
rainTree consulting

Arboricultural Management
PO Box 326 AVALON NSW 2107
Mobile 0419 250 248

Jeremy Maudson
C/- Gartner Trovato Architects
PO Box 1122 MONA VALE 2103
T: 9979 4411

4 September 2024

DA2024/0819
8 SEABEACH AVENUE – NEWPORT, NSW
TREES 1 & 10 – NORFOLK ISLAND PINES
ARBORICULTURAL ADDENDUM – [1]
IMPACT ASSESSMENT & TREE RETENTION REPORT
Ref No: 9124

INTRODUCTION & METHODOLOGY

This report has been commissioned by Jeremy Maudson C/- Gartner Trovato Architects. The purpose of the report is to address additional information required for the protection and management of two (2) Norfolk Island Pine trees known as trees T1 & 10.

Provided within this report are discussions and protection methodology based on amended design documentation that mitigates tree protection zone encroachment impacts by the proposal. These impacts have been identified within Appendix- B and require to be reviewed as part of the discussions presented within this report.

Plans and/or documentation reviewed to assist in the discussions presented include:

Gartner Trovato Architects, project No:2317 design drawings *specific to:*

- Site Plan + Site Analysis: Dwg No: A.01 rev B dated 2.9.2024
- Ground Floor Plan: Dwg No: A.02 rev B dated 2.9.2024
- Elevations: Dwg No: A.04 & 05 rev B dated 2.9.2024
- Sections: Dwg No: A.06 rev B dated 2.9.2024

CC Surveying, job No: 5190

- Site Survey Sheet 1 dated 15.4.2019

Raintree Consulting

- Arboricultural Impact Assessment (AIA) report ref No 1024 dated 15.2.2024.

This report acknowledges and utilizes the current Australian Standards 'Protection of Trees on Development Sites' AS4970 – 2009. Unless specified otherwise all development offsets within this report are taken from the centre of the tree as plotted within survey or design documentation.

DISCLAIMER & LIMITATION ON THE USE OF THIS REPORT

This report is to be utilized in its entirety only. Any written or verbal submission, report or presentation that includes statements taken from the findings, discussions, conclusions or recommendations made in this report, may only be used where the whole of the original report (or copy) is referenced in, and directly to that submission, report or presentation. Unless stated otherwise: Information contained in this report covers only the tree/s that were examined and reflects the condition of the trees at the time of inspection: and the inspection was limited to visual examination of the subject tree without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject tree/s may not arise in the future. Arborist cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specific period of time. Trees are a living entity and change continuously, they can be managed but not controlled and to be associated near one involves some degree of risk.

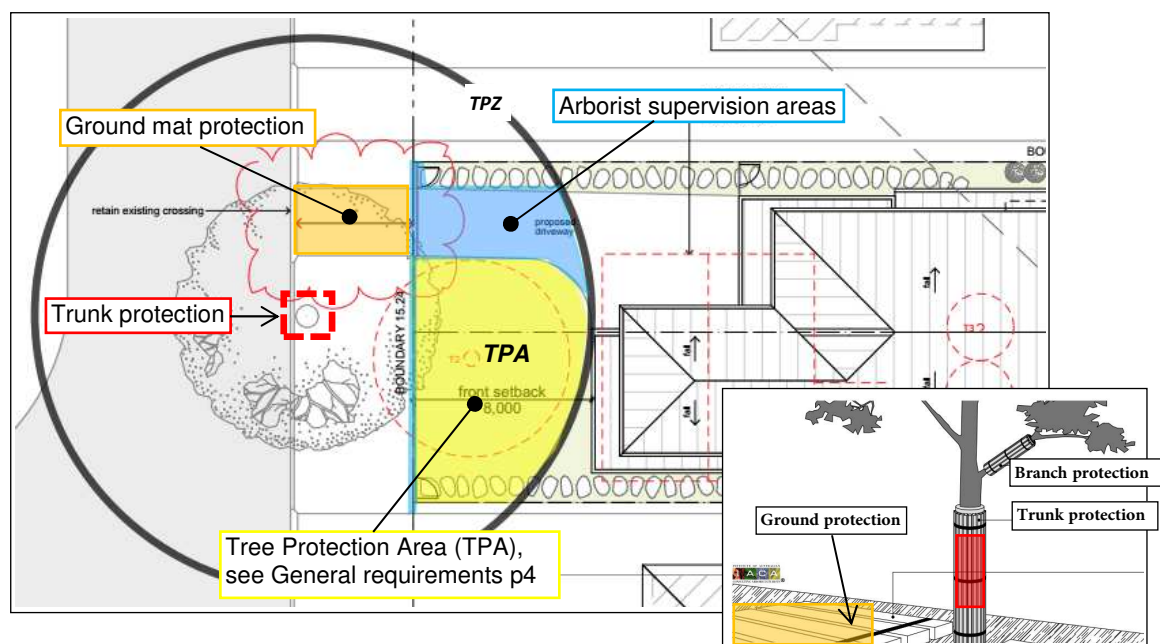
CONTENT	page
SUMMARY OF ASSESSMENT	<i>this page</i>
Figure 1: showing protection area adjacent T1	2
Figure 2: showing protection area adjacent T10	3
Appendix- A: Visual Tree Inspection Checklist	5
Appendix- B: T1 & 10 Tree Assessment Schedule	6
Appendix- C: Tree Location Plan	7

SUMMARY OF ASSESSMENT

Tree 1 – Norfolk Island Pine

1. Retaining the existing driveway crossover without change in condition, the new part suspended driveway within the site is considered a tree sensitive design that proposes a *Minor* (<10%) TPZ encroachment, without SRZ occupancy. Given the *low-level* (Minor) encroachment impact without change to the existing driveway crossover the following recommendations are provided to mitigate impacts and manage the tree during works:
 - a) Prior to demolition activities & works the trunk of the tree is recommended to be protected with 2m high timber beam trunk protection, being wrapped with high visibility material.
 - b) The driveway crossover being within the SRZ is recommended to be protected with ground or root mat protection for vehicle tracking during construction activities.
 - c) Within the site any excavation within the radial 12.6m Tree Protection Zone (TPZ) is to be supervised & certified by an appointed site arborist. Excavation is to be conducted manually (by hand) or non-destructive (soil vacuum) for the first 0.6m (600mm) in depth, specific to:
 - Excavation for pothole front fence footings where the fence is to be of tree sensitive suspended design, and
 - Excavation for suspended driveway footings.

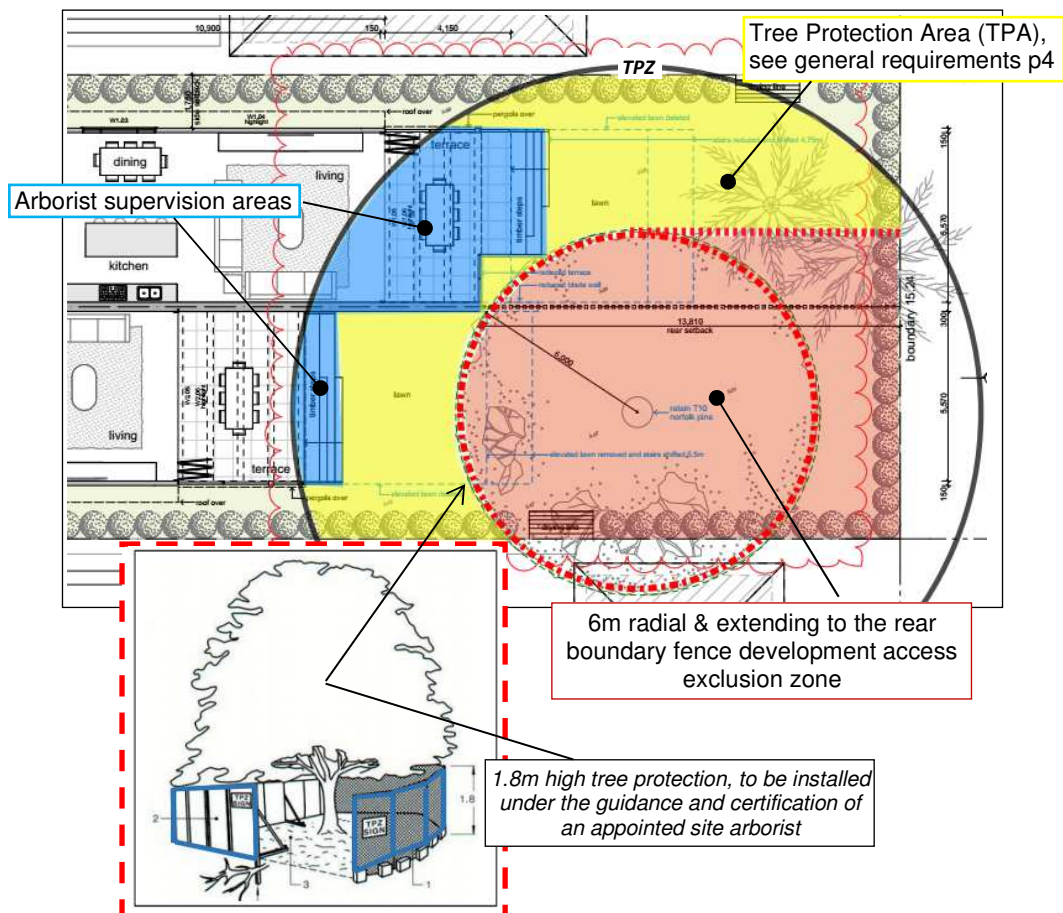
Figure 1: showing protection area adjacent T1



Tree 2 – Norfolk Island Pine

2. The modification of design with reduced building footprint setbacks proposes a manageable *Moderate to Low* TPZ occupancy, at or near 11.7% without encroachment within the SRZ. Given the significance of the tree and exposed surface roots a 6m radial development activity exclusion zone is recommended with the following guidelines provided to manage the tree during works:
- Prior to demolition activities & works the 6m radial exclusion zone is recommended to be fenced off with 1.8m high tree protection fencing, with fencing extending to rear boundary forming a designated tree protection exclusion zone. The fencing is recommended to be certified prior to works, is to remain in place and not be removed or altered without prior project arborist advice & certification. Appropriate tree protection zone signs are recommended to be placed at 4m intervals.
 - Any additional excavation that may be required within the fenced exclusion zone or TPA requires prior arborist approval, supervision and certification.
 - To accommodate the building footprint, excavation within the 11.4m radial Tree Protection Zone (TPZ) is to be supervised & certified by an appointed site arborist. Excavation is to be conducted manually (by hand) or non-destructive (soil vacuum) for the first 0.6m (600mm) in depth.
 - Encountered tree roots at or >40mm(Ø) are to be protected or managed in accordance with AS4970 – 2009 Section 4.5.4 *Root protection during works within the TPZ*, such that tree roots are not damaged or ripped beyond the point of excavation by site machinery.
 - Where significant roots are located bridging over to suspend structures and retain large and critical roots is recommended.

Figure 2: showing protection area adjacent T2



General requirements

3. Unless specified, approved & certified otherwise by an appointed project arborist the following specific guidelines are provided to mitigate impacts by the proposal.
 - a) Activities to be excluded within TPZ radius or specified Tree Protection Areas (TPAs) include:
 - Soil level change, disturbance or alteration including physical damage to trees.
 - Storage & work preparation including wash down areas.
 - Minor works including landscape trenching, additional landscape inground services and installation of utility services.
 - b) No work access or excavation is permitted within Structural Root Zone (SRZ) radius being *the area required for tree stability* unless approved and certified by an appointed arborist. Exceptions to the SRZ exclusion zone include:
 - Tree T1, the installation of vehicle travel mats over the existing driveway crossover to mitigate ground and root disturbance during works.
 - c) All excavations within tree protection zones require arborist compliance certifications, providing any additional tree management recommendations to ensure the trees remain viable.
 - d) Given the significance of the tree's, routine (6 weekly) tree and protection zone inspections are recommended.
 - e) To ensure the tree(s) are appropriately protected the development site superintendent is recommended to be familiar with all tree protection and ongoing certification requirements. The superintendent is responsible for informing all subcontractors of the responsibilities and requirements of tree protection prior to their engagement.
 - f) Should there be any uncertainty with tree protection requirements the site superintendent is recommended to contact the appointed site or project arborist for advice prior to works occurring within tree protection zones (TPZ) or specified tree protection areas (TPAs).
-

Should you require further liaisons in this matter please contact me direct on
0419 250 248

Yours sincerely



Mark A Kokot

AQF Level 5 consulting arborist

Diploma of Hort/Arboriculture (AQF5), Associate Diploma Parks Management (AQF4)
Certified Arborist / Tree Surgeon (AQF3), ISA Tree Risk Assessment Qualified 2029
Member: ISA, Arboriculture Australia & IACA, Working With Children No: WWC0144637E



APPENDIX- A: Tree Retention Value Checklist @rainTree consulting

VTA i) Landscape Significance (LS): The significance of a tree in the landscape is a combination of its amenity, environmental and heritage values. Values may be subjective however, are based after IACA Sustainable Retention Index Value (SRVI) which offer a visual understanding of the relative importance of the tree within the environment. The Landscape Significance for this assessment is described in seven categories to assist in determining the retention value of trees.

1	Significant	2	Very High	3	High	4	Moderate	5	Low	6	Very Low	7	Insignificant
---	-------------	---	-----------	---	------	---	----------	---	-----	---	----------	---	---------------

ii) Visual Tree Assessment (VTA)

0	If appropriate to VTA - * <i>exempt</i> trees from Local Government Authority (LGA) Tree Management or Preservation Orders (TPO)	2E	Trees location likely to be affected by infrastructure restricting root growth potential, or tree has potential to cause infrastructure damage where risk mitigation or rectification works may compromise tree anchorage. Tree(s) may be contained by solid structures with restricted radial anchoring root development
0A	Noxious or invasive species located within heritage or biodiversity conservation areas		
1	Trees that are dead, significantly declining >75% volume or obviously hazardous	3	This rating incorporates trees that may require further investigation of faults & defects, pathogen ID, inspection of cavities or symptoms indicating internal decay that cannot be quantified under visual inspection. Works include Plant Disease Diagnostic Unit (PDDU) pathogen testing, arborist climbing inspection within the canopy, root crown investigation and/or drill penetrating or Picus Sonic Tomograph ultrasound testing procedures to determine percentage of internal decay.
2	Trees that are structurally damaged. Have poor structure or weak & detrimental large stem inclusions capable of failure opposed to 2B. Tree may also be affected by extensive borer damage, fungal pathogens (wood rot) or viruses. Some symptoms may be reversible, remediated or controlled give appropriate arborist management & diagnosis.		
2A	Tree issue specific to basal and/or root plate damage, or very shallow soils, or steep topography resulting in poor anchorage where condition or location may become problematic in near future / may include trees with included bark splits to ground level	4	Trees which appear specifically environmentally stressed by drought, poor soil or site conditions. Symptoms may be reversible given appropriate management
2B	Defect specific to stem inclusions development (weak branch attachments) where the condition may not be immediately detrimental however, require annual to biannual monitoring with control to prevent stem failure by installing slings, cable or bracing. Tree may also contain multi stems or codominant twin stems	5	Trees that have become exposed, are subject to wind loading pressure, or have tall forest form where exposure may result in windthrow or limb snap
		5A	Screen trees, trees or shrubs, that are routinely hedged, pruned or managed for height control
2C	Tree may contain minor wounds, pest or minor pathogen activity, altered from storm damaged to an extent that is not considered immediately detrimental, may also display average form. Likely to require close annual monitoring or minor corrective pruning	6	Trees may be typical for species type, of good form and visual condition for age class. May have suppressed one sided canopies or are visually low risk trees noted under limited visual inspection only
2D	Trees significantly altered by recent storm or over pruning events which may reduce retention values due to average form- or tree extensively pruned for power line clearance	7	VTA restricted by canopy or plant material, vine or ivy covering tree parts or site conditions which do not allow access i.e. fences to neighbouring sites

iii) Retention Value (RV): Determined by [1] tree free of visual defects and viable for retention, [2] viable for retention with minor faults which may reduce ULE, [3] trees containing faults that are likely to become problematic in the short term, [4] trees to be considered for removal due to average condition and low retention values.

1	High retention	2	Medium retention	3	Low retention	4	Consider removal
---	----------------	---	------------------	---	---------------	---	------------------

iv) U.L.E. categories Useful Life Expectancy (after Barrell 1996, modified by the author)

A trees U.L.E. category is the life expectancy of the tree modified first by its age, health, condition, safety and location. U.L.E. assessments are not static but may be modified as dictated by changes in trees health and environment. The five categories of U.L.E. are as follows:

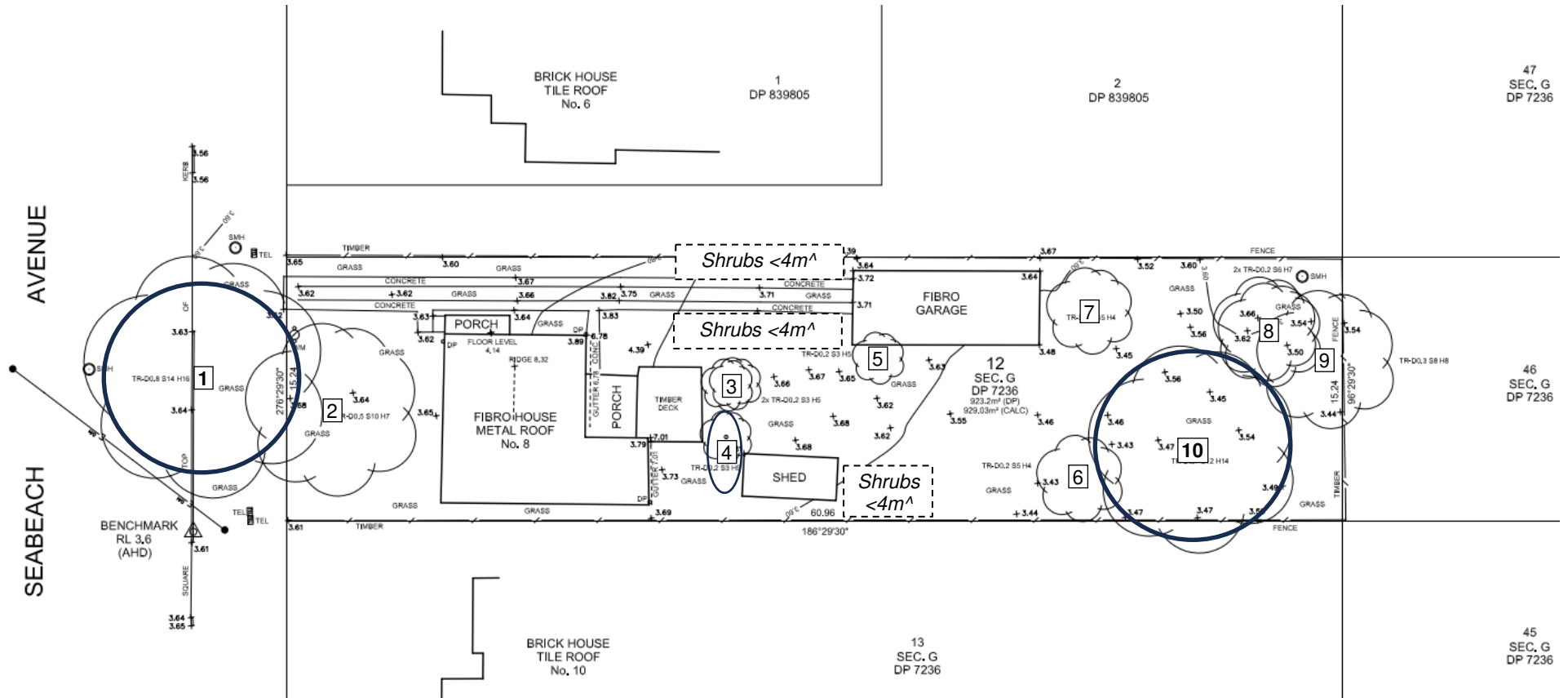
1. Long U.L.E. - Appear retainable at the time of assessment for over 40 years with an acceptable degree of risk assuming reasonable maintenance.
2. Medium U.L.E. - Appear to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk assuming reasonable maintenance.
3. Short U.L.E. - Trees appear to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk assuming reasonable maintenance.
4. Very short - Removal- Trees which should be scheduled for removal within the very short term or as specified within this report.
5. Small, young or regularly pruned – Trees under 5m in height that can be easily moved or replaced, includes screen plantings or hedge lines.

APPENDIX- B: Tree Assessment Schedule (Trees inspected 2/2024)

Refer Appendix- A Tree retention value Checklist

Consider tree removal due to dead or high-risk condition - subject to Local Government Authority notification							Trees with low retention values: senescence, are significantly environmentally stressed, have developing defects or being *exempt non-prescribed trees within the LGA					
Tree No	Botanical Name COMMON NAME	Height x spread (m)	DBH (mm)	SRZ TPZ (m)	Age	Vigour (health)	Condition (structure)	LS	VTA	RV	ULE	Comments
1 CV	<i>Araucaria heterophylla</i> Norfolk Island Pine	22 x 11	1050	3.5 12.6	M	Good	Good	2	6	1-2E	1	CV = Council verge tree, BT= Boundary tree, NT = Neighbouring tree Forms part of significant Avenue planting with no significant visual faults, minor surface root damage NNW with slight inner canopy decline.
<p><i>Design impact summary: Retain & protect. Within the site proposed new driveway footprint having Minor (<10%) TPZ occupancy of low-level impact without SRZ encroachment. Given existing driveway crossover is to remain unchanged tree protection & management should be specific to: no access or excavation within the SRZ, the driveway crossover requires ground & root protection mats during vehicle tracking (access) with the trunk of the tree protected with timber beam trunk protection prior to demolition works occurring. Front boundary fence to be of tree sensitive design being suspended above ground level with fence footings to ensure no tree root at or >40mm(Ø) is damaged by works.</i></p>												
10	<i>Araucaria heterophylla</i> Norfolk Island Pine	20 x 11	950	3.3 11.4	M	Good	Good	3	6	1	1	Tree with no significant visual faults, root plate raised at base under dripline
<p><i>Design impact summary: Proposed building footprints of manageable Moderate to Low (10-15%) TPZ incursion at or near 11.7% without SRZ occupancy. Given the significance of the tree a 6m radial work exclusion zone is recommended to protect & manage critical & exposed surface roots. Tree management should be specific to: no access or excavation within the 6m exclusion zone & SRZ, on site arborist supervision & root management during manual non tree root destructive footing excavations with stair & wall footings recommended to bridge over critical roots at or >40mm(Ø).</i></p>												

APPENDIX- C: Tree Location Plan



In accordance Raintree Consulting's Arboricultural Impact Assessment (AIA) dated 15.2.2024, Trees specified for removal are trees: 2, 3, 4, 5, 6 & 7 with likely retention of exempt palms T8 & 9.