

Mornington Peninsula Shire

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3 Feb 2025

Dear Sir,

Re: 239 Dromana Parade, Safety Beach

Introduction

I am informed that redevelopment of the site of 239 Dromana Parade, Safety Beach is planned. [REDACTED] has been requested by [REDACTED] to conduct an arborist report on the trees within and close to the site. The information provided includes a species description, data on trunk diameters at breast height, heights by spreads, condition, origin of the trees (whether exotic, Australian, Victorian, indigenous or weed) as well as tree protection zones as per the relevant Australian Standard 4970:2009 'Protection of trees on development sites' approach.

Each tree is numbered and located on the accompanying copy of the site analysis drawing on page 3 and described on page 4.

The Trees- General

There is one live tree and two live large shrubs on the site of low height. These include a 'Rosea' type Yellow Gum (Tree 3) of approximately 6m height and 20 or so years of age and two broad spreading Showy Honey Myrtles (Trees 5 and 6) of approx. 4m height of 40-50 years of age. The Rosea Yellow Gum is derived from hybrids of Kangaroo Island Blue Gum and Yellow Gum, neither of which is indigenous (native to the local area). The Showy Honey Myrtles are from West Australia.

VPO1

A Schedule 1 to the Vegetation Protection Overlay applies to the site, thus a permit is required to lop, destroy, remove trees.

A permit is required to remove, destroy or lop any vegetation, except for:

- The removal of vegetation which is to be carried out in conjunction with a development approved under a planning permit and in accordance with an endorsed plan.
- The removal of vegetation necessary for the construction of a dwelling, dwelling extension or outbuilding where no planning permit is required and provided that:
 - A building permit has been granted for the proposed development.
 - No tree with a trunk circumference greater than 0.35 metres is removed within 6 metres of a road frontage.
 - Vegetation is only removed from the building footprint or within 2 metres of the proposed building.
- The removal of vegetation, not within a road reserve, to enable the formation of a single crossing and access driveway with a maximum width of 3.7 metres.
- The removal of vegetation which presents an immediate risk of personal injury or damage to property including the culling of single trees located within 3 metres of a dwelling or outbuilding, or which overhangs a boundary line.
- The removal of any dead timber or branch which has occurred through natural circumstances, fire or the spread of noxious weeds.
- The removal of any tree or branch of a tree which impairs the access of motor vehicles along any existing or approved access track, provided that such access track has a width no greater than 3.7 metres.
- The maintenance of landscaping, including pruning, which does not effect the stability, general form and viability of the vegetation.
- The removal of vegetation that has been established for less than 10 years and which is not required as landscaping under a planning approval.
- The removal of vegetation specified in the schedule to Clause 52.17.
- The removal of vegetation which is to be carried out in conjunction with a development approved under a planning permit and in accordance

Permit Requirements

Accordingly, a permit is required to remove, destroy trees 3, 5 and 6 within the site.



The Trees

Tree No.	Species	Origin	DBH (cm)	HxS (m)	Condition	WOR	Comments
1	Agonis flexuosa (Willow Myrtle)	A	15, 15	4x4	F/G		Neighbouring young healthy neighbouring tree. TPZ 2.6. SRZ 1.8
2	Banksia integrifolia (Coast Banksia)	I	41	9x8	G		Young mature tree in adjacent property. TPZ 4.9. SRZ 2.5
3	Eucalyptus leucoxylon ('Rosea type Yellow Gum')	V	16, 14, 13, 13	6x7	F	4	Planted, young mature, stunted. TPZ 3.4. SRZ 2.1
4	Banksia integrifolia (Coast Banksia)	I	33	8x7	F-P		Mature neighbouring tree which is thinly foliated with minor die-back. Leans to NW. TPZ 4.0. SRZ 2.3
5	Melaleuca nesophylla (Showy Honey Myrtle)	A	24	4x6	F	3	Mature shrubby tree on heavy lean to the NW. TPZ 2.9. SRZ 2
6	Melaleuca nesophylla (Showy Honey Myrtle)	A	24, 18, 13, 13, 10, 10	4x8	F	3	Mature shrubby tree on heavy lean to the NW. TPZ 4.6. SRZ 2.4
7	Melaleuca nesophylla (Showy Honey Myrtle)	A	20, 17, 13	6x8	F		Mature neighbouring shrubby tree. TPZ 3.5. SRZ 2.2
8	Melaleuca nesophylla (Showy Honey Myrtle)	A	25, 15, 13, 13	7x8	F		Mature neighbouring shrubby tree. TPZ 4.1. SRZ 2.3
9	Corymbia ficifolia (Flowering Gum)	A	42	7x8	F/P		Neighbouring tree, very thinly foliated with many dead extremities. TPZ 5 SRZ 2.5
10	Olea europa (Olive)	E	15-17	< 3m high	F/G		Row of healthy small topiaried healthy trees. TPZ 2 SRZ 1.5
11	Euonymus japonica (Japanese Spindle)	E	25	4x7	F		Neighbouring mature shrub. TPZ 3 SRZ 2
12	Banksia integrifolia (Coast Banksia)	I	41	10x7	F		Mature neighbouring tree, thinly foliated upper crown, minor die-back. TPZ 4.9. SRZ 2.5
13	Banksia integrifolia (Coast Banksia)	I	20, 12, 10, 12	7x5	F		Young mature neighbouring healthy tree. TPZ 3.4. SRZ 2.1
14	Melaleuca nesophylla (Showy Honey Myrtle)	A	23, 23, 15	4x8	F		Mature neighbouring broad low spreading shrub. TPZ 4.3. SRZ 2.3







9



Row 10



12



14

13

12

11

In order to understand the table of data, I have provided the following explanatory notes:

Tree Origin Categories

Each tree has been classified as to whether it is indigenous (**I**), native to Victoria (**V**), native to Australia (**A**), exotic (**E**) or an environmental weed (**W**).

An indigenous species (**I**) is one that is known to grow naturally in the local area, even if the individual tree has been planted and is from a seed source or provenance foreign to the area.

A species classified **V** is one which has a part or all, even if very small, of its natural range within Victoria, although it may occur outside the state as well. It does not however occur naturally in the local area.

A species classified **A** is native elsewhere in Australia than Victoria. It does not occur naturally in the local area.

A species classified **E** has its natural range occurring outside Australia.

A species classified **W** is a seriously invasive environmental weed.

DBH diameter of trunk over bark at breast height In a number of cases where the tree has forked into multiple trunks below breast height (1.3-1.5m) the diameter is measured below the fork and an estimate is made for the single trunk equivalent at breast height, or else figures for each of the individual stems can be given.

HxS This is the estimated height (H) of the tree and its average crown spread (S).

SULE Safe useful life expectancy in years. Taken in the context that the area is to be developed for residential use, and that sensible distances are maintained between the buildings and the trees, this is the estimate of time that the tree will continue to provide useful amenity without imposing an onerous financial burden in order to maintain relative safety, and avoid excessive nuisance.

Condition This descriptor can be encapsulated by three terms, namely **Health (H)**, **Structure (S)** and **Form (F)**.

Health is largely governed by the ease in which the metabolic functions are occurring throughout the tree. Symptoms of health include the amount, distribution, density, size and colour of the foliage.

Structure refers to the structural stability of the tree and its branches. A well structured tree is not likely to shed branches or stems, or snap in the trunk or blow over, whereas a poorly structured tree is more likely to.

Form basically refers to the symmetry of the tree. A tree with a straight trunk and symmetrical crown and evenly distributed branches is referred to as having good form, whilst a lopsided leaning tree may have fair – poor form.

Worthiness of Retention (WOR):

The worth for retention of a tree applies to site trees only and is based on the assumption that the site is to be re-developed, and that there is the opportunity for new tree planting. It is based on a number of factors. These factors are:

1. structure, health, form and safe useful life expectancy,
2. size, prominence in the landscape,
3. species rarity,
4. whether indigenous,
5. whether an environmental weed.
6. importance for habitat of native wildlife
7. whether of historical or cultural interest

Any tree with a WOR rating of 3 or less should be seriously considered for removal before development begins because it is dead, nearly dead or dangerous, a weed, is causing or is likely to cause a severe nuisance in the near future, or just of very little significance and readily replaceable with new plantings. Trees rated 4-6 are of some significance. Some of these trees may respond to treatments such as formative pruning, removal of dead wood, weight reduction pruning etc. Trees rated 7 or higher are of high significance (the higher the ranking the more so), primarily because of their good health, structure, form, prominence in the landscape and SULE, although all they still may need substantial works done on them as already detailed, if they are to be retained.

Tree Protection Zone (TPZ) According to the Australian Standard AS 4970-2009 'Protection of Trees on Building Sites', the TPZ is the principal means of protecting trees on development sites. It is a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable.' The radius of the TPZ is calculated by multiplying the DBH by 12. The radius is measured from the centre of the stem at ground level. An area of 10% of the TPZ is deemed acceptable to violate if 10% of the *area* of the TPZ is made up in other directions. *Thus if encroachment is from one side only, encroachment to as close as approximately 8.3 times the DBH (~ 69% the listed TPZ radius) is permissible according to the Standard.*

Where the tree has more than one trunk, the TPZ is deduced by taking the square root of the sum of the squares of each of the DBHs, and multiplying this figure by 12

The TPZs as determined by the AS 4970-2009 approach should be construed as a rough guide. Many factors such as the type of encroachment on the TPZ, species tolerance, age, tree height, presence of spiral grain, soil type, soil depth, tree lean, the existence of onsite structures or root directional impediments, level of wind exposure, irrigation and ongoing tree care and maintenance are each highly influential on the size and success of the TPZ estimation.

Structural Root Zone

According to the Aus Std. AS 4970:2009, the structural root zone is the area of the root plate required for a tree's stability. In order to calculate the indicative radius of such a zone from the trunk centre, according to the Aus Std., one uses the following formula: SRZ radius is $(D \times 50)^{0.42} \times 0.64$, where D is the trunk diameter in metres taken from just above the root buttress. The minimum indicative SRZ radius is 1.5m for any tree, irrespective of how small. A graph is provided in the Aust Std, with a curve depicted relating the SRZ to trunk diameter. Unfortunately, the calculated figures do not match those derived from the graph. The Aust Std. does not mention from where this formula is taken although acknowledges the publication 'Mattheck, C. & Breloer, H. (1994) *The Body Language of Trees* HMSO Publications' in the preface and bibliography. The figures derived from the graph for the indicative SRZs are far greater than those implied from the curve of 95% fit for the results from studies of upturned root plates of windblown and winched over German trees (see Mattheck, C. & Breloer, H. (1994). Furthermore the figures derived from the graph for the indicative SRZs are far greater than what one calculates them to be, using the formula provided by the Standard i.e. $(D \times 50)^{0.42} \times 0.64$. The calculated figures according to the Aust Std. are considerably greater for small and large trunks than those of Mattheck & Breloer.

In reality, the radii calculated whether by graph or using the formula, are much larger than necessary, except in cases such as where the soils are very shallow or where the structural root development is unidirectional or highly asymmetric for some reason, and the excavation is to be within the zone of the roots. **The structural stability generally depends far more on what proportion of the circumference of the tree is to be excavated than the actual distance of excavation from a tree, and this is often not taken into account quite when using the SRZ.**

