



arboricultural impact assessment – 24 & 26 rayner road, whale beach

29th October 2020
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Executive Summary

This report has been prepared to assess the condition and significance of a number of trees on and adjacent the property known as 24-26 Rayner Road, Whale Beach and assess the potential impact of the proposed development on the identified trees. For the purposes of this report the property known as 24-26 Rayner Road, Whale Beach will be referred to as the site.

The tree assessments have been carried out using the Visual Tree Assessment (VTA) method (Mattheck & Breloer 2010) and development impact assessments are based upon the Australian Standard, Protection of Trees on Development Sites AS 4970-2009. The report has been commissioned by the owner of the site and instructions have been provided by Minto Planning Services Pty Ltd. Site inspections and field work were conducted on the 31st August 2020.

The site is currently developed and contains a three-storey dwelling with swimming pool and a detached garage. Outside the building footprint the site has been landscaped with several terraces, pathways and stairs. Although neglected over recent years, the landscape character consists of formalised gardens, paths and terraces and the trees on the site are generally planted exotic species.

The proposed development involves demolition of the built structures and construction of a dwelling with 3 levels, driveway access, a swimming pool and terraced open private space (J Group Projects, 2020).

There are **77** trees considered in this report of which; **54** trees are located on the site; **3** trees are located on adjoining allotments and **20** trees are located within the road reserve. Of the **77** trees considered in this report, based upon the proposed plans:

- **15** trees are to be retained (**3** on the site, **3** on adjoining allotments and **9** within the road reserve),
- **2** trees are to be transplanted on site, and
- **60** trees are proposed to be removed (**49** on the site, and **11** within the road reserve).

A qualitative breakdown of the trees to be retained and removed is shown in the tables opposite.

Provided that the tree protection measures are implemented and the proposed works are carried out in a sensitive manner the proposed development works are unlikely to have a significant impact on the trees identified as being retained.

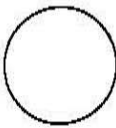
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Details of the 15 Trees to be Retained on Site and within the Road Reserve (number of trees)							
Condition	Environmental / Landscape Significance						
	Biosecurity Weed	Env. Pest (Exempt from DCP)	Low L/scape Sig.	Moderate L/scape Sig.	High L/scape Sig.	Very High L/scape Sig.	Threatened Species
SULE - 1		8			2		
SULE - 2			3				
SULE - 3			1	1			
SULE - 4							
Unstable							

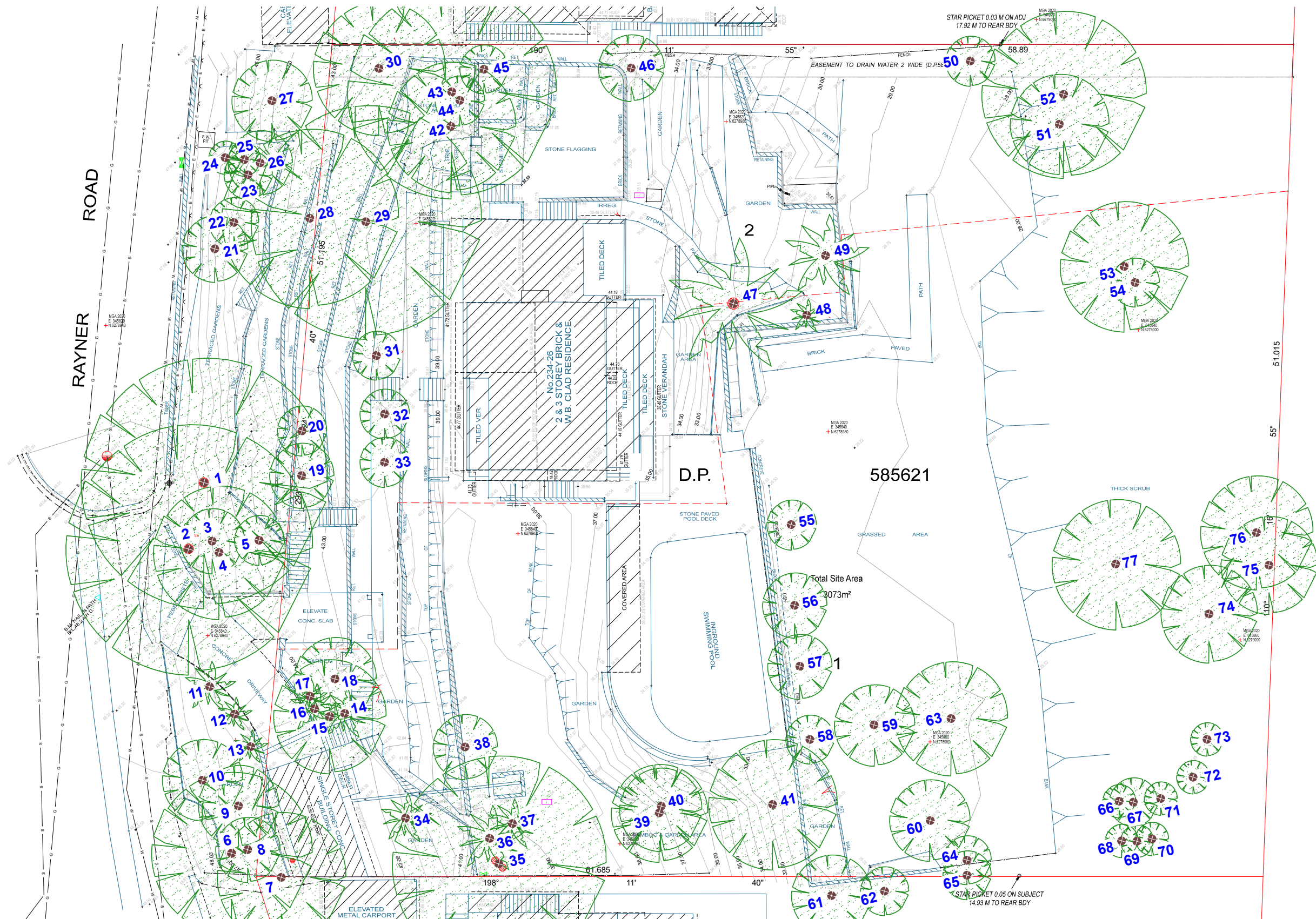
Details of the 2 Trees to be Transplanted on Site and within the Road Reserve (number of trees)							
Condition	Environmental / Landscape Significance						
	Biosecurity Weed	Env. Pest (Exempt from DCP)	Low L/scape Sig.	Moderate L/scape Sig.	High L/scape Sig.	Very High L/scape Sig.	Threatened Species
SULE - 1		1		1			
SULE - 2							
SULE - 3							
SULE - 4							
Unstable							

Details of the 60 Trees to be Removed on Site and within the Road Reserve (number of trees)							
Condition	Environmental / Landscape Significance						
	Biosecurity Weed	Env. Pest (Exempt from DCP)	Low L/scape Sig.	Moderate L/scape Sig.	High L/scape Sig.	Very High L/scape Sig.	Threatened Species
SULE - 1		8			3		
SULE - 2		19	10	1			
SULE - 3		4	7				
SULE - 4		1	2				
Unstable		5					

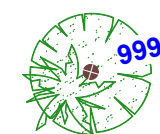


scale at A3
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drawing title
cover sheet



tree legend



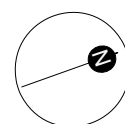
trees considered in this report

This plan is based upon:

Plan Showing Detail and Levels Lot 1 & 2 DP 585621,
No. 24 & 26 Rayner Road, Dwg. No. 77274, Rev. No.B,
Dated 17/08/2020, (Rygate & Company, Sydney, NSW).

In addition to the trees identified on the survey 33 trees
have been added to this plan and a number of trees
shown on the survey have been removed from this plan
as they no longer exist or are dead. The additional trees
are Tree No's 7,8,13, 14, 20, 24, 25, 36, 37, 44, 45, 46,
49, 52, 54, 56, 57, 58, 61, 62, 64, 65, 66, 67, 68, 69, 70,
71, 72, 73, 74, 75 & 76 and their locations, whilst based
upon surveyed features, are approximate.

The tree canopy spreads on this plan have been
adjusted from those on the survey to better reflect the
actual canopy spreads however they remain as indicative
graphics.



tree significance

significance in the environment

- Trees need to be considered in the overall environment and are subject to specific legislation and planning instruments such as:
- Biodiversity Conservation Act (NSW) 2016
 - Biosecurity Act (NSW) 2015, and
 - Development Control Codes.

Biodiversity Conservation Act (NSW) 2016

The Biodiversity Conservation Act lists in its schedules a number of species, populations or ecological communities that are either endangered or vulnerable. The Act requires biodiversity offsets to be made if an activity or development is going to have a significant effect on species, populations or endangered ecological communities listed in the schedules of the Act. Where identified on or adjacent the site, threatened tree species are considered in this report, however no attempt is made to identify trees as components of threatened ecological communities or populations.

Biosecurity Act (NSW) 2015

The purpose of the Biosecurity Act is to protect the NSW economy, environment and community from the negative impact of pests, diseases and weeds. In NSW, all plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. In relation to weeds, the Act identifies weed species under 4 categories being:

- Weeds of National Significance;
- National Environmental Alert Weeds;
- Water Weeds;
- Native Plants Considered to be Weeds.

The Act makes provision of Regional Strategic Weed Management Plans which may include additional weed species to be dealt with weed control at a regional or local level.

Where tree is a species declared under the 4 main weed categories in the Act or where it is a species listed in a Regional Strategic Management Plan, the tree should be a priority for removal.

Development Control Codes

There are a number of environmental pest species that commonly cause problems in developed urban areas or readily spread into natural bushland areas. In urban areas, these species can have aggressive root systems and cause damage to built structures or services. Alternatively, some species can be problematic in natural bushland areas degrading habitats and reducing natural biodiversity.

Many of these are recognised by Councils as pest species and are exempt from protection under Council’s Development Control Plans (DCP).

significance in the landscape

- Assessment of a tree’s significance in the landscape is generally categorised as either:
- Very High Landscape Significance- prominent from a broad landscape perspective;
 - High Landscape Significance - prominent from a neighbourhood perspective;
 - Moderate Landscape Significance - prominent from adjacent areas surrounding the site;
 - Low Landscape Significance - prominent from a site perspective only.

tree condition & life expectancy

condition

The assessment of the trees condition is undertaken by visual inspection of the trees themselves, surrounding vegetation and the site conditions.

An assessment of each tree is undertaken taking into account the condition of the tree’s roots, trunk, branches, foliage, previous pruning works, pests and disease, nesting hollows, fauna scratchings and the surrounding environment that may influence the condition of the tree.

Safe Useful Life Expectancy (SULE)

The condition information is used to determine the Safe Useful Life Expectancy (SULE) of each tree and takes into account the age of the tree, the life span of the species, local environment conditions, estimated life expectancy, the location of the tree and safety aspects.

The SULE method takes into account whether a tree can be retained with an acceptable level of risk based on the information available at the time of inspection. A SULE assessment is not static as it relates to the tree’s health and the surrounding conditions. Whilst it is recognised that changes to the tree’s condition will affect the assessment, changes to the surrounding environment may result in changes to the SULE assessment.

Table 1 Safe Useful Life Expectancy (SULE), (Barrell, 2001)	
Category	Description
1	Long -Life span greater than 40 years
2	Medium - Life span from 15 to 40 years
3	Short - Life span from 5 to 15 years
4	Should be removed within 5 years
5	Small, Young or Regularly Pruned, Trees that can readily be moved or replaced.

In addition to the categories listed above, trees that show signs of imminent structural failure are listed as 'Unstable'.

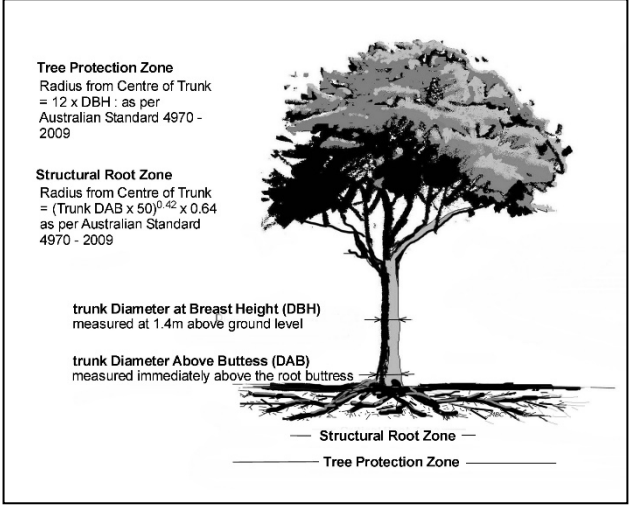
Unstable	Unstable in the ground or have significant trunk damage rendering them structurally hazardous.
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development planning & general impacts on trees

tree protection zones

Where trees are intended to be retained, development footprints should be located away from trees so as to provide adequate clearances for a tree protection zone. Disturbance within Tree Protection Zones can be detrimental to the tree’s root system and in turn affect the stability, health and condition of the tree. In many cases damage to the root systems is the major cause of tree decline in urban areas.

Figure 3.1 Typical diagram of a Tree Protection Zone & Structural Root Zone of a tree based upon AS 4970 – 2009.



Where trees are multi-trunk specimens assessment needs to be made based upon the number of trunks and the diameter of each trunk. Based upon the Australian Standard for Protection of Trees on Development Sites, AS 4970 – 2009, the DBH of multi-trunk trees is calculated by:

$$DBH = \sqrt{(DBH_1)^2 + (DBH_2)^2 + (DBH_3)^2}$$

development design & Tree Protection Zones

Where trees are intended to be retained, proposed developments must provide an adequate Tree Protection Zone around trees. This Tree Protection Zone is set aside for the tree’s root zone and it is essential for the stability and longevity of the tree. Existing soil levels should be retained within the Tree Protection Zone.

Based upon the Australian Standard for Protection of Trees on Development Sites, AS 4970 – 2009, the radius of the Tree Protection Zone (TPZ) is calculated as: TPZ = 12 x DBH with a minimum 2.0m radius and a maximum 15m radius.

developments within the Tree Protection Zone

Minor encroachments into Tree Protection Zones

Based upon AS 4970 – 2009 some development activity can occur within the vicinity of trees and minor encroachments can occur within the calculated Tree Protection Zone provided that:

- no more that 10% of the area (m2) of the Tree Protection Zone is removed (0.7 x TPZ radius on 1 side only);
- the encroachment does not extend into the Structural Root Zone, and
- the area (m2) to be removed is compensated for by increasing the distance of the Tree Protection Zone in other directions so that there is no net loss in area (m2) of the Tree Protection Zone

Major encroachments into Tree Protection Zones

Where the proposed development activity is greater than that described as a minor encroachment (refer above); the activity is considered to be a major encroachment into the Tree Protection Zone.

Where major encroachments are to occur within the Tree Protection Zone of trees intended to be retained, it must be demonstrated that the works or activities will not have a significant impact on the health and condition of the tree. To demonstrate this detailed root mapping investigation by non-invasive methods may be necessary; and other factors such as the age class, health & vigour, trunk lean, disturbance tolerance of the species, and building design may need to be taken into account in the arboricultural assessment.

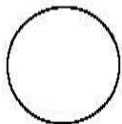
Where major encroachments are proposed to occur into the Tree Protection Zone the tree’s Structural Root Zone should also be taken into account.

developments within the tree’s Structural Root Zone

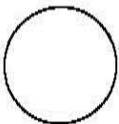
The Structural Root Zone is the area surrounding the tree where the severance of roots and excavation is likely to affect the structural stability of the tree and is likely to have a significant detrimental impact on the health & condition of the tree. Based upon AS 4970 – 2009 the radius of a tree’s Structural Root Zone (SRZ) is determined by measuring the diameter of the trunk immediately above the root buttress (DAB) and calculated by: SRZ = (DAB x 50) 0.42 x 0.64.

Developments should not encroach into the tree’s Structural Root Zone and existing soil levels must remain unchanged. Excavation should not occur within this area unless a detailed arboricultural assessment is undertaken and Specific Tree Protection measures will be required.

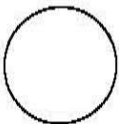
Tree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	DAB (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Canopy Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	TPZ Radius (m)	Area of TPZ (m2)
1	<i>Eucalyptus botryoides</i>	Bangalay / Southern Mahogany	19	15	470, 580	790	Mature multi trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	Large lower trunk on eastern side has been pruned at 1.5m extends approximately 2m to east. Main trunk has a tear wound at 4m that could be investigated further. Large eastern branch at 3m has failed.	1	Within road reserve	9.00	254.50
2	<i>Eucalyptus botryoides</i>	Bangalay / Southern Mahogany	20	15	350, 560	680	Mature twin trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning. Stubs calloused over.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	10%	None evident	1	Within road reserve	7.90	196.10
3	<i>Pittosporum undulatum</i>	Sweet Pittosporum	6	4	170	200	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Good	10%	Dieback is evident in central leader.	2	Within road reserve	2.00	12.60
4	<i>Pinus radiata</i>	Monterey Pine	12	8	470	540	Mature single trunk tree with an upright spreading form; a distinct trunk lean to the north east and majority of canopy and branch development is towards the north east. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree displays some signs of instability and its branch attachment appears fair. The tree is considered to be in poor health and displays poor vigour.	Poor	85%	The tree predominately consists of deadwood.	4	Within road reserve	5.60	98.50
5	<i>Nerium oleander</i>	Oleander	4	3	100, 110, 100, 80, 80, 80, 70	1200	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. The tree appears to have been previously removed to ground level.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Fair	10%	None evident	3	Within road reserve	2.80	24.60



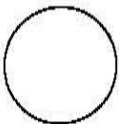
Tree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	DAB (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Canopy Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	TPZ Radius (m)	Area of TPZ (m2)
6	<i>Erythrina sykesii indica</i>	Coral Tree	12	10	240, 250, 250, 290, 200	610	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned.	Exempt Species in Council DCP	The tree displays some signs of instability and its branch attachment appears fair. The tree is considered to be dead and displays no signs of any vigour.	None	100%	The tree is dead.	Unstable	Within road reserve	6.60	136.80
7	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	14	8	390, 120	480	Mature single trunk tree with an upright forest form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays good vigour.	Good	10%	A cavity present in main trunk at various locations between 3.0 & 5.0m.	2	On adjacent allotment	4.90	75.40
8	<i>Glochidion ferdinandi</i>	Cheese Tree	6	4	130	160	Immature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	Within road reserve	2.00	12.60
9	<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	12	5	310	360	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	Within road reserve	3.70	43.00
10	<i>Pittosporum undulatum</i>	Sweet Pittosporum	9	5	160, 210	360	Mature twin trunk tree with an upright spreading form; a slight trunk lean to the north west and majority of canopy and branch development is towards the No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	3	Within road reserve	3.20	32.20
11	<i>Washingtonia robusta</i>	Cotton palm	3	2	340	390	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2 / 5	Within road reserve	0.70	1.50
12	<i>Washingtonia robusta</i>	Cotton palm	2	2	250	380	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2 / 5	Within road reserve	0.50	0.80
13	<i>Washingtonia robusta</i>	Cotton palm	2	2	250	370	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2 / 5	Within road reserve	0.50	0.80
14	<i>Washingtonia robusta</i>	Cotton palm	6	3	310	390	Mature single trunk tree with an upright spreading form; a slight trunk lean to the north east and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree stability is suspect and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	Unstable	On site	1.00	3.10
15	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	12	7	290	370	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	On site	3.50	38.50
16	<i>Washingtonia robusta</i>	Cotton palm	10	3	320	440	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2	On site	1.70	9.10
17	<i>Washingtonia robusta</i>	Cotton palm	3	2	320	420	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	On site	0.70	1.50
18	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	12	5	250	350	Mature single trunk tree with an upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the north. Lower limbs of the tree have been poorly pruned to a height of 8m.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2	On site	3.00	28.30
19	<i>Schefflera actinophylla</i>	Umbrella Tree	8	4	140, 150, 50, 70, 50, 30, 30	330	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Fair	10%	None evident	3	On site	2.80	24.60
20	<i>Schefflera actinophylla</i>	Umbrella Tree	8	3	140, 70	210	Semi-mature multi trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Good	<5%	None evident	3	On site	2.00	12.60
21	<i>Ligustrum lucidum</i>	Large Leaf Privet	9	4	240, 70	310	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	2	Within road reserve	3.00	28.30
22	<i>Ligustrum lucidum</i>	Large Leaf Privet	8	3	180, 60	280	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	Within road reserve	2.30	16.60
23	<i>Ligustrum lucidum</i>	Large Leaf Privet	8	3	240, 100, 80	370	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	2	Within road reserve	3.30	34.20
24	<i>Ligustrum lucidum</i>	Large Leaf Privet	7	2	160, 80	240	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	Within road reserve	2.10	13.90
25	<i>Ligustrum lucidum</i>	Large Leaf Privet	7	2	160, 30	180	Semi-mature twin trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	10%	None evident	2	Within road reserve	2.00	12.60
26	<i>Ligustrum lucidum</i>	Large Leaf Privet	9	4	220, 60	340	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	2	Within road reserve	2.70	22.90
27	<i>Ligustrum lucidum</i>	Large Leaf Privet	10	5	290, 110, 90, 60	470	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	10%	None evident	2	Within road reserve	3.90	47.80
28	<i>Olea europaea subsp cuspidata</i>	African Olive	11	11	400	560	Mature single trunk tree with an upright spreading form; a slight trunk lean to the north east and balanced canopy and branch development. north east. Lower limbs of the tree have been pruned.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2	Within road reserve	4.80	72.40



Tree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	DAB (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Canopy Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	TPZ Radius (m)	Area of TPZ (m2)
29	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	14	14	410	490	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	10%	None evident	2	On site	4.90	75.40
30	<i>Ligustrum lucidum</i>	Large Leaf Privet	12	8	380	440	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	On site	4.60	66.50
31	<i>Duranta repens</i>	Golden Dewdrop	5	3	100, 120, 80, 60, 60, 50, 60	440	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned.	Low L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Fair	<5%	None evident	3	On site	1.00	3.10
32	<i>Callistemon salignus</i>	Willow Bottlebrush	5	3	120	220	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree stability is suspect and its branch attachment appears poor. The tree is considered to be dead and displays no signs of any vigour.	None	100%	Dead Tree	4	On site	2.00	12.60
33	<i>Pittosporum undulatum</i>	Sweet Pittosporum	4	3	160	190	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	2	On site	2.00	12.60
34	<i>Cordyline australis</i>	Cordyline	5	3	180	220	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	3	On site	0.70	1.50
35	<i>Erythrina sykesii indica</i>	Coral Tree	13	13	490, 450	770	Over mature twin trunk tree with an upright spreading form; a slight trunk lean to the and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree stability is suspect and its branch attachment appears poor. The tree is considered to be in poor health and displays good vigour.	None	<5%	None evident	Unstable	On site	8.00	201.10
36	<i>Howea forsteriana</i>	Kentia Palm	10	4	160	190	Semi-mature single trunk tree with a tall spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2 / 5	On site	0.90	2.50
37	<i>Archontophoenix cunninghamii</i>	Bangalow Palm	14	3	190	270	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Fair	<5%	None evident	2	On site	1.50	7.10
38	<i>Schefflera actinophylla</i>	Umbrella Tree	6	4	130, 110, 110, 120, 180	410	Mature multi trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. Upper branches have been recently poorly pruned.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	On site	3.60	40.70
39	<i>Casuarina glauca</i>	Swamp Oak	13	6	320	440	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	2	On site	3.80	45.40
40	<i>Pittosporum undulatum</i>	Sweet Pittosporum	5	5	100, 80	240	Mature twin trunk tree with an upright spreading form; a slight trunk lean to the north west and majority of canopy and branch development is towards the north west. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	15%	None evident	3	On site	2.00	12.60
41	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	10	8	450	560	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Upper branches have been pruned.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	10%	None evident, however the tree is located on top of a rock shelf.	1	On site	5.40	91.60
42	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	14	8	260	410	Mature single trunk tree with an upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the north east. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	10%	None evident	1	On site	3.10	30.20
43	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	14	13	600, 230, 140, 200	760	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	Syngonium vine is growing on the trunk to a height of 5m.	1	On site	8.20	211.20
44	<i>Pittosporum undulatum</i>	Sweet Pittosporum	6	3	70	100	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	2	On site	2.00	12.60
45	<i>Pittosporum undulatum</i>	Sweet Pittosporum	5	3	50	60	Immature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	2	On site	2.00	12.60
46	<i>Schefflera actinophylla</i>	Umbrella Tree	7	4	80, 60, 60, 90, 120, 60	449	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree stability is suspect and its branch attachment appears poor. The tree is considered to be in poor health and displays fair vigour.	Very Good	<5%	There is significant and extensive decay in the centre of the main junction.	Unstable	On site	2.40	18.10
47	<i>Phoenix canariensis</i>	Canary Island Date Palm	10	8	820	1030	Mature single trunk tree with an upright rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	The tree is located on the edge of a rock shelf.	1 / 5	On site	3.60	40.70
48	<i>Trachycarpus fortunei</i>	Chinese Windmill Palm	4	1	300	280	Mature single trunk tree with an upright spreading form; a slight trunk lean to the north east and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2 / 5	On site	0.70	1.50
49	<i>Phoenix reclinata</i>	Date Palm	4	5	550	590	Mature single trunk tree which has been uprooted and failed at the base on the southern side.	Exempt Species in Council DCP	The tree has recently failed at the base .	poor	<25%	The tree is located on a rock shelf.	Unstable	On site	1.10	3.80
50	<i>Stenocarpus sinuatus</i>	Firewheel	8	3	290	370	Mature single trunk tree with an upright elliptical form; a slight trunk lean to the north and majority of canopy and branch development is towards the north west. Appears that the central leader has been pruned/removed at 6m.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Fair	10%	None evident	3	On site	3.50	38.50



Tree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	DAB (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Canopy Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	TPZ Radius (m)	Area of TPZ (m2)
51	<i>Araucaria columnaris</i>	Cook's Pine	15	6	510	620	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	1	On site	6.10	116.90
52	<i>Erythrina sykesii indica</i>	Coral Tree	16	10	470	590	Mature single trunk tree with an upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the north west. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree displays some signs of instability and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Fair	10%	Decay is present in previously pruned branch stubs.	1	On site	5.60	98.50
53	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	13	8	320, 470	530	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	1	On site	6.80	145.30
54	<i>Casuarina glauca</i>	Swamp Oak	8	3	200	260	Semi-mature single trunk tree with an upright spreading form; a slight trunk lean to the south and majority of canopy and branch development is towards the south. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in poor health and displays poor vigour.	Poor	60%	The tree appears to be suppressed by the adjacent vegetation. The tree is a windswept senescing specimen.	4	On site	2.40	18.10
55	<i>Olea europaea subsp cuspidata</i>	African Olive	4	3	70, 110, 80, 40	380	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Appears that the central leader has been pruned/removed at 3m	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays good vigour.	Good	<5%	None evident	2	On site	2.00	12.60
56	<i>Olea europaea subsp cuspidata</i>	African Olive	4	4	150, 70, 90, 110, 80	360	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Appears that the central leader has been pruned/removed at 2m.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Fair	15%	None evident	2	On site	2.80	24.60
57	<i>Olea europaea subsp cuspidata</i>	African Olive	4	4	60, 90, 70, 90, 50	380	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Appears that the central leader has been pruned/removed at 1m	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Fair	10%	Decay is present in previously pruned branch stubs.	2	On site	2.00	12.60
58	<i>Olea europaea subsp cuspidata</i>	African Olive	4	3	120, 160	390	Semi-mature twin trunk tree with an upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the Appears that the central leader has been pruned/removed at 1.5m.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears fair. The tree is considered to be in good health and displays good vigour.	Good	10%	Decay is present in previously pruned branch stubs.	2	On site	2.40	18.10
59	<i>Araucaria columnaris</i>	Cook's Pine	16	5	390	450	Mature single trunk tree with an upright pyramidal form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	100%	None evident, however the tree has developed into twin trunks at approximately 12m.	1	On site	4.70	69.40
60	<i>Araucaria columnaris</i>	Cook's Pine	18	5	350	440	Mature multi trunk tree with an upright rounded form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	High L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	1	On site	4.20	55.40
61	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	5	5	150, 140	300	Semi-mature twin trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Good	10%	None evident	2	On adjacent allotment	2.50	19.60
62	<i>Pittosporum undulatum</i>	Sweet Pittosporum	6	3	120, 100	230	Mature twin trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in good health and displays good vigour.	Good	<5%	None evident	2	On adjacent allotment	2.00	12.60
63	<i>Ficus rubiginosa</i>	Port Jackson Fig/Rusty Fig	6	7	150, 200, 80, 190, 260, 110	450	Mature multi trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Moderate L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Excellent	<5%	None evident	1	On site	5.20	84.90
64	<i>Casuarina glauca</i>	Swamp Oak	8	3	140	190	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in poor health and displays fair vigour.	Fair	20%	None evident	3	On site	2.00	12.60
65	<i>Casuarina glauca</i>	Swamp Oak	7	3	160	190	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Fair	25%	None evident	2	On site	2.00	12.60
66	<i>Casuarina glauca</i>	Swamp Oak	6	2	140	210	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Fair	<5%	None evident	2	On site	2.00	12.60
67	<i>Casuarina glauca</i>	Swamp Oak	8	3	190	240	Mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	15%	None evident	2	On site	2.30	16.60
68	<i>Casuarina glauca</i>	Swamp Oak	7	2	110	180	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Fair	20%	None evident	2	On site	2.00	12.60
69	<i>Casuarina glauca</i>	Swamp Oak	5	2	130	170	Semi-mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in moderate health and displays fair vigour.	Fair	30%	None evident	3	On site	2.00	12.60
70	<i>Casuarina glauca</i>	Swamp Oak	5	2	110	130	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears fair. The tree is considered to be in poor health and displays fair vigour.	Fair	45%	None evident	3	On site	2.00	12.60
71	<i>Casuarina glauca</i>	Swamp Oak	7	2	100	120	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Fair	20%	None evident	2	On site	2.00	12.60
72	<i>Casuarina glauca</i>	Swamp Oak	5	2	170	210	Semi-mature twin trunk tree with an upright elliptical form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays fair vigour.	Good	15%	None evident	2	On site	2.00	12.60



Tree No	Genus Species	Common Name	Height (m)	Canopy Spread (m)	DBH (mm)	DAB (mm)	Description	Environmental / Landscape Significance	Condition	Foliage Condition	% Canopy Dead Wood	Evidence of Pests, Disease, Cavity, Bracket Fungi	SULE	On / off site	TPZ Radius (m)	Area of TPZ (m2)
73	<i>Casuarina glauca</i>	Swamp Oak	5	2	130	170	Semi-mature single trunk tree with an upright elliptical form; an upright trunk/s and majority of canopy and branch development is towards the north west. No evidence of significant branch pruning.	Low L/scape Sig.	The tree appears stable and its branch attachment appears sound. The tree is considered to be in moderate health and displays good vigour.	Good	<5%	None evident	3	On site	2.00	12.60
74	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	8	6	220	250	Mature single trunk tree with an upright spreading form; an upright trunk/s and majority of canopy and branch development is towards the No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Good	10%	None evident	1	On site	2.60	21.20
75	<i>Banksia integrifolia</i>	Coastal Banksia	3	6	380	400	Mature twin trunk tree where 1 of the trunks has failed. The remains of the tree has a spreading a distinct trunk lean to the north east and majority of canopy and branch development is towards the north east. No evidence of significant branch pruning.	Low L/scape Sig.	The tree stability is suspect and its branch attachment appears poor. The tree is considered to be in poor health and displays fair vigour.	Fair	25%	Decay is present in branch stubs and the western trunk is dead and has previously failed.	3	On site	4.60	66.50
76	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	10	7	270	360	Mature twin trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. No evidence of significant branch pruning.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On site	3.20	32.20
77	<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	10	8	410	480	Mature single trunk tree with an upright spreading form; an upright trunk/s and balanced canopy and branch development. Lower limbs of the tree have been pruned to 5m.	Exempt Species in Council DCP	The tree appears stable and its branch attachment appears sound. The tree is considered to be in good health and displays good vigour.	Very Good	<5%	None evident	1	On site	4.90	75.40



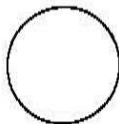
Figure 7.1 View of the site's road frontage looking west with Tree No. 9 (right foreground) and Tree No.10 (centre foreground)

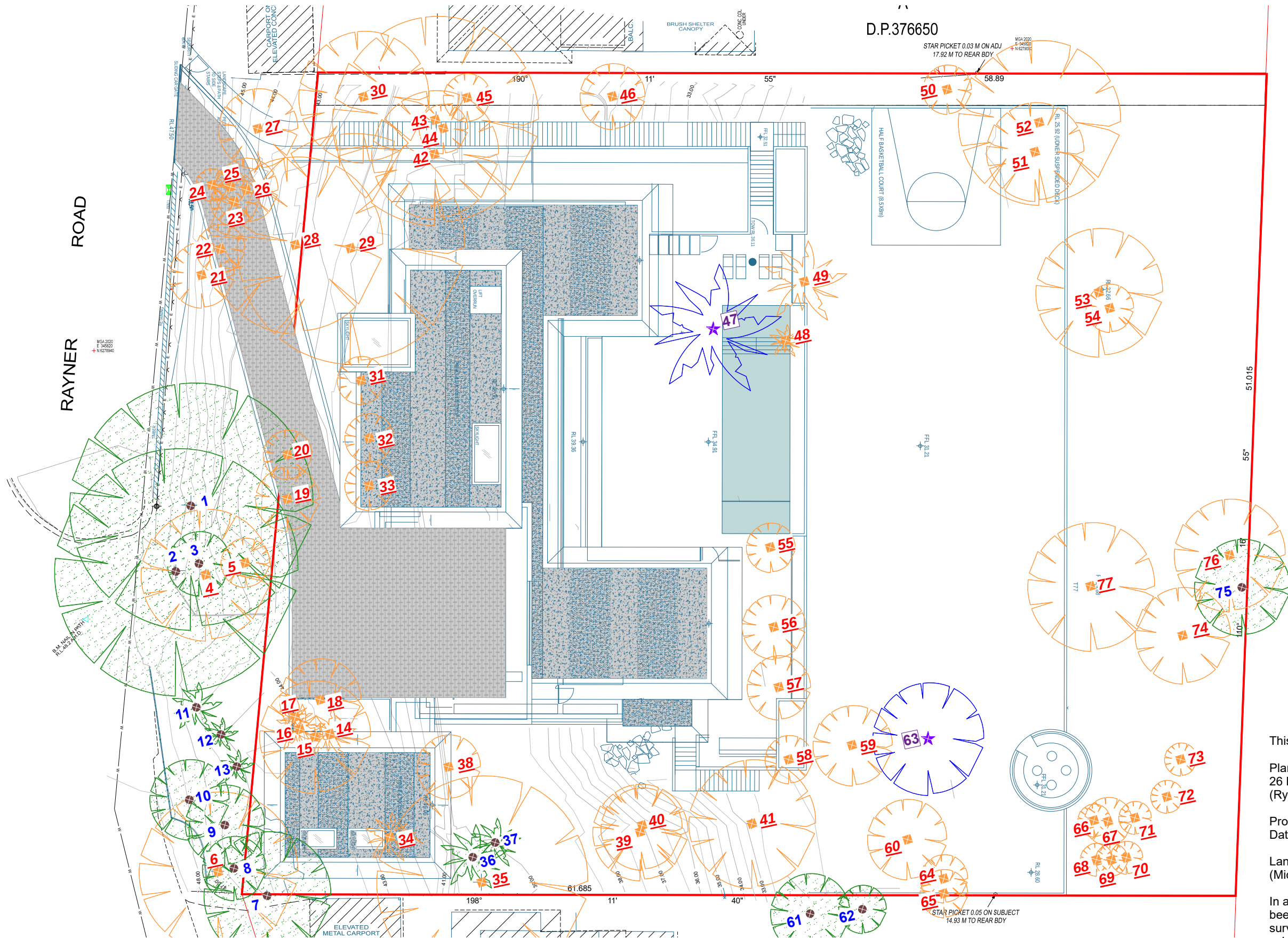


Figure 7.2 View of the site from the rear landscape terraced area looking south west

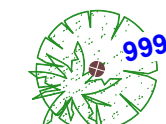
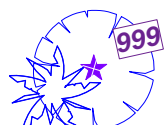


Figure 7.3 View of northern slope looking west with Tree No's 74 & 76 (left to right) with Tree No. 75, a Coastal Banksia, on a substantial lean to the north.





tree legend

-  999 trees to be retained
-  999 trees to be transplanted
-  999 trees to be removed

This plan is based upon:

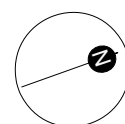
Plan Showing Detail and Levels Lot 1 & 2 DP 585621, No. 24 & 26 Rayner Road, Dwg. No. 77274, Rev. No.B, Dated 17/08/2020. (Rygate & Company, Sydney, NSW).

Proposed Level 3 Plan, Dwg.No. A100-DA, Rev.No.A, Dated 07/10/20 (J Group Projects, Avalon Beach NSW).

Landscape Plan for DA, Dwg.No. JG.LanP.01, Dated 15/10/20 (Michael Cooke Garden Design, Central Mangrove, NSW)

In addition to the trees identified on the survey 33 trees have been added to this plan and a number of trees shown on the survey have been removed from this plan as they no longer exist or are dead. The additional trees are Tree No's 7, 8, 13, 14, 20, 24, 25, 36, 37, 44, 45, 46, 49, 52, 54, 56, 57, 58, 61, 62, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75 & 76 and their locations, whilst based upon surveyed features, are approximate.

The tree canopy spreads on this plan have been adjusted from those on the survey to better reflect the actual canopy spreads however they remain as indicative graphics.

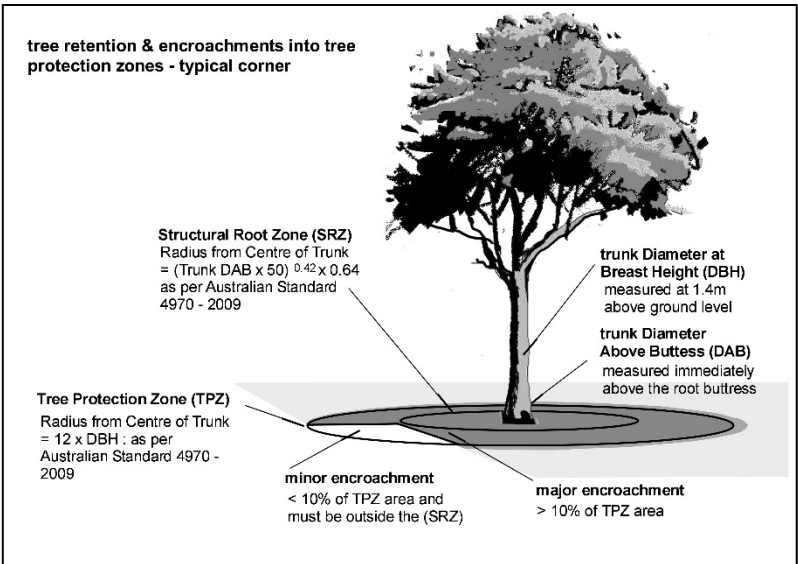
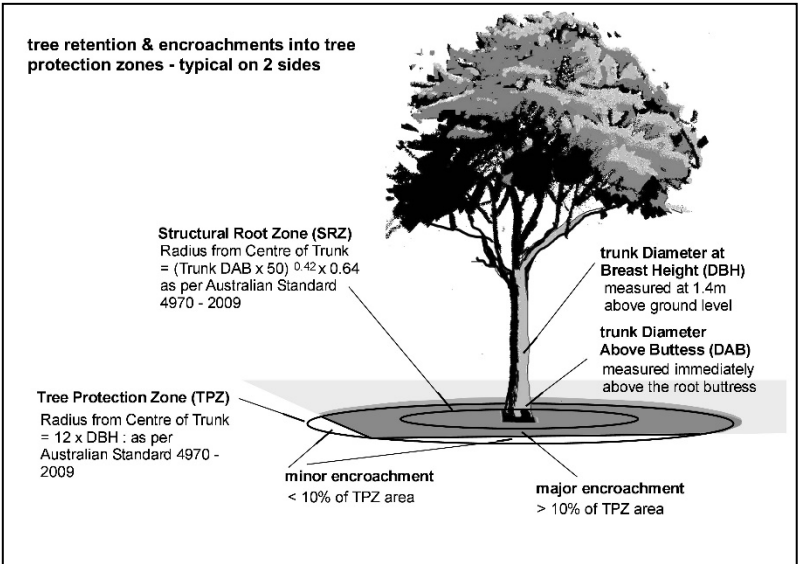
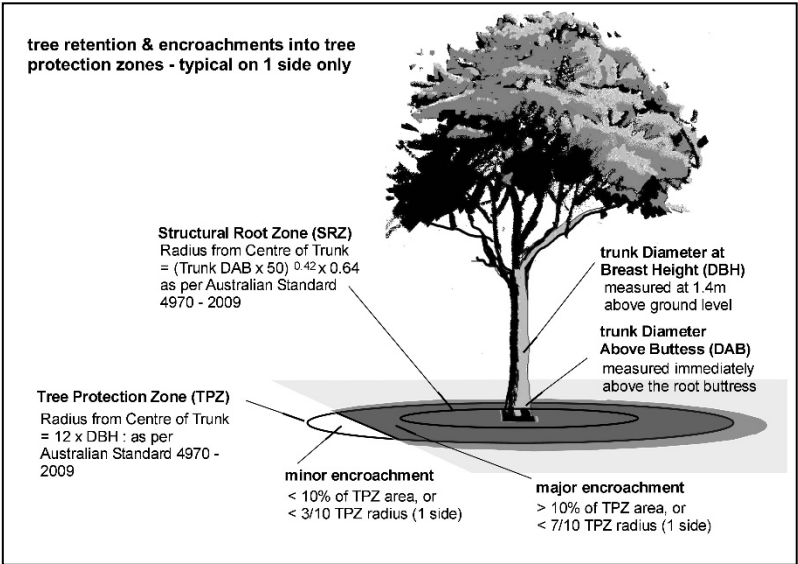


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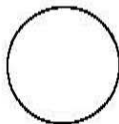
project
arboricultural impact assessment - 24 & 26 rayner rd, whale beach

drawing title
proposed development - tree retention, transplanting & removal

typical application of Australian Standard 4970-2009 - Protection of Trees on Development Sites

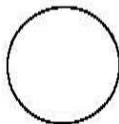


Tree No	Genus Species	DBH (mm)	DAB (mm)	SULE	Env./ L/scape Sig.	TPZ Radius (m)	Radius of 90% of TPZ area (7/10)	SRZ Radius (m)	Adjacent Works	Influence on Tree	Plan Status	On / off site
1	<i>Eucalyptus botryoides</i>	470, 580	790	1	High L/scape Sig.	9.00	6.3	3	The proposed driveway is within 5.4m (north) of the tree with some minor excavation occurring on the southern side of the driveway to achieve design levels. Branch pruning of the lower 2 nd order limb extending to the north will be required.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve
2	<i>Eucalyptus botryoides</i>	350, 560	680	1	High L/scape Sig.	7.90	5.5	2.8	The proposed driveway is within 7.0m (north) of the tree with some minor excavation occurring on the southern side of the driveway to achieve design levels.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve
3	<i>Pittosporum undulatum</i>	170	200	2	Low L/scape Sig.	2.00	1.4	1.7	The proposed driveway is within 5.5m (north) of the tree with some minor excavation occurring on the southern side of the driveway to achieve design levels.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve
4	<i>Pinus radiata</i>	470	540	4	Exempt Species in Council DCP	5.60	3.9	2.6	The proposed driveway is within 5.1m (north) of the tree with some minor excavation occurring on the southern side of the driveway to achieve design levels.	No significant impact however, the tree is considered to be in poor condition.	To be Removed	Within road reserve
5	<i>Nerium oleander</i>	100, 110, 100, 80, 80, 70	1200	3	Exempt Species in Council DCP	2.80	2	3.6	The proposed elevated driveway is within 2.7m (north) of the tree.	No significant impact however, the tree is exempt from protection under the provisions of the DCP.	To be Removed	Within road reserve
6	<i>Erythrina sykesii indica</i>	240, 250, 250, 290, 200	610	Unstable	Exempt Species in Council DCP	6.60	4.6	2.7	The existing garage retaining wall is within 2.9m (north) of the tree. The existing garage is within 3.7m (north) of the tree. The proposed garage requires excavation within 3.9m (north) of the tree.	No significant impact however, the tree is exempt from protection under the provisions of the DCP.	To be Removed	Within road reserve
7	<i>Lagunaria patersonia</i>	390, 120	480	2	Exempt Species in Council DCP	4.90	3.4	2.4	The existing garage retaining wall is within 0.5m (north) of the tree. The existing garage is within 1.2m (north) of the tree. The proposed garage requires excavation within 2.3m (north west) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	On adjacent allotment
8	<i>Glochidion ferdinandi</i>	130	160	2	Low L/scape Sig.	2.00	1.4	1.5	The existing garage retaining wall is within 1.8m (north) of the tree. The existing garage is within 2.6m (north) of the tree. The proposed garage requires excavation within 3.8m (north west) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve
9	<i>Brachychiton acerifolius</i>	310	360	2	Exempt Species in Council DCP	3.70	2.6	2.2	The proposed garage requires excavation within 3.4m (north) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve



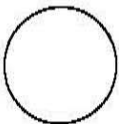
Tree No	Genus Species	DBH (mm)	DAB (mm)	SULE	Env./ L/scape Sig.	TPZ Radius (m)	Radius of 90% of TPZ area (7/10)	SRZ Radius (m)	Adjacent Works	Influence on Tree	Plan Status	On / off site
10	<i>Pittosporum undulatum</i>	160, 210	360	3	Moderate L/scape Sig.	3.20	2.2	2.2	The proposed garage requires excavation within 5.7m (north) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve
11	<i>Washingtonia robusta</i>	340	390	2	Exempt Species in Council DCP	0.70	0.5	0.5	The existing driveway is to be demolished within 0.4m (north) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve
12	<i>Washingtonia robusta</i>	250	380	2	Exempt Species in Council DCP	0.50	0.4	0.4	The existing driveway is to be demolished within 0.4m (north) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve
13	<i>Washingtonia robusta</i>	250	370	2	Exempt Species in Council DCP	0.50	0.4	0.4	The existing driveway is to be demolished within 0.4m (north) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	Within road reserve
14	<i>Washingtonia robusta</i>	310	390	Unstable	Exempt Species in Council DCP	1.00	0.7	0.7	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
15	<i>Lagunaria patersonia</i>	290	370	2	Exempt Species in Council DCP	3.50	2.4	2.2	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
16	<i>Washingtonia robusta</i>	320	440	2	Exempt Species in Council DCP	1.70	1.2	1.2	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
17	<i>Washingtonia robusta</i>	320	420	2	Exempt Species in Council DCP	0.70	0.5	0.5	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
18	<i>Lagunaria patersonia</i>	250	350	2	Exempt Species in Council DCP	3.00	2.1	2.1	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
19	<i>Schefflera actinophylla</i>	140, 150, 50, 70, 50, 30, 30	330	3	Exempt Species in Council DCP	2.80	2	2.1	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
20	<i>Schefflera actinophylla</i>	140, 70	210	3	Exempt Species in Council DCP	2.00	1.4	1.7	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
21	<i>Ligustrum lucidum</i>	240, 70	310	2	Exempt Species in Council DCP	3.00	2.1	2	The proposed elevated driveway is within 0.9m (north) of the tree.	Capable of being retained however, the tree is exempt from protection under the provisions of the DCP.	To be Removed	Within road reserve
22	<i>Ligustrum lucidum</i>	180, 60	280	2	Exempt Species in Council DCP	2.30	1.6	1.9	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	Within road reserve
23	<i>Ligustrum lucidum</i>	240, 100, 80	370	2	Exempt Species in Council DCP	3.30	2.3	2.2	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	Within road reserve
24	<i>Ligustrum lucidum</i>	160, 80	240	2	Exempt Species in Council DCP	2.10	1.5	1.8	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	Within road reserve
25	<i>Ligustrum lucidum</i>	160, 30	180	2	Exempt Species in Council DCP	2.00	1.4	1.6	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	Within road reserve
26	<i>Ligustrum lucidum</i>	220, 60	340	2	Exempt Species in Council DCP	2.70	1.9	2.1	The proposed driveway spatially conflicts with the location of the tree.	Not applicable	To be Removed	Within road reserve

Tree No	Genus Species	DBH (mm)	DAB (mm)	SULE	Env./ L/scape Sig.	TPZ Radius (m)	Radius of 90% of TPZ area (7/10)	SRZ Radius (m)	Adjacent Works	Influence on Tree	Plan Status	On / off site
27	<i>Ligustrum lucidum</i>	290, 110, 90, 60	470	2	Exempt Species in Council DCP	3.90	2.7	2.4	The proposed entrance path spatially conflicts with the location of the tree.	Not applicable	To be Removed	Within road reserve
28	<i>Olea europaea subsp cuspidata</i>	400	560	2	Exempt Species in Council DCP	4.80	3.4	2.6	The proposed building footprint is within 5.7m (north) of the tree. The proposed elevated driveway is within 0.65m (south) of the tree.	Capable of being retained with substantial pruning however, the tree is exempt from protection under the provisions of the DCP.	To be Removed	Within road reserve
29	<i>Lagunaria patersonia</i>	410	490	2	Exempt Species in Council DCP	4.90	3.4	2.5	The proposed building footprint is within 2.3m (north) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
30	<i>Ligustrum lucidum</i>	380	440	2	Exempt Species in Council DCP	4.60	3.2	2.3	The proposed external path stairs are within 1.5m (east) of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
31	<i>Duranta repens</i>	100, 120, 80, 60, 60, 50, 60	440	3	Low L/scape Sig.	1.00	0.7	0.7	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
32	<i>Callistemon salignus</i>	120	220	4	Low L/scape Sig.	2.00	1.4	1.8	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
33	<i>Pittosporum undulatum</i>	160	190	2	Low L/scape Sig.	2.00	1.4	1.6	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
34	<i>Cordyline australis</i>	180	220	3	Low L/scape Sig.	0.70	0.5	0.5	The proposed building footprint spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
35	<i>Erythrina sykesii indica</i>	490, 450	770	Unstable	Exempt Species in Council DCP	8.00	5.6	3	The proposed garage is 3.0m (south) of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system. The tree is exempt from protection under the provisions of the DCP.	To be Removed	On site
36	<i>Howea forsteriana</i>	160	190	2	Exempt Species in Council DCP	0.90	0.6	0.6	The proposed garage is 2.2m (south) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	On site
37	<i>Archontophoenix cunninghamii</i>	190	270	2	Exempt Species in Council DCP	1.50	1	1	The proposed garage is 3.6m (south) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	On site
38	<i>Schefflera actinophylla</i>	130, 110, 110, 120, 180	410	2	Exempt Species in Council DCP	3.60	2.5	2.3	The proposed garage is 0.9m (south) of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
39	<i>Casuarina glauca</i>	320	440	2	Moderate L/scape Sig.	3.80	2.7	2.3	The proposed external stairs are within 2.7m (north west) of the tree.	No significant impact however, retention of the tree conflicts with the landscape plan.	To be Removed	On site
40	<i>Pittosporum undulatum</i>	100, 80	240	3	Low L/scape Sig.	2.00	1.4	1.8	The proposed external stairs are within 3.2m (north west) of the tree.	No significant impact however, retention of the tree conflicts with the landscape plan.	To be Removed	On site



Tree No	Genus Species	DBH (mm)	DAB (mm)	SULE	Env./ L/scape Sig.	TPZ Radius (m)	Radius of 90% of TPZ area (7/10)	SRZ Radius (m)	Adjacent Works	Influence on Tree	Plan Status	On / off site
41	<i>Lagunaria patersonia</i>	450	560	1	Exempt Species in Council DCP	5.40	3.8	2.6	The existing retaining wall is to be demolished within 1.6m (north) of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
42	<i>Lagunaria patersonia</i>	260	410	1	Exempt Species in Council DCP	3.10	2.2	2.3	The proposed landscape retaining walls are within 0.3m (west) & 0.4m (east) of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
43	<i>Lagunaria patersonia</i>	600, 230, 140, 200	760	1	Exempt Species in Council DCP	8.20	5.7	2.9	The proposed external stairs spatially conflicts with the location of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
44	<i>Pittosporum undulatum</i>	70	100	2	Low L/scape Sig.	2.00	1.4	1.3	The proposed external stairs spatially conflicts with the location of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
45	<i>Pittosporum undulatum</i>	50	60	2	Low L/scape Sig.	2.00	1.4	1	The proposed external stairs are within 1.5m (east) of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
46	<i>Schefflera actinophylla</i>	80, 60, 60, 90, 120, 60	449	Unstable	Exempt Species in Council DCP	2.40	1.7	2.4	The proposed external stairs are within 1.5m (east) of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
47	<i>Phoenix canariensis</i>	820	1030	1	Exempt Species in Council DCP	3.60	2.5	2.5	The proposed swimming pool is within 0.6m (north) of the tree with proposed landscape levels around the tree being raised.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	Transplant on Site	On site
48	<i>Trachycarpus fortunei</i>	300	280	2	Low L/scape Sig.	0.70	0.5	0.5	The proposed swimming pool spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
49	<i>Phoenix reclinata</i>	550	590	Unstable	Exempt Species in Council DCP	1.10	0.8	0.8	The proposed retaining wall spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
50	<i>Stenocarpus sinuatus</i>	290	370	3	Exempt Species in Council DCP	3.50	2.4	2.2	The proposed retaining wall is within 0.9m (east) of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
51	<i>Araucaria columnaris</i>	510	620	1	High L/scape Sig.	6.10	4.3	2.7	The proposed lower terrace spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
52	<i>Erythrina sykesii indica</i>	470	590	1	Exempt Species in Council DCP	5.60	3.9	2.7	The proposed lower terrace spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
53	<i>Lagunaria patersonia</i>	320, 470	530	1	Exempt Species in Council DCP	6.80	4.8	2.5	The proposed lower terrace wall is within 1.9m (south) of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
54	<i>Casuarina glauca</i>	200	260	4	Low L/scape Sig.	2.40	1.7	1.9	The proposed lower terrace wall is within 2.6m (south) of the tree.	Construction activity is to occur in close proximity to the tree and substantial pruning and damage to the tree is likely to occur.	To be Removed	On site

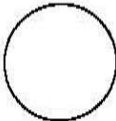
Tree No	Genus Species	DBH (mm)	DAB (mm)	SULE	Env./ L/scape Sig.	TPZ Radius (m)	Radius of 90% of TPZ area (7/10)	SRZ Radius (m)	Adjacent Works	Influence on Tree	Plan Status	On / off site
55	<i>Olea europaea subsp cuspidata</i>	70, 110, 80, 40	380	2	Exempt Species in Council DCP	2.00	1.4	2.2	The proposed swimming pool terrace is to be above existing levels and spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
56	<i>Olea europaea subsp cuspidata</i>	150, 70, 90, 110, 80	360	2	Exempt Species in Council DCP	2.80	2	2.2	The proposed swimming pool terrace is to be above existing levels and spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
57	<i>Olea europaea subsp cuspidata</i>	60, 90, 70, 90, 50	380	2	Exempt Species in Council DCP	2.00	1.4	2.2	The proposed swimming pool terrace is to be above existing levels and spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
58	<i>Olea europaea subsp cuspidata</i>	120, 160	390	2	Exempt Species in Council DCP	2.40	1.7	2.2	The proposed swimming pool terrace is to be above existing levels and spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
59	<i>Araucaria columnaris</i>	390	450	1	High L/scape Sig.	4.70	3.3	2.4	The proposed lower landscape terrace is to be above existing levels and spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
60	<i>Araucaria columnaris</i>	350	440	1	High L/scape Sig.	4.20	2.9	2.3	The proposed lower landscape terrace is to be above existing levels and spatially conflicts with the location of the tree.	Not applicable	To be Removed	On site
61	<i>Lagunaria patersonia</i>	150, 140	300	2	Exempt Species in Council DCP	2.50	1.8	2	The existing masonry retaining wall is to remain on the adjoining allotment within 0.7m (west) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	On adjacent allotment
62	<i>Pittosporum undulatum</i>	120, 100	230	2	Low L/scape Sig.	2.00	1.4	1.8	The existing masonry retaining wall is to remain on the adjoining allotment within 0.8m (west) of the tree.	No significant impact with appropriate Tree Protection Measures.	Retained with General Tree Protection Measures	On adjacent allotment
63	<i>Ficus rubiginosa</i>	150, 200, 80, 190, 260, 110	450	1	Moderate L/scape Sig.	5.20	3.6	2.4	The proposed lower landscape terrace is to be above existing levels and spatially conflicts with the location of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	Transplant on Site	On site
64	<i>Casuarina glauca</i>	140	190	3	Low L/scape Sig.	2.00	1.4	1.6	The proposed lower landscape terrace is to be above existing levels and spatially conflicts with the location of the tree.	Changes to soil levels are likely to involve fill and or excavation effecting a substantial portion of the tree's root system.	To be Removed	On site
65	<i>Casuarina glauca</i>	160	190	2	Low L/scape Sig.	2.00	1.4	1.6	The proposed boundary retaining wall spatially conflicts with the location of the tree.	Excavation is likely to involve severance of significant tree roots resulting in the decline of the tree and/or rendering it unstable.	To be Removed	On site
66	<i>Casuarina glauca</i>	140	210	2	Low L/scape Sig.	2.00	1.4	1.7	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
67	<i>Casuarina glauca</i>	190	240	2	Low L/scape Sig.	2.30	1.6	1.8	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site

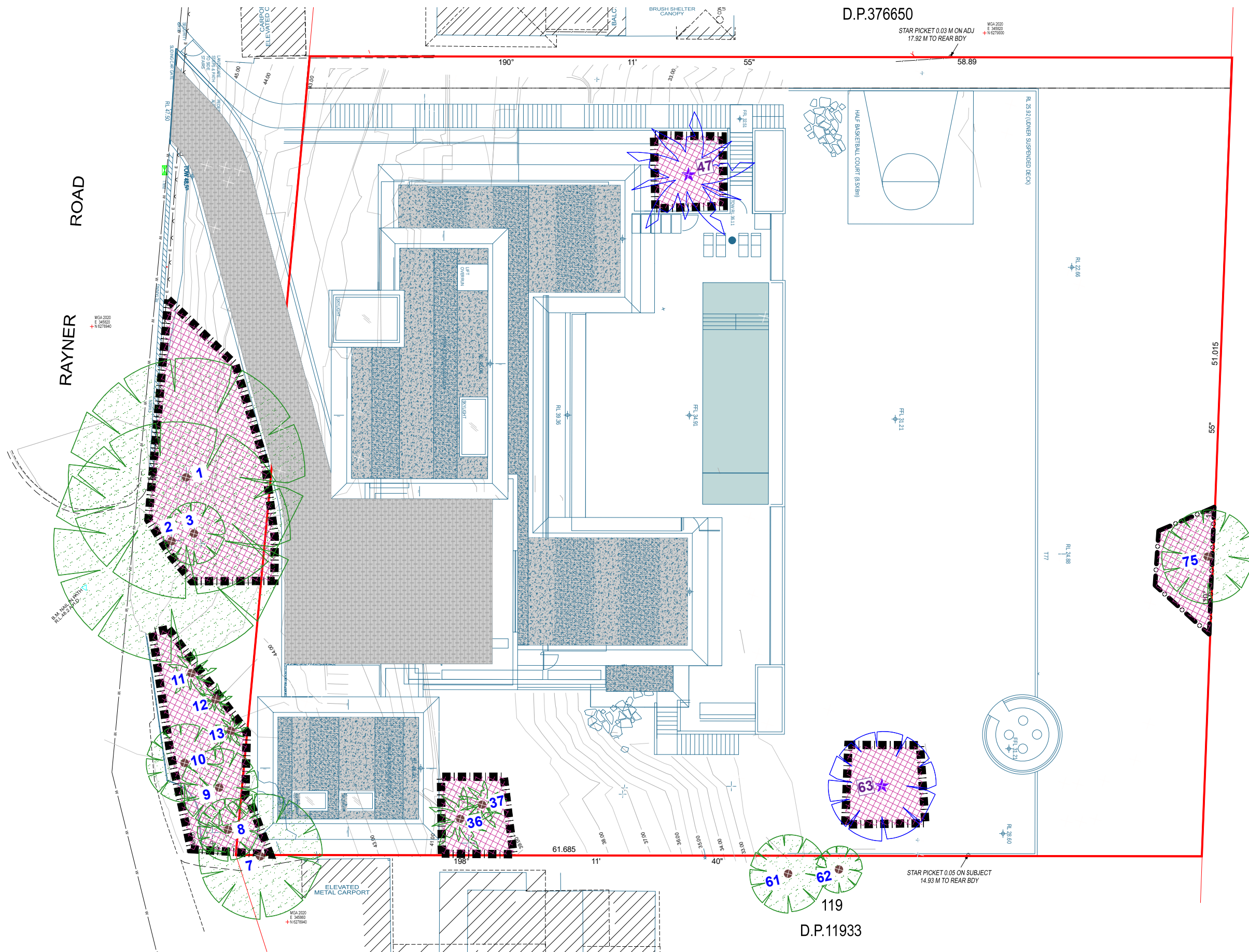


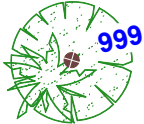
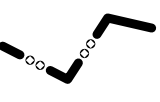
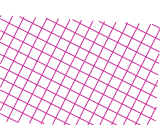
Tree No	Genus Species	DBH (mm)	DAB (mm)	SULE	Env./ L/scape Sig.	TPZ Radius (m)	Radius of 90% of TPZ area (7/10)	SRZ Radius (m)	Adjacent Works	Influence on Tree	Plan Status	On / off site
68	Casuarina glauca	110	180	2	Low L/scape Sig.	2.00	1.4	1.6	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
69	Casuarina glauca	130	170	3	Low L/scape Sig.	2.00	1.4	1.6	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
70	Casuarina glauca	110	130	3	Low L/scape Sig.	2.00	1.4	1.4	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
71	Casuarina glauca	100	120	2	Low L/scape Sig.	2.00	1.4	1.4	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
72	Casuarina glauca	170	210	2	Low L/scape Sig.	2.00	1.4	1.7	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
73	Casuarina glauca	130	170	3	Low L/scape Sig.	2.00	1.4	1.6	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
74	Lagunaria patersonia	220	250	1	Exempt Species in Council DCP	2.60	1.8	1.8	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
75	Banksia integrifolia	380	400	3	Low L/scape Sig.	4.60	3.2	2.3	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works potential could affect the stability of the tree.	Retained with General Tree Protection Measures	On site
76	Lagunaria patersonia	270	360	1	Exempt Species in Council DCP	3.20	2.2	2.2	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site
77	Lagunaria patersonia	410	480	1	Exempt Species in Council DCP	4.90	3.4	2.4	The proposed lower slope is to be rehabilitated and revegetated.	Weed control, vegetation removal & bank stabilisation works are likely to have a significant impact on the tree.	To be Removed	On site

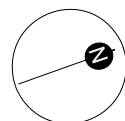


Figure 12.1 - Tree No. 47 to be transplanted on site





- tree legend**
-  trees to be retained
 -  trees to be transplanted
 -  trees to be removed
 -  tree protection fencing (refer specifications)
 -  tree protection webbing (refer specifications)
 -  tree protection zone

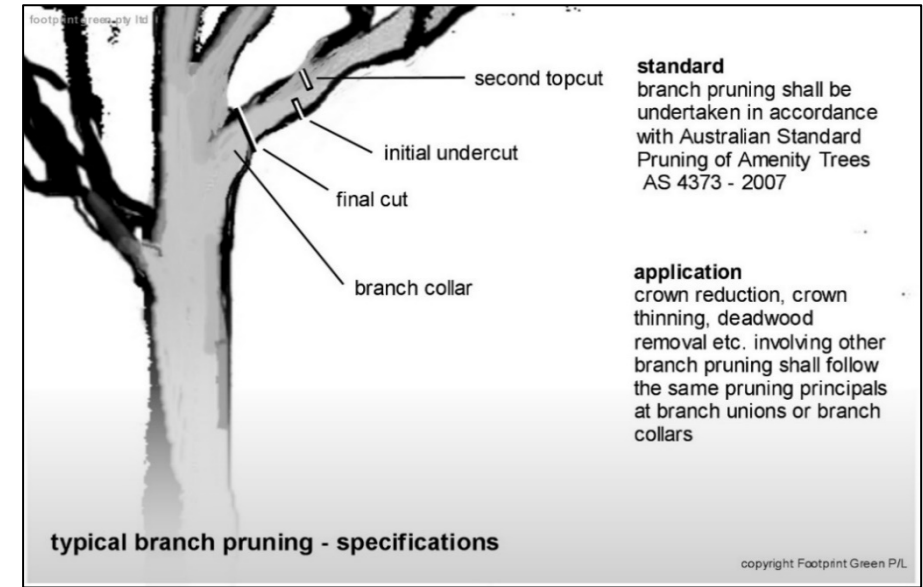


tree removal

Trees identified for removal shall be removed so that no damage occurs to the foliage, branching structure, trunk or root zone of trees identified as being retained or transplanted.

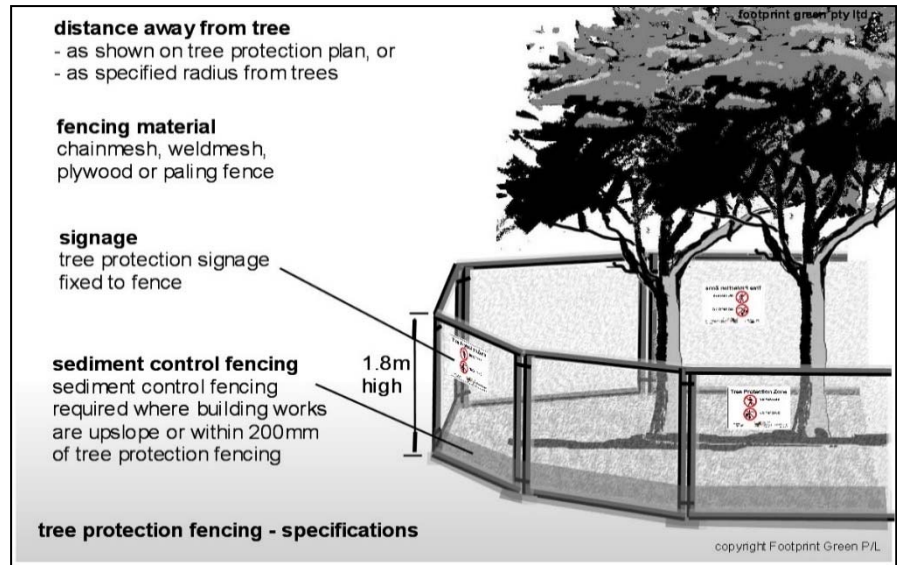
branch pruning Tree No. 1 and elsewhere if required

Branch pruning will be required on Tree No.1 to remove the lower 2nd order branch extending to the north of the tree to provide clearance for construction of the driveway. Should branch pruning be required in other areas to provide access for vehicles and pedestrians, pruning must be carried out in accordance with Australian Standard AS 4373-2007 Pruning of Amenity Trees and the work is to be undertaken by an experienced and qualified arborist and in accordance with the specification below.



tree protection fencing

Prior to demolition or construction, secure Tree Protective Fencing is to be erected around individual trees or groups of trees identified as being retained and should be located as shown on the Tree Protection Plan (refer sheets 13 & 14)



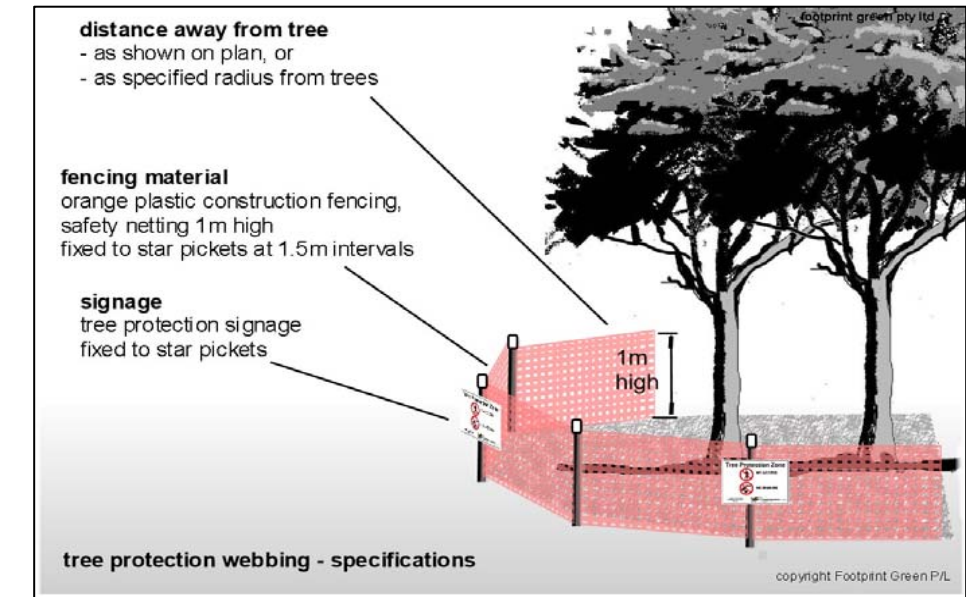
The building contractor shall ensure that at all times during site works no activities, stockpiles, storage or disposal of materials shall take place within the fenced off areas and that all Protective Fences remain secure throughout the development work period.

All access within the tree protection fencing for temporary and permanent works must be carried out under the instructions of an experienced and qualified project arborist and protective fencing shall remain in functional condition for the duration of building works and can be removed to allow for works identified in the landscape plan.

tree protection webbing

Tree Protection Webbing shall be installed in lieu of Tree Protection Fencing only where shown on the Tree protection Plans (sheets 13 & 14) prior to trees being transplanted or in the case of Tree No. 75 where the topography is steep and there is limited potential for damage to occur to the tree.

Tree Protection Webbing shall be installed in accordance with the specification below.



tree protection signage

Tree Protection Signage is to be installed on fencing and shall be installed at maximum 15m intervals and at changes in the fencing direction (refer specification below).



Installation of services within tree protection zones on site

The installation of services such as drainage within the Tree Protection Zones must be carried out in accordance using hand tools (refer specification below)

hand tools

Include the use of shovels, crowbars. (mattocks & axes shall not be used).

retention of tree roots

Excavation is to be conducted under the supervision of the project arborist. Tree root >30mm dia. shall be exposed, left intact and not severed or damaged

inspection of tree roots

Where tree roots spatially conflict with the fall line of the service, depending upon the number and size of the tree roots, the project arborist shall either:
- cleanly prune the tree roots and treat them with root hormone compound, or
- provide instructions to leave the tree roots intact and backfill the excavation and investigate alternate locations



excavation for services using hand tools within Tree Protection Zones - specifications

soft landscape works

Unless specified on plans, soft landscaping works within the Tree Protection Zones should be carried out in accordance with the specification below.

within tree protection zones

soil decompaction or rotary hoes should not occur within tree protection zones.

existing soil levels must remain unchanged be incorporated into finished landscape design levels. exceptions can occur to finished design levels where new turf is to be laid or garden beds established provided that a free draining soil base is used and the new soil base is no greater than 50mm in depth.

in turf areas the landscape design should consider utilising an established mowing edge to prevent ongoing damage to trunks from whipper snippers

the landscape design should not encourage regular pedestrian thoroughfare access across tree protection zones unless permeable pavements are provided

the tree protection zone or areas surrounding the trunks of established trees should ideally be mulched to minimise damage to the basal area of the tree and root buttresses

soft landscape works within Tree Protection Zones - specifications

