maculata (Spotted Gum)	R	SM	14 x 5	30cm	38cm	Moderate	Moderate	Low		2.8m	6m	A partially suppressed and co dominate example of the species located between 2 retaining walls and additional plant material. Poor vigour and health. Remove.
T29	Allocasuarina torulosa (Rose She Oak)	N	SM	12 x 3m	22cm	25cm	Low	Low	Low	DW	2m	4m	A semi mature example of the species located under the neighbouring canopy. Retain.
T30	Howea forsteriana (Kentia palm)	N	SM	4 x 2m	15cm	15cm	Moderate	Low	Low		2m	4m	A small palm that will have been planted as part of more recent landscape works.
T31	Corymbia maculata (Spotted Gum)	E	SM	18 x 6m	34cm	40cm	Moderate	Moderate	Moderate		2.7m	6m	Co dominant at 8m. Lower canopy pruning. Located outside the construction footprint. Retain.

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T31 b	Eucalyptus paniculata (Grey Ironbark)	N	SM	12 x 4	32cm	35cm	Low	Low	Low				A semi mature example of the species located adjacent to the retaining wall. Retain.
T32	Corymbia maculata (Spotted Gum)	N	SM	14m x 6m	59cm	72cm	Moderate	Moderate	Moderate		2.8m	6m	A semi mature example of the species with sparse upper canopy. Retain.
T33	Corymbia maculata (Spotted Gum)	E	M	24 x 12m	54cm	62cm	High	High	High		3m	7m	A well established example of the species located adjacent to the foreshore. A1. Retain.
T34	Corymbia maculata (Spotted Gum)	E	M	24 x 8m	56cm	60cm	High	High	High		3m	7m	A well established example of the species located adjacent to the foreshore. A1. Retain.
T35	Corymbia maculata (Spotted Gum)	E	M	24 x 8m	38cm	42cm	High	High	High		3m	7m	Part of a stand of 3 C.maculata located within the neighbouring residence.
T36	Corymbia maculata (Spotted Gum)	E	SM	12 x 5m	25cm	30cm	Moderate	Moderate	Moderate	I	2.6m	5m	A pair of C.maculata that have fused at 1m. Retain.
T36 b	Corymbia maculata (Spotted Gum)	E	S	8 x 3m	30cm	30cm	Moderate	Low	Moderate		2m	4m	Included to T36
T37	Corymbia maculata (Spotted Gum)	E	SM	8 x 4m	30cm	30cm	Low	Low	Low	D	2m	4m	Suppressed upper canopy and in decline. Remove.
T38	Corymbia maculata (Spotted Gum)	E	SM	10 x 5m	25cm	30cm	Moderate	Moderate	Moderate		2.6m	5m	Part of a stand of C.maculata located within the neighbouring residence. Retain.

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T39	Corymbia maculata (Spotted Gum)	E	Sm	10 x 5m	25cm	30cm	Moderate	Moderate	Moderate		2.6m	5m	As above. Retain.

Genus, Species, and Common name

The botanical and common name of each tree is identified and recorded. Occasionally the exact species name is unknown; sp. Is recorded to indicate this.

Height, Spread, Trunk Diameter, DBH and DRB

The Trees height and spread are recorded in meters.

The tree DBH is recorded in millimetres. DBH is an abbreviation of diameter (of the trunk) measured at breast height (or 1.4 meters from the base of the trunk). If more than one trunk is present the DBH is calculated in accordance with AS4970-2009 Protection of Trees on Development Sites.

If the tree has multiple trunks each trunk DBH will be recorded individually.

The tree DRB is recorded in millimetres. DRB is an abbreviation of Diameter (of the trunk) measured above the root buttress. It is required to calculate the SRZ in accordance with AS4970-2009 Protection of Trees on Development Sites when there is major encroachment within the TPZ, i.e. greater than 10% is encroached upon or if there is an encroachment within the SRZ.

Age

The age class of each tree is estimated as either:

J- Juvenile, a young sapling, easily replaced from nursery stock

SM- Semi mature, a tree that has not grown to mature size

M- Mature, a tree that has reached mature size and will slowly increase in size over time.

OM- Over mature, a tree that has been mature for a long period and is beginning to display signs of decline, e.g. large dead branches

S- Senescent, an over mature tree that is now in decline

Health

The Tree's health is recorded as a measurement of:

G- Good, the does not appear stressed with no excessive dieback, insect infestation, decay, deadwood or epicormic shoots

Avg- Average health, the tree appears stressed and has some crown dieback, and/or areas or few epicormic shoots, and/or some deadwood in the crown and some new growth at the branch tips. These trees may benefit from remediation of the growing environment to reduce stress and return it to good health.

F- Fair, the tree may have areas of crown die back, and/or many epicormic shoots, and/or reduced new growth at branch tips. These trees have been stressed fort a short period of time; remediation of the growing environment may improve the trees health.

P- Poor, the tree may have large areas of crown die back, and/or many epicormic shoots, and/or reduced new growth at branch tips. These trees have been stressed for a long time, remediation of the growing environment would not return the tree to good health.

Crown Condition

The crown condition of each tree is assessed and recorded as either:

G- Good Condition: the tree appears to have no visible indication of inherent structural effects.

Avg- Average Condition: the tree has minor structural defects which may be corrected with remedial works or pruning, allowing the tree to return to Good Condition.

F- Fair Condition: the tree has visible structural defects such as (but not limited to) dead branches, and/or an unbalanced crown, and/or leaning trunk and/or signs of decay. These trees do not demonstrate the typical form of their species, of have been damaged or have begun to deteriorate. Remedial works or pruning may return the tree to Average Condition.

P- Poor Condition: the tree has significant structural defects such as (but not limited to) very large dead branches, and/or extremely unbalanced crown, and/or subsiding trunk, and/or large areas of decay. These trees do not demonstrate the typical form of their species, or have been severely damaged or have deteriorated significantly. Remedial pruning would not return the tree to fair condition.

Significance

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The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. When determining a tree's significance within the landscape context, the following questions are asked. Significance is measured as high, medium, or low. High being an affirmative answer for 4 or more questions, Medium being 3 affirmative answers, and Low being 2 or less affirmative answers.

- Is the tree a local native remnant; an endangered species, a part of an endangered species community; or does the tree provide critical habitat.

Amenity value

Amenity value is a subjective measurement based on the tree's contribution to the landscape, it may be based on the tree's visual form, however it also includes non visual attributes such as provision of shade for a seat, screening of poor views or for privacy, or if it has historical significance. The amenity value is recorded as:

H- High, the tree form is an excellent example of its species and it makes a great specimen and/or it has other attributes such as screening, or its historical significance. These trees are visually prominent and valuable to the community or public domain.

M- Medium, the tree may have an altered form and/or it has attributes that provide amenity to local residents only.

L- Low, the tree is not a good specimen and it does not provide substantial benefit to local residents or the community.

Ecological value

Ecological value is a measurement of the tree's contribution to the environment. It is determined by the tree's area of origin, its potential to provide habitat to native fauna and its potential to become an environmental pest. The ecological value is recorded as:

H- High, the tree is locally native or remnant and/or it has habitat for native fauna

M- Medium, the tree is native but not locally native

L- Low, the tree is not native and/or it may be a listed nuisance or weed species.

Ha- Habitat, is the tree valued by fauna for food (i.e. foliage, fruit, or sap) or shelter (i.e. nesting, roosting, dray, or hollow).

Form

The form, structure or shape of each tree is assessed and recorded as either one or a combination of several of the below terms may be used to describe the tree's form; (U) Upright, (B) Broad, (C) Conical, (Sh) Shrub, (CS) Crown Shy (also referenced is the adjacent dominant tree canopy i.e. T4), (V) Vase, (D) Dome, (P) Palm, (S) Spreading, (L) Leaning or (BM) Basal Multi Trunked.

Crown form may also be assessed in accordance with the relationship with the neighbouring tree and recorded as either: S- Suppressed, the crown is located beneath another larger crown and is leaning away (Crown Shy); C- Co dominant, the crown is adjacent to another crown of similar size, their crown areas may appear joined; D- Dominant, the crown is above the lower crowns; E- Emergent, the crown emerges from a lower canopy formed by the other dominant or co dominant crowns.

Defects

The presence of one or a combination of several defects is recorded (W) Wound, (D) Decay, (F) Fungus, (B) Bulge, (FB) Fibre Buckling, (C) Cracks, (S) Split, (H) Hollow, (DB) Die back, (E) Epicormic Shoots, (DW) Dead wood, (I) Inclusion, (CA) Cavities, (PF) Previous Failure, (R) Root Damage, (P) Pruning wound, (PD) Pests and Diseases, (ST) Storm Damage.

Structural Root Zone (SRZ)

The SRZ is a radial area extending outwards from the centre of the trunk. This area contains the majority of the structural woody roots. This area is primarily responsible for stability. Root damage or root loss within this zone greatly increases the opportunity for decay fungi to ingress into the heartwood, causing internal decay in addition to destabilising the tree's structural integrity. The SRZ is calculated as follows (This calculation is derived from the Australian Standard AS 4970-2009 Protection of Trees on Development Sites):

$$\text{SRZ (Radius)} = (\text{D} \times 50)^{0.42} \times 0.6$$

Tree protection Zone (TPZ)

The TPZ is a circular area with a radius measured by multiplying the DBH by twelve, or a circular area the size of the tree's drip line, whichever is greater. This area contains the majority of the essential structural and feeder roots responsible for stability, gaseous exchange and water and nutrient uptake. Excavation, back filling, compaction or other disturbance should not occur in this area. The TPZ is used to identify the minimum area required for the safe retention of a given tree. This calculation is derived from the Australian Standard AS 4970-2009 Protection of Trees on Development Sites. An incursion to 10% within the TPZ is potentially acceptable if no other option is available. A major encroachment (in excess of 10%) is required to be clearly justified by the project Arborist and compensated for elsewhere. Justification methodology may vary depending on site or individual tree's health, vigour and ability to withstand disturbance may require root investigation.

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RATING	HERITAGE VALUE	ECOLOGICAL VALUE	AMENITY VALUE
1. SIGNIFICANT	The subject tree is listed as a Heritage Item under the Local Environment Plan (LEP) with a local, state or national level of significance or is listed on Council's Significant Tree Register	The subject tree is scheduled as a Threatened Species as defined under the Threatened Species Conservation Act 1995 (NSW) or the Environmental Protection and Biodiversity Conservation Act 1999	The subject tree has a very large live crown size exceeding 300m ² with normal to dense foliage cover, is located in a visually prominent position in the landscape, exhibits very good form and habit typical of the species
	The subject tree forms part of the curtilage of a Heritage Item (building /structure /artefact as defined under the LEP) and has a known or documented association with that item	The tree is a locally indigenous species, representative of the original vegetation of the area and is known as an important food, shelter or nesting tree for endangered or threatened fauna species	The subject tree makes a significant contribution to the amenity and visual character of the area by creating a sense of place or creating a sense of identity
	The subject tree is a Commemorative Planting having been planted by an important historical person (s) or to commemorate an important historical event	The subject tree is a Remnant Tree, being a tree in existence prior to development of the area	The tree is visually prominent in view from surrounding areas, being a landmark or visible from a considerable distance.
2. VERY HIGH	The tree has a strong historical association with a heritage item (building/structure/artefact/garden etc) within or adjacent the property and/or exemplifies a particular era or style of landscape design associated with the original development of the site.	The tree is a locally-indigenous species, representative of the original vegetation of the area and is a dominant or associated canopy species of an Endangered Ecological Community (EEC) formerly occurring in the area occupied by the site.	The subject tree has a very large live crown size exceeding 200m ² ; a crown density exceeding 70% (normal-dense), is a very good representative of the species in terms of its form and branching habit or is aesthetically distinctive and makes a positive contribution to the visual character and the amenity of the area
3. HIGH	The tree has a suspected historical association with a heritage item or landscape supported by anecdotal or visual evidence	The tree is a locally-indigenous species and representative of the original vegetation of the area and the tree is located within a defined Vegetation Link / Wildlife Corridor or has known wildlife habitat value	The subject tree has a large live crown size exceeding 100m ² ; The tree is a good representative of the species in terms of its form and branching habit with minor deviations from normal (e.g. crown distortion/suppression) with a crown density of at least 70% (normal); The subject tree is visible from the street and surrounding properties and makes a positive contribution to the visual character and the amenity of the area
4. MODERATE	The tree has no known or suspected historical association, but does not detract or diminish the value of the item and is sympathetic to the original era of planting.	The subject tree is a non-local native or exotic species that is protected under the provisions of this DCP.	The subject tree has a medium live crown size exceeding 40m ² ; The tree is a fair representative of the species, exhibiting moderate deviations from typical form (distortion/suppression etc) with a crown density of more than 50% (thinning to normal); and The tree is visible from surrounding properties, but is not visually prominent – view may be partially obscured by other vegetation or built forms. The tree makes a fair contribution to the visual character and amenity of the area.
5. LOW	The subject tree detracts from heritage values or diminishes the value of a heritage item	The subject tree is scheduled as exempt (not protected) under the provisions of this DCP due to its species, nuisance or position relative to buildings or other structures.	The subject tree has a small live crown size of less than 40m ² and can be replaced within the short term (5-10 years) with new tree planting
6. VERY LOW	The subject tree is causing significant damage to a heritage item.	The subject tree is listed as an Environment Weed Species in the Leichhardt Local Government Area, being invasive, or is a known nuisance species.	The subject tree is not visible from surrounding properties (visibility obscured) and makes a negligible contribution or has a negative impact on the amenity and visual character of the area. The tree is a poor representative of the species, showing significant deviations from the typical form and branching habit with a crown density of less than 50% (sparse).
7. INSIGNIFICANT	The tree is completely dead and has no visible habitat value	The tree is a declared Noxious Weed under the Noxious Weeds Act (NSW) 1993 within the relevant Local Government Area.	The tree is completely dead and represents a potential hazard.