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ARBORICULTURAL IMPACT ASSESSMENT

COMMISIONED BY: David Thoroughgood, RoadTek
SITE: 628 Tomewin Mountain Road, Currumbin Valley
DOCUMENT AUTHOR: P/I (AQF Level 5)
DATE OF INSPECTION: 1 July 2024
VERSION: 1
DOCUMENT NUMBER: 1

AUTHORS DISCLAIMER

No responsibility will be taken for any changes in tree health or future damage this tree or trees might cause to person/s or property between the time of site visit and assessment and the recommended actions listed prior. The contents of this report were accurate at the time of writing. No part of this report shall be reproduced without the written permission of the author. No responsibility will be accepted for any damage to any tree that is recommended to be retained, should the protocols listed in this report not be followed.

The author acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of the land on which the trees and potential works will be carried out. The author supports the continuation of cultural, spiritual & educational practices of Aboriginal and Torres Strait Islander peoples.

DOCUMENT CONTROL

DOCUMENT:

Report Name:	Arboricultural Impact Assessment
Report Scope:	Provide Arboricultural Impact Assessment for proposed removal of concrete slab.

CLIENT DETAIL:

Client:	RoadTek
Contact Name:	David Thoroughgood

TREE ASSESSOR & REPORT AUTHOR:

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DOCUMENT TRACKING:

Version:	Date:	Prepared by:	Detail:	Reviewed by:	Authorised by:
1	13/07/2024	P/I	AIA	P/I	P/I

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1 INTRODUCTION

1.1.1 This Arboricultural Impact Assessment has been prepared by P/I of Powerclear for RoadTek. The report shall assess the viability of existing site trees and consider the retention value and risk assessment as viewed on the day of the inspection. An assessment will be made in relation to the possibility of damage to existing adjacent tree roots upon removal of the concrete slab located on the low side of the road verge, outside the private residence of 628 Tomewin Mountain Road, Currumbin Valley. QLD.

1.1.2 The trees within the site have been assessed and given a Retention Value Rating (RVR) (See **Appendix B** for definition of RVR). Trees with low RVR should be removed. Tree with a medium RVR may be removed for the benefit of the outcome, and trees with high RVR should be retained where possible.

1.1.3 The site is a rural locality within the Gold Coast City Council local government area and is subject to the relevant Local, State and Federal Government legislative framework. The location and assessment area will be referred to as *the site* from here within.

1.2 Purpose of Report

1.2.1 Address RoadTek's request for assessment of the potential for damage to two (2) native trees (**IMAGE 1.1 and 1.2**) upon proposed removal of a concrete slab that is situated within the Structural Root Zone (SRZ) of the trees (see **Appendix D** for definition of SRZ), and advice on the possibility of removal of the slab in a safe manner.

1.2.2 Discuss ways to mitigate potential damage to the trees during works in general accordance with Australian Standard *AS4970:2009 Protection of Trees on Development Sites*.

1.2.3 Clearly identify the trees to be retained and discuss their health and condition at the time of assessment.

1.2.4 Include a table of trees to be retained including tree particulars (i.e. species, Diameter at Breast Height (DBH), height, canopy spread, tree protection zone (TPZ), structural root zone (SRZ), health, structure, significance) and attach to report (See **Appendix A** Tree Assessment Data Table)

1.2.5 Provide recommendations for management and protection of identified trees during the operational phase of the proposed development.

1.3 Scope of Works

1.3.1 Travel to site to conduct a tree inspection in relation to the supplied site plans and provide specific tree data for the relevant trees.

1.3.2 Advise on tree protection measures in general accordance with Australian Standard *AS4970:2009 Protection of Trees on Development Sites*.

1.3.3 Recommend actions for trees that will be directly impacted by the proposed works.

2 METHODOLOGY

2.1 Tree Inspection and Assessment

2.1.1 Non-invasive ground-based visual tree assessment (VTA) methodology (Mattheck, Breloer 1994) was utilised to record relevant information relating to the trees within the site. Professional tree measurement equipment was used to gather necessary data.

2.1.2 Photographs were taken of the trees and site, using a high resolution camera and have not been altered in any way.

2.1.3 Specific tree details are found in **Table 1 (Appendix A)**. This table contains tree species identification, measurements, health and vigour assessments and specific notes and suggested works. Points of interest are addressed further in the body of this report.

2.2 Documents utilised

2.2.1 Information received via email: From: David Thoroughgood, David.Z.Thoroughgood@tmr.qld.gov.au, Sent: Monday, June 17, 2024 9:25 AM To: P/I @powerclear.com.au. (This email contained 2 x images that can be found in **Appendix C** of this report)

2.2.2 Australian Standard *AS4970:2009 Protection of Trees on Development Sites*.

2.2.3 (VTA) methodology - Mattheck and Breloer 1994 - The Body Language of Trees – A handbook for failure analysis by Clous Mattheck and Helge Breloer - Research for Amenity trees No 4 HMSO Books – ISBN 0117530670

2.2.4 IACA, 2010 IACA significance of a tree assessment rating system, Institute of Australian Consulting Arborists, Australia www.iaca.org.au

3 SITE OBSERVATIONS

3.1 Site Inspection

3.1.1 The site and the subject trees were inspected and assessed by P/I on Monday 1st July 2024.

3.2 Location of Site

3.2.1 The site is located along the western side of Tomewin Mountain Road adjacent to the eastern boundary 628 Tomewin Mountain Road. The concrete slab proposed for removal is located just outside the private residence boundary. (see **FIGURE 1).**

3.2.2 This report will address 2 x native trees of relevance on the site, and determine their status in relation to the proposed works. See **FIGURE 1** below.

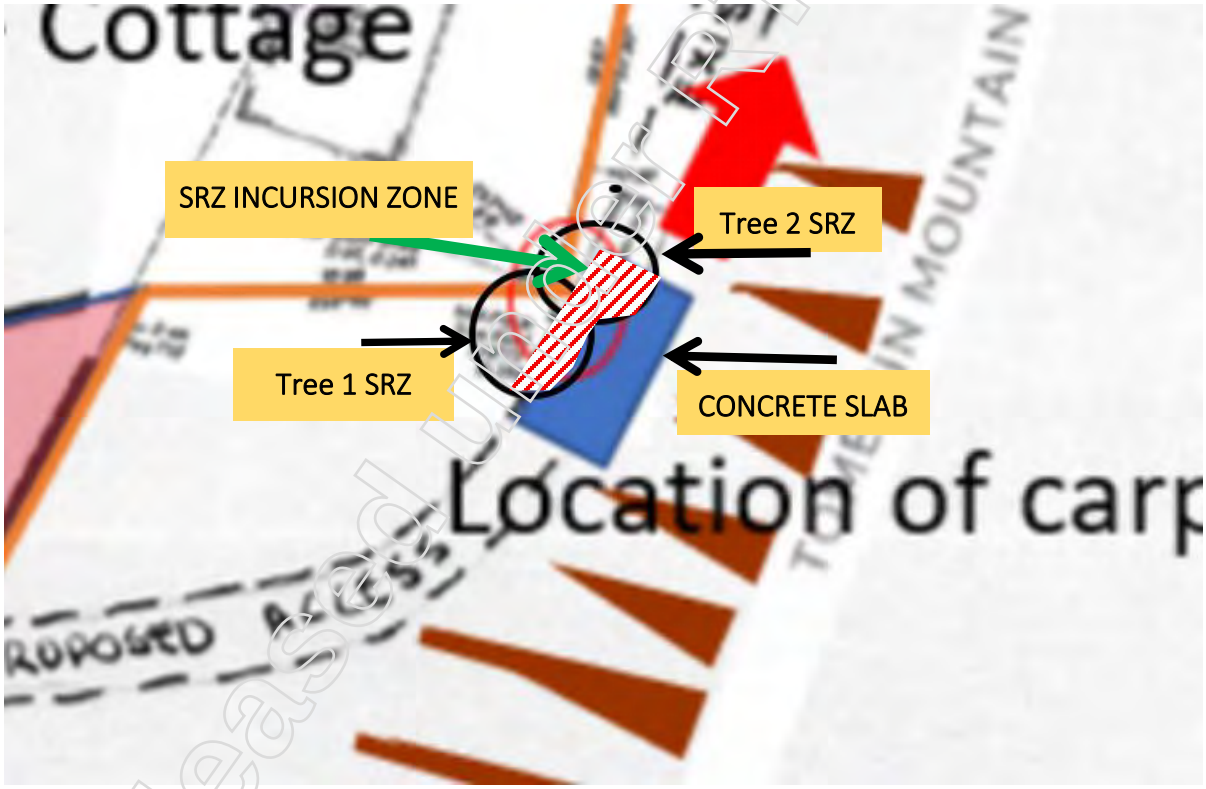

Figure 1: Site plan with tree locations showing incursion of concrete slab into SRZ of both trees

Figure 2: Site image supplied by client: note the shed was not present at at time of inspection.

4 TREE OBSERVATIONS

4.1 Habitat Presence

4.1.1 There was no observed presence of arboreal fauna habitation in any of the trees at the time of assessment.

4.2 Tree 1 - *Macadamia integrifolia* (Macadamia Tree)

4.2.1 This mature native tree is growing on the low side of the roadside verge (**FIGURE 1**). It is located on the western side of the concrete slab and adjoins the fenceline of the private residence at 628 Tomewin Road, Currumbin Valley QLD.

4.2.2 The tree is in good condition. It exhibits healthy canopy density (IMAGE 1.5). There was no evidence that any pruning work had been carried out recently on this tree. This tree grows slightly to the west due to canopy suppression from the large Fig tree to the east (IMAGE 1.8). (The Fig tree is not discussed in detail for the purpose of this report)

4.2.3 The potential for the tension side of the root system to be currently growing underneath the slab is highly likely. (see 4.2.4)

4.2.4 Tension - A trees' root zone grows to best anchor the tree in its environment. The roots most needed to support the tree in-situ are known as the 'tension side' and this is an essential structural requirement for the trees' stability. In the case of each of these trees, the tension side has developed to the east and will hold the tree stable as it reaches towards light in the west.

4.3 Tree 2 - *Mallotus philippensis* (Red Kamala)

4.3.1 This mature native tree is growing on the low side of the roadside verge (FIGURE 1). It is located on the western side of the concrete slab and adjoins the fenceline of the private residence at 628 Tomewin Road, Currumbin Valley QLD.

4.3.2 The tree is in good condition. It exhibits healthy canopy density (IMAGE 1.7). There was no evidence that any pruning work had been carried out recently on this tree. This tree grows dominantly to the west due to canopy suppression from the large Fig tree to the east (IMAGE 1.7). (The Fig tree is not discussed in detail for this report)

4.3.3 The potential for the tension side of the root system to be currently growing underneath the slab is highly likely (see 4.2.4 for explanation of possible impact due to this potential).

Photo Plate 1 - site and tree observations

IMAGE 1.1 –Tree 1 and 2 - note the concrete slab proposed for removal at the base of the trees

IMAGE 1.2 – Tree 2 - Red Kamala with the concrete slab hard against the trunk

IMAGE 1.3 – Base of tree one

IMAGE 1.4 – Tree 2 - Red Kamala, looking at the private residence (W) standing on the slab.

IMAGE 1.5 – healthy branch growth and canopy of tree one - Macadamia Tree

IMAGE 1.6 – tree 1 (LHS) and tree 2. Both exhibit healthy branch growth and leaf size

IMAGE 1.7 – tree two in the foreground - note the excessive lean to the west, due to canopy suppression

IMAGE 1.8 – Looking up into the Fig tree growing to the east of the trees discussed in this report. The Fig has caused both trees 1 and 2 to grow west in search of light.

5 DISCUSSION

5.1 Environmental Significance and Legislation

5.1.1 Both the trees discussed in this report are native trees to Australia.

5.1.2 Both trees are Gold Coast City Council assets and the author defines them as each having a 'medium' RVR (See **Appendix B** for definition of RVR)

5.1.3 Removal of the existing concrete slab will be undertaken by RoadTek.

5.2 Potential Impacts of Proposed Works

5.2.1 The SRZ's of both the trees are within the proposed works area. (**FIGURE 1**)

5.2.2 **Tree 1** - The proposed works will encroach upon the TPZ and SRZ of this tree.

5.2.3 **Tree 2** - The proposed works will encroach upon the TPZ and SRZ of this tree.

5.2.4 Due to the high probability of tension roots growing on the east side of each tree (**4.2.3**, and **4.3.3**) It would be expected that the roots of both these trees lie underneath the concrete slab that is proposed to be removed.

5.2.5 Machinery incorrectly utilised for the works could hit and damage the trunk of the trees as the slab is lifted and removed.

5.2.6 Should the roots be damaged or severed, the balance and health of the trees will be severely impacted, leading to possible destabilisation and nutrient suppression of each tree.

6 RECOMMENDATIONS

6.1.1 The author recommends the following actions for this site: That the concrete slab be removed without disturbing the root zones of either of the two trees discussed in this report.

6.1.2 Wrap high visibility bunting around the trunk of both trees as a visual aid to the machinery operator and staff onsite. (As per **Appendix D** - tree protection measures)

6.1.3 That the slab be lifted gently with a suitable machine (ie: bobcat), in order that the expected roots underneath the slab are not damaged in any way.

6.1.4 Jackhammers and other sharp tools are not recommended for use due to the high probability of damage occurring to the expected structural roots underlying the slab.

6.1.5 No other material should be laid and/or compacted in the place of the concrete slab without consulting project arborist in the first instance.

6.1.6 It is recommended the project arborist be onsite during removal works.

END OF REPORT

N/R
P/I Consulting Arborist
AQF Level 5 Consulting Arborist
Diploma of Arboriculture
VALID Tree RISK Inspector
Member Arboriculture Australia

N/R
P/I – Managing Director
AQF Level 5 Consulting Arborist
Diploma of Arboriculture
Member - Arboriculture Australia
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APPENDICES

APPENDIX A: Tree Assessment Data Table

Tree No.	Tree Species	Age class	Height (m)	Crown Spread (m)	DBH (cm)	DAB (cm)	TPZ (m)	SRZ (m)	Health	Condition	Notes - defects Habitat value and Recommended Works
1	*Macadamia integrifolia* (Macadamia Tree)	M	12	4	37	41.5	4.44	2.29	Good	Good	Recommend to retain
2	*Mallotus philippensis* (Red Kamala)	M	12	9	60	66	7.2	2.78	Good	Good	Recommend to retain

Tree Table Key

Age Class	Descriptor
Young (**Y**)	A sapling or recently planted tree in the early stages of its life cycle and reproductive ability. Located in its position for approximately 10 years or less.
Semi-mature (**SM**)	Tree is actively growing, increasing in height and width and in its primary stages of growth and development. Displaying early stages of its physical attributes without having reached its maximum size in its location and position.
Mature (**M**)	Tree has reached its expected height and spread in its location and growing environment, with reduced growth indicators including, primary and secondary (incremental) growth characteristics.
Senescent (**Se**)	Tree exhibits a decline in health and vigour and/or senescent reduced growth and development of physical attributes (condition and structure) with deteriorating systems and cycles of its organs, with significant levels of decay present.
Health	**Descriptor**
Excellent (**Exc**)	Complete crown with dense foliage throughout crown. Excellent foliage size and colour that is true to type with no visible pest and disease or fungal pathogens. No presence of deadwood.
Good (**Good**)	Full crown with variations of foliage density throughout the crown. Leaves are of good size and colour for this species with no signs of pest and disease or fungal pathogens present. Minor levels of deadwood present.
Average (**Av**)	A declining crown with reduced foliage size and atypical in colour and presence of pest and disease and fungal pathogens. Presence of epicormic growth minimal dieback and visible deadwood.
Poor (**Poor**)	Significantly reduced crown with sparse foliage and reduced foliage size that is atypical in colour. Noticeable dieback and visible deadwood with significant pathogen damage and degradation.
Dead (**D**)	No live foliage, visibly delaminating bark on the trunk and throughout upper stems and branches.
Condition	**Descriptor**
Good (**Good**)	Strong branch attachments, no visible structural defects and no wounds to trunk or evidence of fungal pathogens.
Average (**Av**)	Evidence of structural defects and wounding at minor levels with no fungal pathogens present.
Poor (**Poor**)	Obvious structural defects with evidence of wounding, cavities and decay present. Evidence of damage to exposed structural roots.
Hazardous (**Haz**)	Significant structural defects and presence of target. Tree requires immediate works to eliminate associated risk.

APPENDIX B: STARS Retention Value Definition

Significance of a Tree Assessment Rating System (STARS) provides the Retention Value Rating (RVR) of a tree and/or group of trees by balancing a combination of environmental, cultural, physical, amenity and social values. The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site.

The system uses a scale of High, Medium, and Low significance in the landscape. Once the landscape significance of a tree has been defined, the Retention Value can be determined.

- LOW Retention Value: These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.
- MEDIUM Retention Value: These trees are moderately important for retention. Their removal should only be considered if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted
- HIGH Retention Value: These trees are considered important for retention and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed per Standards Australia AS 4970 Protection of trees on development sites.

Criteria for decision of RVR:

1. High Significance in landscape
   - The tree is in good condition and good vigor,
   - The tree has a form typical for the species,
   - The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age,
   - The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils Significant Tree Register,
   - The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity,
   - The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group, or has commemorative values,The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa *in situ* - tree is appropriate to the site conditions.

2. Medium Significance in landscape

- The tree is in fair-good condition and good or low vigour,
- The tree has form typical or atypical of the species,
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area,
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street,
- The tree provides a fair contribution to the visual character and amenity of the local area,
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

3. Low Significance in landscape

- The tree is in fair-poor condition and good or low vigor,
- The tree has form atypical of the species,
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings,
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area,
- The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen,
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxonomy *in situ* - tree is inappropriate to the site conditions,
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- The tree has a wound or defect that has potential to become structurally unsound.

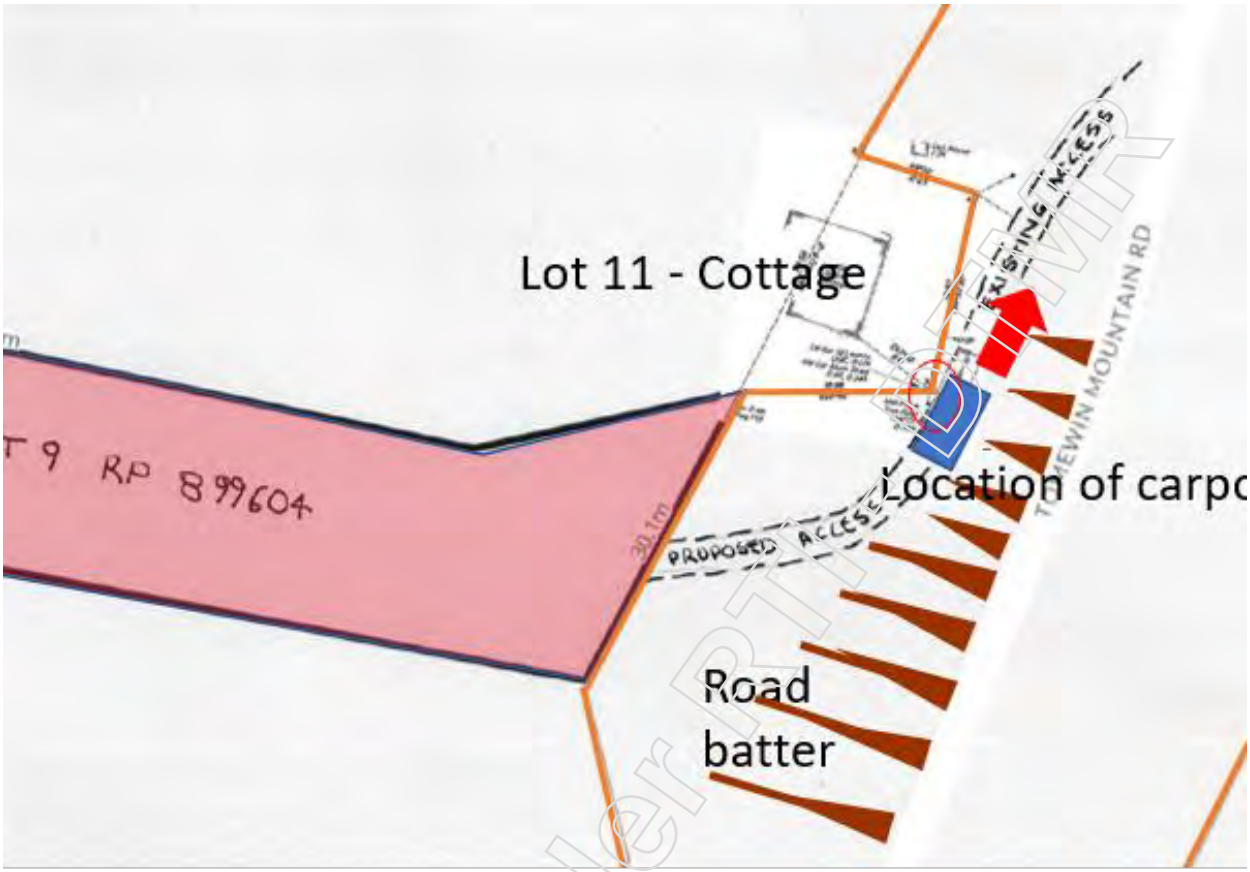
Environmental Pest / Noxious Weed Species

- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
- The tree is a declared noxious weed by legislation.

Hazardous/Irreversible Decline

- The tree is structurally unsound and/or unstable and is considered potentially dangerous,
- The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

APPENDIX C: Original Images Provided By Stakeholders



APPENDIX D: SRZ, TPZ Definition and Recommended Tree Protection Measures.

Tree Protection Zone (TPZ) – The TPZ 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 TPZ is calculated using the Australian standard AS4970 - "Protection of Trees on Development Sites" formula.

Structural Root Zone (SRZ) – The SRZ only needs to be calculated when major encroachment into a TPZ is proposed. The SRZ is the area required for tree stability. A larger area is required to maintain a viable tree. The SRZ is calculated using the Australian standard AS4970 - "Protection of Trees on Development Sites" formula.

TREE PROTECTION MEASURES

Tree Protection Measures and Recommendations within this report are in accordance with Australian Standard AS4970-2009 "Protection of Trees on Development Sites".

Tree protection measures are to be implemented prior to commencement of demolition, during construction and post construction phases to ensure adequate protection for the retained trees on site.

To achieve the best possible outcome in protecting the relevant trees during the development, compliance with the tree protection measures is crucial in ensuring the long-term success of the site trees.

- The fundamental element for tree protection for this site is tree protection fencing to protect and delineate an area where no development activities occur.
- The trees requiring protection will be indicated within the final report and Tree Protection Plan.
- The Tree protection measures are to be implemented prior to commencement of construction and remain until post construction phases to ensure adequate protection for the retained trees on site.
- The tree protection must be checked and certified by the Project Arborist during and after construction.
- The effectiveness of the tree protection measures recommended depends on the degree of cooperation between the developer, construction contractor, and the Project Arborist.

TREE PROTECTION SPECIFICATIONS

Tree Protection Zones (TPZ)

TPZ are to be erected prior to any work or machinery entering the site. The TPZ will remain in place until all site works are complete (refer to Appendix A).

Tree Protection Fencing

Shall protect the tree from mechanical damage. Ensure no materials are stored at the base of the trees. It is the site foreman's and owner's responsibility to ensure this area is maintained throughout the development. The Tree Protection Fencing must be checked and Certified by the Project Arborist.

Tree Protection - Boarding

Trees, on a development site can be damaged by vehicles, heavy loaders and bobcats during the demolition and construction phase. Trees are easily protected by installing tree protection which usually consists of cordoning off the trees with temporary fencing panels. Where fencing. Is not possible due to site conditions tree protection boarding will prevent mechanical damage.

Tree Protection - Rumble Boards or Trac Mats

Soil compaction can be caused by vehicles, heavy loaders and bobcats during the demolition and construction phase. Trees are easily protected by installing tree protection rumble Boards or trac mats which cover the ground frequently used by machinery. This will prevent soil compaction and prevent the tree from declining in health.

Activities

No other activity is to take place within the TPZ. This includes and is not restricted to the following: silt fence excavation, soil level changes, storage of material or waste, run off from wash down, slurry etc., refuelling, parking, and various other activities (refer to AS4970-2009 4.2 pg 15)

Maintenance of the Tree Protection Zones

During construction shall be completed by the Project Arborist. The Project Arborist shall make regular checks and maintain the tree protection structures during construction.

Adequate signs

Regarding the delegated areas of "TPZ" shall be clearly visible from within the development site. The area indicates the zone required for protecting trees and all their parts. The sign shall be made from durable all-weather material and be securely fixed to the outer visible side of the tree protection fencing. The signage shall be visible from all areas of the work site and may include multiple signs.

Alterations

Alteration to the TPZs requires the Project Arborist approval.

Root Pruning

Trees requiring root pruning prior to excavation shall be done under the supervision of the Project Arborist. Roots equal to 50mm or greater shall require pruning by the Project Arborist. The root pruning cuts made shall be made at a 90 degree angel and use a clean sharp pruning implement.

Trenching and boring underground services

Trenching and boring within the TPZ shall be done under the supervision of the Project Arborist. Where possible all services should be routed outside the minimum set back distance. Where this is not possible the underground service should be installed by directional drilling at a depth of no less than 600mm or use manual excavation techniques. When the Structural Root Zone is affected the Project Arborist must demonstrate that the tree(s) would remain viable.

Tree Pruning

Tree pruning, crown lifting, crown reduction, branch removal shall be carried out by an arborist with minimal qualification of certificate 3 (Australian Qualification Framework AQF Level 3) in Arboriculture.

Hold Points

Requiring certification by the Project Arborist include:

- Installation of tree protection and signage.
- Excavation within TPZ/SRZ.
- Various unforeseen changes in the field.
- Mid construction
- Completion of construction works.

8 REFERENCES

The Body Language of Trees – A handbook for failure analysis by Clous Mattheck and Helge Breloer - Research for Amenity trees No 4 HMSO Books – ISBN 0117530670

Mangroves to Mountains Second edition *Leiper, Glazebrook, Cox and Rathie*

Australian Standard *AS4970:2009 Protection of Trees on Development Sites*.

IACA, 2010 IACA significance of a tree assessment rating systems, institute of Australian consulting arborists, Australia www.iaca.org.au

Jabree Ltd
Working for the Gold Coast Traditional Owner community

Tomewin Mountain Road
Concrete Slab Removal
Assessment Report

Prepared for

The Department of Transport and Main Roads

by

Jabree Limited

November 2024

PO Box 1103
Southport BC, Qld, 4215
Phone 1300 558 923
ABN 61 147 546 405

Abbreviation	Description
ACHA	*Aboriginal Cultural Heritage Act 2003* (Qld)
ATSIHP	*Aboriginal and Torres Strait Islander Heritage Protection Act* (Cth)
CHMA	Cultural Heritage Management Agreement
DSDSATSIP	Department of Treaty Aboriginal and Torres Strait Islander Partnerships, Community and the Arts (Qld)
EPBC	*Environmental Protection and Biodiversity Conservation Act 1999* (Cth)
GCNTG	Gold Coast Native Title Group
GSV	Ground Surface Visibility
TMR	Department of Transport and Main Roads

Authorship

This cultural heritage assessment report was authored by Jabree Limited.

Cover plate: Facing south, view onto the project area with concrete slab

1 Project Background

The Department of Transport and Main Roads (TMR) proposes removing a concrete slab from a road corridor adjacent to Lot 11 SP254156, in the Gold Coast suburb of Currumbin Valley. The work involves several activities that will lead to the exposure of underlying ground. Construction activities will include the removal of a concrete slab. Associated use of heavy machinery is expected not to disturb the subsurface integrity of the ground as it will be operated from an existing driveway. However, a mature macadamia tree, whose roots grow underneath the slab is unlikely to survive the slab removal.

TMR contacted Jabree Ltd via email on 11 June 2024 to assess the presence of potential cultural heritage in the project area. The work request included a one-day cultural heritage survey of an area where a concrete slab was to be removed. TMR engaged Jabree in September 2024 to undertake a one-day cultural heritage assessment.

Under the *Aboriginal Cultural Heritage Act 2003* (the Act), Jabree Ltd (Jabree) is the registered Aboriginal Cultural Heritage Body for the project area.

This report is for a basic cultural heritage assessment of the project area of sufficient scope to provide the Department of Transport and Main Roads with an understanding of Aboriginal cultural heritage values that may exist within the development area; and compliance requirements under the *Aboriginal Cultural Heritage Act 2003*.

2 Aboriginal and European Historical Background

The European history of the Tomewin region dates back to the mid-19th century, when early settlers engaged in timber extraction, primarily targeting cedar and rosewood, alongside cattle grazing and banana cultivation (Tweed Shire Council, 2017). Tomewin also became an important waypoint for the Cobb and Co. coach service that operated between Murwillumbah and Nerang. This coach route, which served as the inland connection between the towns of the colonies, bypassed the Tweed River, which presented a natural barrier to travel along the flatter coastal route (Graham, 2015).

The Tomewin Road, which connected the Currumbin and Tweed valleys, traversed steep and rugged terrain, posing significant challenges to transportation. Mount Tomewin itself reaches an elevation of 457 metres (1,500 feet), with the surrounding ridge averaging around 335 metres (1,100 feet) (Tweed Shire Council, 2017). Given these topographical constraints, logs and other heavy freight had to be securely tied down during transport by horse and wagon to prevent damage (McKellar, 2003).

In contemporary times, the region has seen a decline in traditional farming activities, with banana cultivation largely reduced to a few remaining holdings. The area has shifted toward smaller, subdivided lots, where hobby farming practices are more common (Tweed Shire Council, 2017).[1]

P/I

[1] Tweed Shire Council. (2017). *Tweed Shire History: The European Settlement of the Region*. Tweed Shire Council. Graham, M. (2015). *Cobb and Co. in the Tweed Valley: The Historical Significance of the Coach Service between Murwillumbah and Nerang*. Tweed Historical Society. McKellar, A. (2003). *The Development of Transport Routes in the Tweed Region: Challenges and Solutions in the 19th Century*. Journal of Australian Regional History, 21(3), 45-58.

P/I

This connection has contributed to the view that the Tallebudgera area was not held in high regard by the Traditional Owners of the region. The existence of a former Aboriginal pathway along Tomewin Mountain Road is also documented in various other sources (e.g., Boileau, 2004; Horsman 1995)[2]. Steele (1984:53) reports about a pathway that crossed the Mac Pherson Range from the Tweed and was associated with the grave of Duranbah and a legend of two dingoes[3].

The reported Aboriginal pathway along Tomewin Mountain Road, which connects the border between New South Wales (NSW) and Queensland (QLD) and the Currumbin and Tweed valleys, is an important cultural and historical feature that reflects the traditional practices and connections of the Aboriginal communities in the area.

Key features include:

- **Traditional Land:** The pathway is situated on the ancestral lands of the Yugambeh people and parts of the Bundjalung Nation. These groups have a rich cultural heritage tied to the land, with a long history of connection that predates European colonization.
- **Pathway Purpose:** The pathways served various purposes, including trade routes, seasonal movement to hunting and gathering sites, and connections between different clans. They facilitated not only the movement of people but also the exchange of resources and cultural practices.
- **Cultural Practices:** The pathways are associated with various cultural practices, including ceremonies and storytelling. Many sites along these routes hold significant spiritual meaning.
- **Geography and Ecology:** The area around Tomewin Mountain Road is characterized by diverse ecosystems, including rainforests, eucalyptus forests, and rich wildlife habitats. This ecological variety provided Aboriginal people with abundant resources for food, medicine, and materials.
- **Contemporary Significance:** Today, these pathways are recognized not only for their historical importance but also for their role in education and cultural revitalization efforts. Aboriginal groups continue to engage with the land, preserving their cultural heritage and sharing it with broader audiences.

3 Site Location

The project area is located west of Tomewin Mountain Road, within the road corridor adjacent to Lot 11 SP254156. Currumbin Creek Road runs about 1km to the west and Bains Road is the closest road to the north. The Mac Pherson range ridgeline and Queensland border are 250m to the east. An unnamed tributary to Currumbin Creek runs approximately 50m west of the project area. The project area location is displayed in **Figure 1**.

[2] Boileau, J. (2004). Tweed Shire Council. Community based Heritage study. Thematic History. Report for Tweed Shire Council September 2004. Horsman, M.J. (1995). Patterns of settlement. Development and land use: Currumbin Valley 1852-1915. Thesis submitted to the Department of History, University of Queensland, for the degree of Master of Arts (Local History). July 1995.

[3] Steele, J.G., (1984). Aboriginal Pathways of Southeast Queensland and the Richmond River, University of Queensland Press, St Lucia

Tomewin Mountain Road connects the Currumbin Valley with the Tweed Valley and is a steep and windy road. In places, it offers spectacular views back to the Coast and the Valley below.

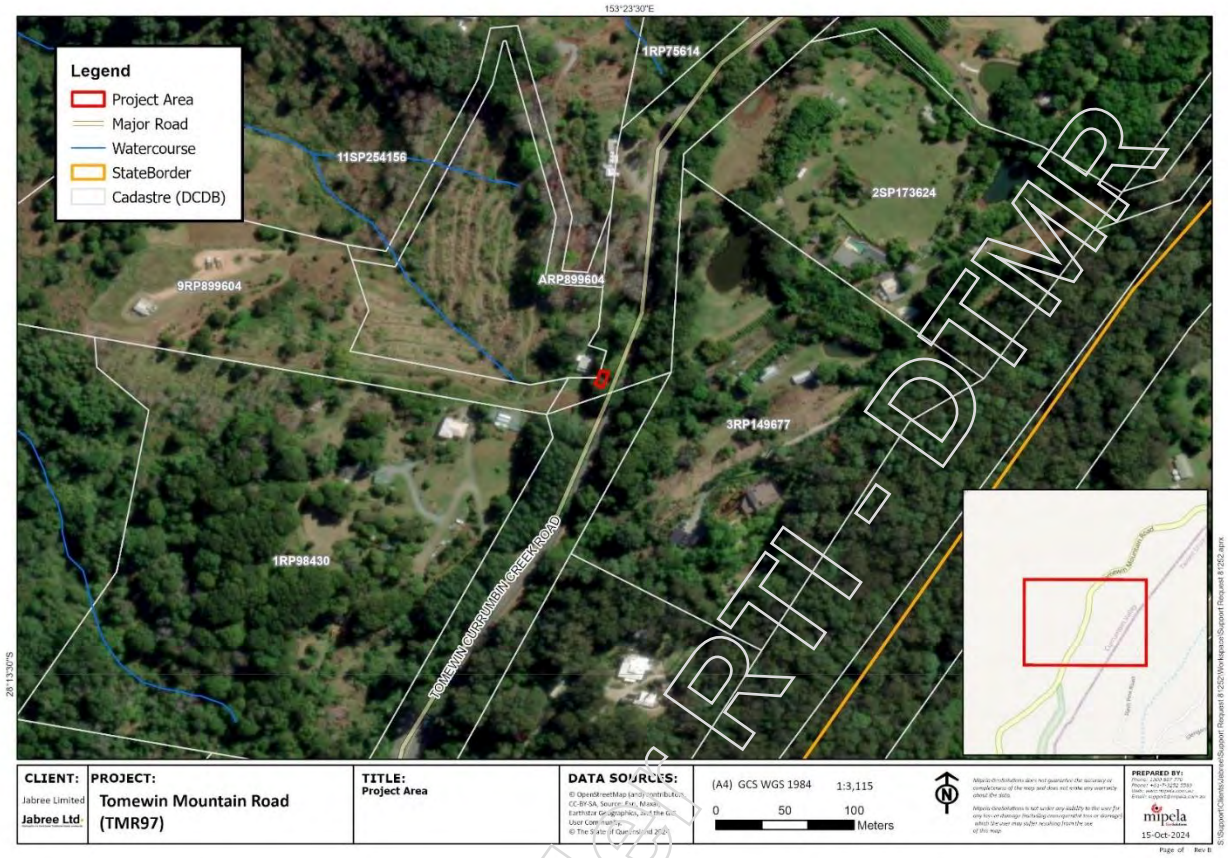


Figure 1 - Approximate location of project area outlined in red.

3.1 Historical Aerial Photography

Before the fieldwork, a review of historical aerial photography was undertaken. The earliest aerial photos was available from 1961 referenced from QImagery and further images from 1989 and 2007 provide insight into historical land use and disturbance levels for the project area. The 1961 aerial photo shows significant clearing around the project area, with only a few trees remaining after clearing. At this time, Tomewin Mountain Road and a few early surrounding residential areas are visible in proximity of the project area (**Figure 2**).

By 1989, some regrowth vegetation is observable in the project area. In addition, a few more buildings and access roads had been constructed. A few areas around the project show plantations and orchards (**Figure 3**). In 2007, vegetation regrowth was noticeable within the project area rendering Tomewin Mountain Road less visible and the construction of additional dwellings can be seen (**Figure 4**).

Figure 2 - Aerial taken over Tomewin Mountain Road, Queensland, 1961. Approximate project area is coloured red. (Source: Department of Resources QImagery (QAP1190137)).

Figure 3 - Aerial taken over Tomewin Mountain Road, Queensland, 1989 (Source: Department of Resources QImagery (QAP4812051))

Figure 4 - Aerial taken over Tomewin Mountain Road, Queensland, 2007 (Source: Department of Resources QImagery (QAP6264062))

3.2 DSDSATSIP Database

Confidential

Confidential

4 Assessment Objectives and scope

Confidential

4.1 Survey Aims and Methodology

Confidential

4.2 Field Program

The field survey was conducted on the 10th of October 2024. The field team included P/I as traditional owner representative for the area.

The field team also included P/I (Jabree Limited General Manager), P/I (Jabree Limited Archaeologist), TMR representatives including Jacinta Stevens and two police officers.

4.3 Description of Project Area and Field Survey Outcomes

4.3.1 Site Description

Confidential

4.3.2 Data Collection and Observations

Confidential

Confidential

4.3.3 Assessment Findings

Confidential

Figure 6 – Facing south looking at the northern end of the concrete slab of the project area

Figure 7 – northern end of the concrete slab showing the underlying soil profile and macadamia tree

5 Statement of Heritage Impact

5.1 Proposed Disturbance to the Project Area

Confidential

5.2 Statement of Impact to Aboriginal Cultural Heritage

Confidential

6 Conclusion

The project is located in an area of high Aboriginal cultural heritage sensitivity, primarily due to its proximity to an Aboriginal pathway, a mature macadamia tree, and associated cultural stories. While no tangible cultural material was identified during this preliminary survey, the intangible cultural value of the site is significant, with the pathway and the macadamia tree playing important roles in local Aboriginal cultural narratives. The proposed works, including the removal of the concrete slab, are expected to cause further disturbance to this cultural landscape.

In consideration of the ACHA and the assessment findings. Jabree does not agree with removal of the concrete slab or any associated works in the area of the slab.