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45 Cox Drive, Dennes Point.
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***Arboricultural Impact Assessment (AIA) for the proposed development at 45 Cox Drive, Dennes Point.**

It should be noted, that the Australian Standard 4970: Protection of Trees on Development Sites was republished in May 2025. Some changes have been made to the common terms and definitions in the Standard, notably;
-the term DBH (Diameter at Breast Height) is now expressed as DSH (Diameter at Standard Height),
-NRZ (Notional Root Zone) is "...zone enclosed by a radius of 12 times DSH that is a primary trigger for arboricultural input on a development site"
-TPZ (Tree Protection Zone) is the "specified zone above and below the ground and at given offsets from the trunk set aside to protect a tree's roots and crown where these might be damaged by development"
Furthermore, new definitions exist for three levels of encroachment into the NRZ;
-Minor NRZ encroachment "...is less than or equal to 10% of the area of the NRZ..."
-Moderate NRZ encroachment "...is greater than 10% and less than or equal to 20% of the area of the NRZ and is outside the SRZ (Structural Root Zone)..."
-Major NRZ encroachment is "...if it is greater than 20% of the area of the NRZ or inside the SRZ..."

ARBORICULTURAL IMPACT ASSESSMENT (AIA).

TreeCentric Tree Solutions was approached to take on the role of Project Arborist for the proposed development at 45 Cox Drive, Dennes Pt. Jim Mulchay from Mulcahy Planning and Property Services provided an Environmental Management Plan/ Natural Values Assessment (EMP/NVA) in February 2026, the trees on the site were accurately located and mapped in Figure 9. (Page 8.) of that document. Figure 9. (Mulchay, Feb 2025), has been reproduced in this report along with some additions and is illustrated as **Figure 1.** The information and locations for the trees, proposed garage, access track and stormwater overflow were taken from this document.
The EMP/NVA from Mulcahy Planning and Property Services identified 10 trees on the site within 15 of the proposed development site.

2 of these trees, (Tree 1 & Tree 14) are High Conservation Value Trees, both trees are *Eucalyptus viminalis* subsp. *viminalis*, the remaining 8 trees are *Eucalyptus amygdalina*.

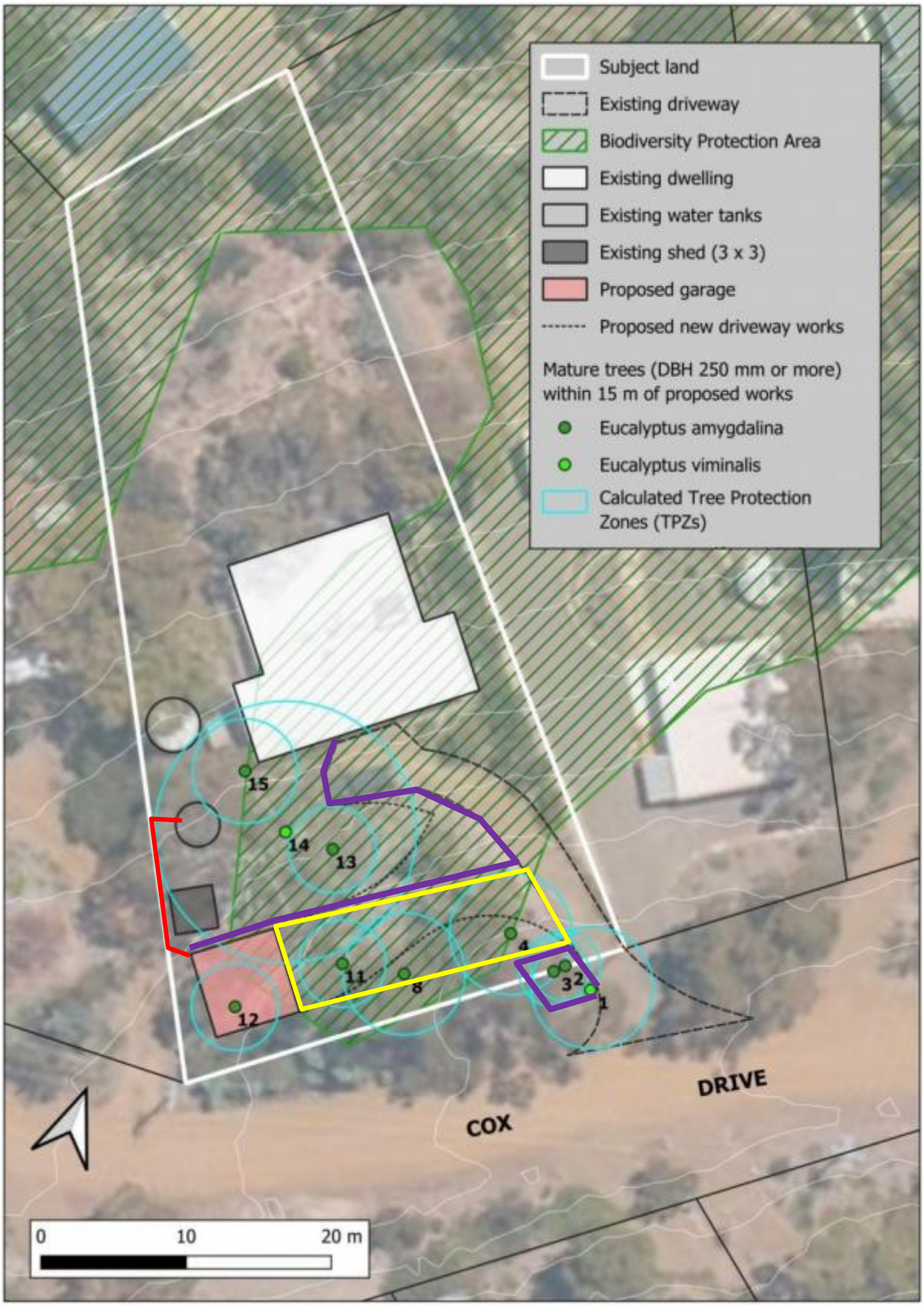

Figure 1. Adapted from (Figure 9. on Page 8. of Mulchay, Feb 2026). Locations of the trees and the proposed new driveway, garage and associated stormwater plumbing at 45 Cox Dr, Dennes Pt. Additions in red showing recommended trench line for Stormwater, in yellow showing recommended line of new driveway and in purple recommended location of Tree Protection Zone (TPZ) fencing.

As shown in **Figure 1**. extracted from EMP/NVA (Mulchay, Feb, 2026), Tree's 1,2,3,4,8,11,12 & 14 have the potential of having their Notional Root Zones (NRZ) encroached upon by the proposed driveway. Tree's 13 & 15 will not be impacted upon.

Tree's 12 & 14 have the potential of having their NRZ's encroached upon by the proposed garage and/or the stormwater plumbing to the existing tank.

Table 1. shows the relevant data pertaining to the 8 Tree's at the site that have the potential to be impacted upon by the proposed development.

Table 1. Relevant data pertaining to the 8 Tree's at 45 Cox Drive, Dennes Pt that will be impacted upon or have the potential to be impacted upon by the proposed development.

TREE NO	TREE SPECIES	DSH in cm	High Conser-vation Value Tree Y/N	Recommen-dation to Retain or Remove	NRZ in m	Perceived cause/likely cause of impact	Expected Level of encroachment Minor Moderate Or Major
1	*Eucalyptus viminalis* subsp. *viminalis*	35	Y	Retain	4.2	-Proposed driveway improvements	Minor
2	*Eucalyptus amygdalina*	20	N	Retain	2.4	-Proposed driveway improvements	Minor
3	*Eucalyptus amygdalina*	20	N	Retain	2.4	-Proposed driveway improvements	Minor
4	*Eucalyptus amygdalina*	35	N	Remove	4.2	-Proposed driveway improvements	Minor
8	*Eucalyptus amygdalina*	35	N	Remove	4.2	-Proposed driveway improvements	Minor
11	*Eucalyptus amygdalina*	25	N	Remove	3	-Proposed driveway improvements	Minor
12	*Eucalyptus amygdalina*	25	N	Remove	3	-Proposed garage -Proposed driveway to garage -Stormwater trenching	Minor
14	*Eucalyptus viminalis* subsp. *viminalis*	75	Y	Retain	9	-Proposed garage -Proposed driveway to garage -Stormwater plumbing	Minor

Recommendations.

Tree 1 and Tree 14 are both *Eucalyptus viminalis* subsp. *viminalis*, these trees are both High Value Conservation Trees. In order to prioritise the health and future of Tree 1 and in particular Tree 14, some amendments are required.

Tree 14 because of its species, age and size is a significant tree on the site, it is also showing some symptoms of stress such as dieback/deadwood, sparse canopy and smaller leaf size. Because of the existing infrastructure within Tree 14's NRZ, the house and driveway, it would be reasonable to expect that its fibrous root system has taken the opportunity to proliferate in the bank to the east and the south of its trunk. For this reason my recommendation is to keep the level of encroachment as "Minor/less than 10%". In order to reduce the impact on the NRZ of Tree 14 keeping the proposed driveway higher up the bank is required. **Figure 1.** Shows in yellow the recommended line of the driveway, **Table 2.** shows the limits of approach for Tree 1, 2, 3 & 14. Unfortunately this does compromises the NRZ's of Tree 4 and 8.

Tree 4 and Tree 8 are both immature trees with some structural weakness and are not presenting as good future trees. It is recommended that that along with Tree 11 and 12, that Tree 4 and 8 also be removed in order to allow further protection of the High Conservation Value Trees at the site.

There is no indication that power will be run to the shed, if this is a requirement then the trenching from the mains box should be located in the centre of the existing driveway and then follow the centre of the proposed new driveway to the garage.

Tree's associated with the proposed development.

The proposed new section of driveway to access the proposed garage and associated stormwater plumbing has the potential to impact upon Tree's 1, 2, 3, 4, 8, 11, 12 & 14. **Table 2.** Shows the data pertaining to these tree's, including the limits of approach for each tree.

Guidelines for the proposed access track improvement, and associated drainage are specified in the Tree Protection Specifications (TPS) and the Tree Protection Plan (TPP) section of this document and as illustrated in **Figure 1.**

Table 2. Relevant data pertaining to the 8 Tree's at 45 Cox Drive, Dennes Point, that have the potential to be impacted upon by the proposed new driveway and garage.

TREE NO	NRZ in M	LIMIT OF APPROACH Disturbance for new driveway and or garage limited to this distance from center of trunk in M	LEVEL OF ENCROA -CHMENT Minor, Moderate or Major	Approx. Encroachment By new driveway and or garage as a percentage
1	4.2	3	Minor	8.77%
2	2.4	2	Minor	3.98%
3	2.4	2	Minor	3.98%
4	4.2	n/a Tree to be removed	n/a	n/a
8	4.2	n/a Tree to be removed	n/a	n/a
11	3	n/a Tree to be removed	n/a	n/a
12	3	n/a Tree to be removed	n/a	n/a
13	3	n/a	None	Nil
14	9	Limit to 6.2	Minor	9.91%
15	3.6	n/a	None	Nil

TREE PROTECTION SPECIFICATIONS (TPS).

Tree removals- Tree's 4, 8, 11 & 12 require removal to accommodate the excavation, consolidation and foundation creation required for the proposed new section of driveway, garage and associated stormwater plumbing.

Tree pruning- Tree's 1 & 14 require pruning to remove the deadwood in their canopies. It is recommended that the tree's have deadwood down to 25mm removed, this will assist in maintaining the health of the trees whilst making the site safer for the stakeholders at the proposed development site.

Any tree pruning or tree removals required at the site should be carried out by a suitably qualified Arborist in accordance with AS4373-1996 (1996) *Pruning of Amenity Trees.* The pruning or removal of any trees on the site needs to be done strategically so as to avoid damaging any above ground part of the trees to be retained. And furthermore, the removal process needs to be done with the least disturbance and damage to the soil and roots of the trees to be retained.

New driveway improvements- The earthworks required for the new section of driveway must follow the limits of approach set out in **Table 2.** This is to ensure that the NRZ's of Tree's 1, 2, 3, 13, 14 & 15 are not compromised.

The associated plumbing trenches- The earthworks required for the stormwater plumbing from the garage to the existing tank as shown in **Figure 1.** Must run straight out from the garage downpipe to the Western boundary and then run down hard against the Western boundary of the property and then straight back in to feed the tank. This is illustrated in red in **Figure 1.** This is to ensure that the NRZ's of Tree's 14 is not further compromised.

Tree Protection Zones (TPZ's), trunk protection and interpretive signage- The erection of the Tree Protection Zone (TPZ) fencing is to be overseen by the Project Arborist and will be made up of orange hi-vis flagging ropes strung at approx 1.4m high using steel pickets and other trees where appropriate. For practicality there will be 2 TPZ's that group Tree 1, 2, & 3 together and another 1 that groups Tree 13, 14 & 15 together. The boundaries of the TPZ's will be set using the limits of approach guidelines that are set out for each tree in **Table 2.** the approximate locations are shown in **Figure 1.**. Trunk protection in the form of hi-vis barrier mesh is to be wrapped around the trunks of Tree's 1, 2 & 3 that are in close proximity to the access track. Interpretive signs such as **Figure 3.** to be erected on the approach sides of the TPZ fencing.

TREE PROTECTION SPECIFICATIONS (TPS) TIMELINE.

Pre-construction management

-Any tree pruning or tree removals required at the site should be carried out by a suitably qualified Arborist in accordance with AS4373-1996 (1996) *Pruning of Amenity Trees.*

-TPZ fencing and interpretive signage to be erected, as directed and overseen by the Project Arborist

-Signage to be placed on the approaching side of the separate TPZ fenced areas (See example **Figure 3.**).

During construction management

-Any stakeholders involved at the site during the construction phase must read and sign off on the TPZ rules. TPZ staking, barrier mesh/flagging rope and signage to remain intact for the duration of the construction phase. TPZ rules to be adhered to at all times (See **Figure 2.**).

-The project Arborist must be alerted if anything that contravenes the tree protection plan is necessary. Intermittent site inspections to be carried out by Project Arborist to check that Tree protection measures are being maintained.

Post construction management

-At the completion of the development of the site the TPZ stakes, barrier mesh/flagging rope and signage can be taken down. Project Arborist to report on overall compliance to the TPZ rules and the overall health of the trees. Any issues raised should be commented on, and recommendations made for the management of the trees into the future.

AGREEMENT REGARDING TREE PROTECTION ZONE RULES AT 45 Cox Dr, Dennes Pt (Adapted from AS-4970-2009 Protection of trees on development sites.)

Site rules in consideration of protecting the retained trees on the site during the construction phase of the development. These rules are to be read, understood and signed off by all relevant stakeholders involved in the development of the site.

Acceptable TPZ's for the trees to be retained at the site have been outlined in the Arborists report, **Table 2.**

1. A copy of the Arborists report should be available upon request at or before attending the site.
2. Signage at entrance to property that states that TPZ are being maintained on the site by staked areas delineated with barrier mesh/flagging rope and signage.
3. The TPZ's delineated by stakes and barrier mesh/flagging rope are a no go zone for any activity, including but not exclusive to the following;- no damage to the trees or their roots, no machinery storage or works, no people, no storage of materials, no parking, no refuelling, no cleaning of tools, no fires, no dumping of soil, unused concrete, rubbish, chemicals or paint.
4. The boundary and any associated signage of the TPZ's must be maintained at all times.
5. If any alteration to the TPZ boundary is required, then the project Arborist must be contacted.

DATE	NAME	ORGANISATION	SIGNITURE

Figure 3. Example of sign to be fixed to the approaching side of the 2 separate areas of TPZ fencing on the proposed development site at 45 Cox Dr, Dennes Pt.

COMMENTS

To ensure that no further impact is placed on the trees at the proposed site, any other excavation required for services such as electricity, drainage, stormwater overflow or associated plumbing should be located outside of the designated TPZ fenced areas. As demonstrated the level of encroachment into the TPZ's of the trees to be retained at the proposed development site is at most Minor, and therefore is not expected to have any detrimental impact upon the trees. Providing the proposed project is carried out following the guidelines in this document, these trees will remain viable entities in the landscape well into the future.

Signed

Andy Angliss

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