

Arboricultural Impact Assessment



Prepared For

[REDACTED]
CPB Contractors, Dragados and Samsung C&T Joint Venture (CDS-JV)
30 Garema Ct
KINGSGROVE NSW 2208

Site Address

Westconnex New M5
Traffic Intersection
Gardeners Rd, MASCOT

[REDACTED] Consulting Arboriculturist & Horticulturist

Tree Surgery Certificate
Advanced Certificate Urban Horticulture
Diploma of Horticulture (Arboriculture)
Member of the International Society of Arboriculture (ISA)
ISA Tree Risk Assessment Qualification (TRAQ)

CDS reference: M5N-ES-RPT-LRW-0049-00-Gardeners Road CH100 Tree Report

Revision 2

February 2019

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1 Introduction

1.1 Brief

This Arboricultural Impact Assessment (AIA) was prepared by Treeism Arboricultural Services and was commissioned by [REDACTED] of CPB Contractors, Dragados and Samsung C&T Joint Venture (CDS-JV).

The proposed works are part of the larger WestConnex New M5 project. The scope of work specifically for removal of four trees approximately 80m East of the existing Bunnings entrance on Gardeners Road. The trees will be impacted due to the realignment of the roadway, removal and reinstatement of kerb and gutter, footpath on the northern side of Gardeners Road, 200m from the Bourke Road intersection.

To avoid queuing into Bunnings on Bourke Road (north), changes have been made to include a right-hand turning lane into Bunnings from Gardeners Road. This change requires the acquisition of an additional 190m² and pushes the existing east bound lanes into the existing kerb/gutter and footpath. There are no options to amend the design as the Project is constrained by the availability of land within the Project footprint.

Care has been taken to obtain all information from reliable sources. All data has been verified as far as possible; however, I can neither guarantee nor be responsible for the accuracy of information provided by others.

This report is not intended to be a comprehensive tree risk assessment; however, the report may make recommendations, where appropriate, for further assessment, treatment or testing of trees where potential structural problems have been identified, or where below ground investigation may be required.

This AIA is not intended as an assessment of any impacts on trees by any proposed future development of the site, other than the current discussed scope of work.

The purpose of this report is to assess the vigour and condition of the trees, and identify the potential impacts the proposed development may have on those trees to be retained in proximity to the works.

The author of this report holds an AQF Level 5 Diploma of Horticulture (Arboriculture) and has 26 years in the horticultural industry. 21 of these 26 years have been specifically within the field of arboriculture.

Previous roles varied from working actively as a tree climber in private contracting companies to Tree Management Officer at several local Councils and working with independent Consultants. The author is independent from the project.

This AIA has been commissioned to ensure compliance with the requirements set out by the Department of Planning and Environment (DPE) as per Condition B63 - Table 1 (below).

Table 1 –Condition of Approval B63 Compliance Table

Condition	Requirement	Addressed in:
B63	The Proponent must commission an independent experienced and suitably qualified arborist, to prepare a comprehensive Tree Report(s) prior to removing any trees on the periphery and/or outside the construction footprint as identified in the figures in Section 6 of the document referred to in condition A2(b), including any tree(s) removed along Euston Road. The Tree Report may be prepared for the entire SSI or separate reports may be prepared for individual areas where trees are required to be removed. The report(s) must identify the impacts of the SSI on trees and vegetation within and adjacent to the construction footprint. The report(s) must include:	This Report - Overview & individual area as per Appendix I.

Condition	Requirement	Addressed in:
B63 (a)	a visual tree assessment with inputs from the design, landscape architect, construction team;	VTA noted in Appendix I & staff inputs as per Appendix D and onsite discussions.
B63 (b)	consideration of all options to amend the SSI where a tree has been identified for removal, including realignment, relocation of services, redesign of or relocation of ancillary components (such as substations, fencing etc.) and reduction of standard offsets to underground services; and	Appendix D & E, onsite discussion.
B63 (c)	measures to avoid the removal of trees or minimise damage to existing trees and is to ensure the health and stability of those trees to be protected. This includes details of any proposed canopy or root pruning, excavation works, site controls on waste disposal, vehicular access, storage of materials and protection of public utilities.	N/A
B63	A copy of the report(s) must be submitted to the Secretary for approval prior to the removal, damage and/or pruning of any trees, including those affected by site establishment works. All recommendations of the report must be implemented by the Proponent, unless otherwise agreed by the Secretary.	No tree removal, damage and/or pruning will occur to the subject trees prior to the Secretary's approval of this report.

1.2 Methodology

In preparation for this report, ground-level, visual tree assessment (VTA) ¹, or limited VTA (e.g. where access was limited), were completed by the author of this report on 6th November 2018. Inspection details of these trees are provided in Appendix I —Schedule of Assessed Trees.

The tree heights were visually estimated, and unless otherwise noted in Appendix I, the trunk Diameter at Breast Height were measured at 1.4 metres above ground level (DBH) using a diameter tape. Tree canopy spreads were stepped out with field observations written down, and photographs of the site and trees were taken using an iPhone 6.

No aerial inspections, root mapping or woody tissue testing were undertaken as part of this tree assessment. Information contained in this report only reflects the condition of the trees at the time of inspection.

Trees are dynamic, living things which can be subject to change without notice in certain circumstances.

Plans and documents referenced for the preparation of this report include:

- AS4970-2009 Protection of trees on development sites, Standards Australia;
- Conditions B63 – (Table 1);
- Marked up survey detailing proposed works location. These marked up plans are attached as Appendix G - Tree Location Map;
- Extract of Minor Consistency Review New M5 (intersection Changes) – Appendix E;
- Cross Section Detail – Appendix F.

¹ Visual Tree Assessment (VTA) is a procedure of defect analysis developed by Mattheck and Breloer (1994) that uses the growth response and form of trees to detect defects.

1.3 Tree Preservation and Management Guidelines

The proposed works form part of the approved WestConnex New M5 State Significant Infrastructure project (SSI 6788), which overrides the State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 'Vegetation SEPP' (which refers to prescribed and non-prescribed trees pursuant to the City of Sydney Development Control Plan 2012 (CoSDCP) Section 3.5.3).

What constitutes a 'tree' as per planning approval is any tree that:

- is equal to or greater than three (3) metres in height; or
- for a single trunk species, a trunk circumference of 300 millimetres at a height of one metre above ground level; or
- for a multi-trunk species, a trunk circumference exceeding 100 millimetres at a height of one metre above ground level.

However, this excludes any species listed under the Biosecurity Act 2015 (this Act overrules Noxious Weed Act 1993).

2 Observations and Discussion

2.1 Summary of Assessed Trees

Four (4) trees were assessed and included in this report. Details of these are included in the Schedule of Assessed Trees – Appendix I. Of these trees:

- all four (4) are prescribed (i.e. 'considered a tree' under the DPE approval/conditions);
- all four (4) trees have medium RVs – T1 – T4.

2.2 Threatened Species

No species on the subject site are subject to threatened conservation status under Australian and/or State Government legislation (i.e. NSW Biodiversity Conservation Act 2016 and the Commonwealth Environment Protection and Biodiversity Conservation Act 1999).

2.3 Proposed Removal of Prescribed Trees

Four (4) trees determined to have a *medium* Retention Value (RV- see Appendix C) are proposed to be removed.

As stated in the Extract of Minor Consistency Review New M5 (intersection Changes), to avoid queuing into Bunnings on Bourke Road (north), changes have been made to include a right-hand turning lane into Bunnings from Gardeners Road. This change pushes the existing east bound lanes into the existing kerb/gutter and footpath where the subject trees are located.

Given all four (4) trees are within the footprint of the proposed works and will be subjected to significant ground level reductions within the Structural Root Zones (SRZ) (see Appendix F), they cannot be safely retained.

Soil level changes are unacceptable within the SRZ of trees, lowering ground levels will incur major root severance and render the trees unstable.

Replanting will be undertaken in accordance with the conditions B63A-B63C.

3 Recommendations

3.1 Tree Removal

Four (4) trees ascribed a *medium* RV require removal to accommodate the proposed works (T1-T4).

Replanting will be undertaken in accordance with the conditions B63A-B63C.

4 References

Mattheck, C. & Breloer, H. (1994) *The Body Language of Trees: A handbook for failure analysis. Research for Amenity Trees No. 4*, The Stationery Office, London.

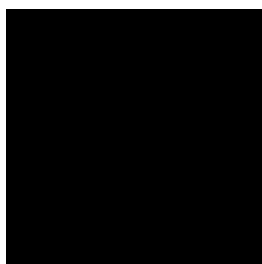
Standards Australia AS4373-2007: *Pruning of Amenity Trees*, Standards Australia, Sydney.

Hadlington, P. & Johnston, J. (1988) *Australian Trees: Their Care & Repair*. University of NSW Press, Kensington.

Standards Australia AS4970-2009 *Protection of trees on development sites*, Standards Australia, Sydney.

Barrell, J (1995) *Pre-development Tree Assessment from Trees and Building Sites*, Eds. Watson & Neely, International Society of Arboriculture, Illinois.

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5 Appendices

Appendix A - Terms and Definitions

Aerial inspection: where the subject tree is climbed by a professional tree worker/ arborist (typically AQF Level 3) specifically to inspect and assess the tree for signs of symptoms of defects, disease, etc.

Age classes

- Y** Young refers to an established but juvenile tree.
- SM** Semi-mature refers to a tree at growth stages between immaturity and full size.
- EM** Early-mature refers to a tree close to full sized still actively growing.
- M** Mature refers to a full sized tree with some capacity for further growth.
- LM** Late-Mature refers to a full sized tree with little capacity for growth that is not yet about to enter decline.
- OM** Over-Mature refers to a full sized tree with little capacity for growth that is entering or has entered decline.

Co-dominant: refers to stems or branches equal in size and relative importance.

Condition/Structure: refers to the tree's form and growth habit, as modified by its environment (aspect, suppression by other trees, soils) and the state of the scaffold (i.e. trunk and major branches), including structural defects such as cavities, crooked trunks or weak trunk/branch junctions. These are not directly connected with health and it is possible for a tree to be healthy but in poor condition/structure.

Deadwood: refers to any whole limb that no longer contains living tissues (e.g. live leaves and/or bark). Some dead wood is common in a number of tree species.

Diameter at Breast Height (DBH): Refers to the tree trunk diameter at breast height (1.4 metres above ground level).

Epicormic growth: adventitious branches that are considered to be a weak attachment in the short term due to minimal wood formation. There are generally formed following storm-related branch breakage or poor pruning practices. Should sufficient holding wood form in the long-term this growth is less of an issue.

Hazard: refers to anything with the potential to harm health, life or property.

Health: Refers to the tree's vigour as exhibited by the crown density, leaf colour, presence of epicormic shoots, ability to withstand disease invasion, and the degree of dieback.

Inclusion stem/bark: the pattern of development at branch or stem junctions where bark is turned inward rather than pushed out. This fault is located at the point where the stems/branches meet. This is normally a genetic fault and potentially a weak point of attachment as the bark obstructs healthy tissue from joining together to strengthen the joint.

Scaffold branch/root: a primary structural branch of the crown or primary structural root of the tree.

Secondary Stem: refers to stems or branches with one of unequal size and relative importance.

SRZ: refers to the Structural Root Zone of the tree, this is the area required for tree stability.

TPZ: refers to the Tree Protection Zone of the tree, this is the primary method of protecting trees, it is a combination of the root area and the canopy and the SRZ is located within it.

Visual Tree Assessment (VTA): a procedure of defect analysis developed by Mattheck and Breloer (1994) that uses the growth response and form of trees to detect defects.

Appendix B - ULE Guide

ULE categories (after Barrell 1996, Updated 01/04/01)

The five categories and their sub-groups are as follows:

1. Long ULE - tree appeared retainable at the time of assessment for over 40 years with an acceptable degree of risk, assuming reasonable maintenance:
 - a) Structurally sound trees located in positions that can accommodate future growth
 - b) Trees which could be made suitable for long term retention by remedial care
 - c) Trees of special significance which would warrant extraordinary efforts to secure their long-term retention
2. Medium ULE - tree appeared to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk, assuming reasonable maintenance:
 - a) Trees which may only live from 15 to 40 years
 - b) Trees which may live for more than 40 years but would be removed for safety or nuisance reasons
 - c) Trees which may live for more than 15 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
 - d) Trees which could be made suitable for retention in the medium term by remedial care
3. Short ULE - tree appeared to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk, assuming reasonable maintenance:
 - a) Trees which may only live from 5 to 15 years
 - b) Trees which may live for more than 15 years but would be removed for safety or nuisance reasons
 - c) Trees which may live for more than 15 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
 - d) Trees which require substantial remediation and are only suitable for retention in the short term.
4. Removal - trees which should be removed within the next 5 years:
 - a) Dead, dying, suppressed or declining trees because of disease or inhospitable conditions
 - b) dangerous trees through instability or recent loss of adjacent trees
 - c) Dangerous trees because of structural defects including cavities, decay, included bark, wounds or poor form
 - d) Damaged trees that are clearly not safe to retain
 - e) Trees which may live for more than 5 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
 - f) Trees which are damaging or may cause damage to existing structures within the next 5 years
 - g) Trees that will become dangerous after removal of other trees for the reasons given in (a) to (f)
 - h) Trees in categories (a) to (g) that have a high wildlife habitat value and, with appropriate treatment, could be retained subject to regular review
5. Small, young or regularly pruned - Trees that can be reliably moved or replaced:
 - a) small trees less than 5m in height
 - b) young trees less than 15 years old but over 5m in height
 - c) formal hedges and trees intended for regular pruning to artificially control growth

Appendix C - STARS - 1 of 2

Significance of a Tree Assessment Rating System (IACA 2010)© (1 of 2)

The landscape significance of a tree is an essential criterion for establishing the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree.

This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of *High*, *Medium* and *Low* significance in the landscape. Once the landscape significance and *Useful Life Expectancy* of an individual tree has been defined, the retention value can be determined.

Tree Significance - Assessment Criteria

1. High Significance in landscape.

- The tree is in good condition and good vigour;
- 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 vigour;
- 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 taxa *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 - STARS - 2 of 2

Significance of a Tree Assessment Rating System (IACA 2010)© (2 of 2)

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

Note: The assessment criteria are designed for individual trees only but can be applied to a monocultural stand in its entirety e.g. hedge.

In the development of this document IACA acknowledges the contribution and original concept of the Footprint Green Tree Significance & Retention Value Matrix, developed by Footprint Green Pty Ltd and Andrew Morton in June 2001.


		Significance				
		1. High	2. Medium	3. Low		
		Significance in Landscape	Significance in Landscape	Significance in Landscape	Environmental Pest / Noxious Weed Species	Hazardous / Irreversible Decline
Estimated Life Expectancy	1. Long >40 years					
	2. Medium 15-40 Years					
	3. Short <1-15 Years					
	Dead					
<p><u>Legend for Matrix Assessment</u></p> <div style="text-align: right;">  </div>						
		<p>Priority for Retention (High) -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 by the Australian Standard AS4970 <i>Protection of trees on development sites</i>. Tree sensitive construction measures must be implemented e.g. pier and beam etc if works are to proceed within the Tree Protection Zone.</p>				
		<p>Consider for Retention (Medium) -These trees may be retained and protected. These are considered less critical; however their retention should remain priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.</p>				
		<p>Consider for Removal (Low) -These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.</p>				
		<p>Priority for Removal -These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.</p>				

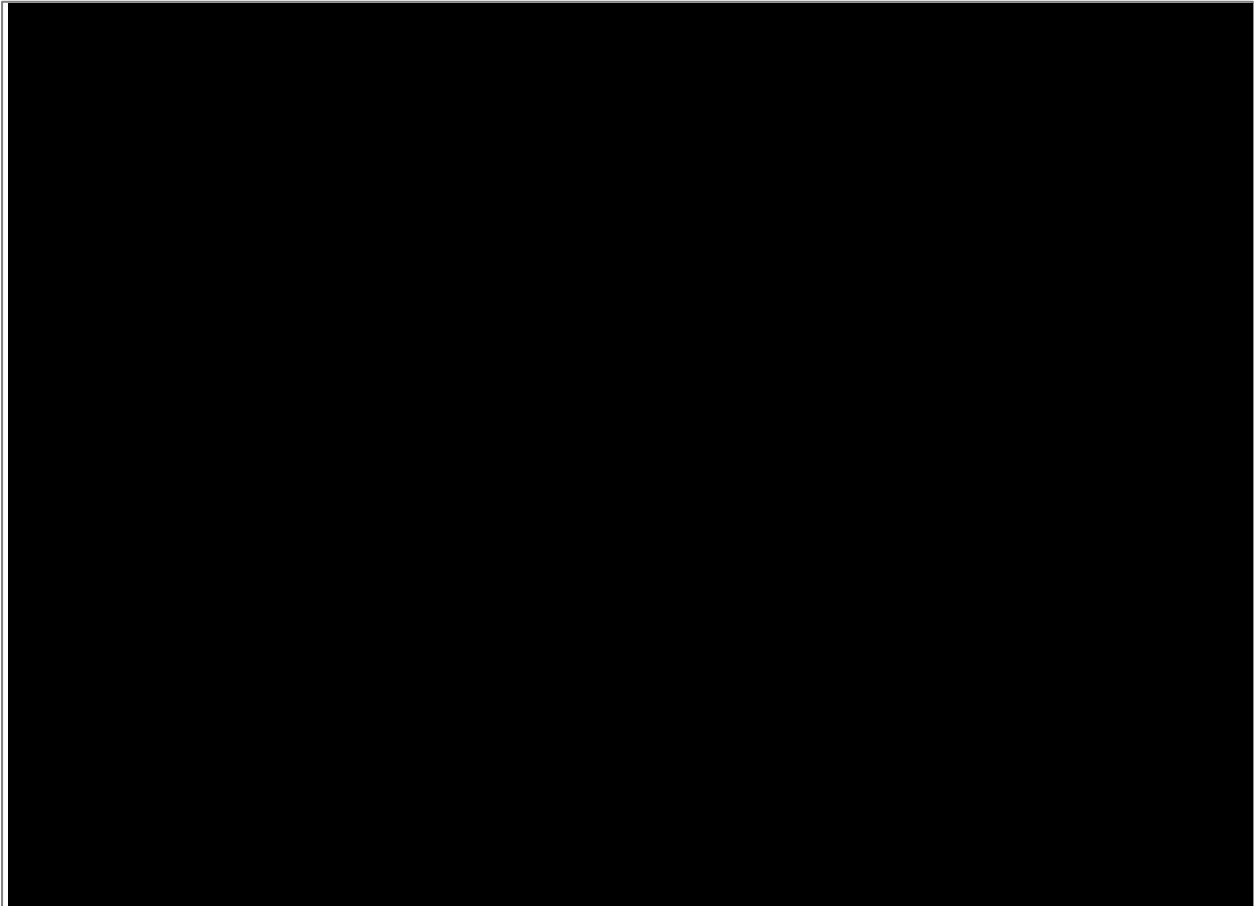
Table 1 - Tree Retention Value - Priority Matrix.

IACA, 2010, *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au

Appendix D - Record of Meetings and Design Input

██████████ attended the site inspection on 6/11/2019 with construction input.

No input from the Landscape Architect has been included as these works are not constrained by any urban design or landscaping requirements.



2 Proposed activity

2.1 Need for the design changes

The Approved Project included upgrades to the local road network in Alexandria and Mascot to cater for the St Peters interchange. The creation of a new signalised intersection was approved to integrate the new Campbell Road extension into the local road network. Upgrades were also approved to the intersection of Bourke Road and Gardeners Road, located immediately south of the new intersection, which included the restriction of right turn movements into properties by vehicles travelling north along Bourke Road. Vehicles exiting onto Bourke Road from developments at 520-530 Gardeners Road, 200 Bourke Rd and 506-518 Gardeners Road would also be restricted from right-turn movements to travel north along Bourke Road.

Further assessment has identified that the future operational level of service of the approved new intersection and the Bourke Road / Gardeners Road intersection would be below the desired service level. Discussions with landowners also raised concerns that the approved upgrades would restrict property access to developments at 520-530 Gardeners Road and 506-518 Gardeners Road. This restriction may have flow-on effects that alter customer behaviour at 520-530 Gardeners Road.

Consequently, changes to both intersections are proposed to improve the performance of both intersections, and to improve access to the identified properties. A description of the approved intersections and proposed changes is provided in the following section. A consistency assessment would assess the elements of the intersections that deviate from the designs as approved.

2.2 Description of proposed design changes

2.2.1 Campbell Road extension / Bourke Road intersection

The proposed design changes would improve the level of service of the Campbell Road extension / Bourke Road intersection and incorporate signalised access to the access easement for 506-518 Gardeners Road via Bourke Road. The intersection subject to the proposed design changes would become a four-legged intersection and include the following provisions:

- Campbell Road eastbound: two southbound through lanes onto Bourke Road (south), one eastbound through lane into the access easement for 506-518 Gardeners Road, one left-turn lane onto Bourke Road (north)
- Bourke Road northbound: two through lanes onto the Campbell Road extension, two right-turn lane onto Bourke Road (north)
- Bourke Road southbound: one left-turn lane onto Bourke Road (south), one right-turn lane onto the Campbell Road extension. Lane provisions on Bourke Road southbound at the Bourke Road / Gardeners Road intersection would remain as per the Approved Project.

The cycleway on the western side of Bourke Road would be designed as a shared path rather than separate bicycle lanes to the south and west of the proposed intersection to maximise available road space. Signalised pedestrian crossings would be provided across the four legs of the intersection as shown in Figure 2-1. Two traffic islands (see Figure 2-1) would be incorporated to facilitate safe pedestrian movements across the intersection. Cyclists travelling north along Bourke Road who wish to connect to continue along Bourke Road (north) would need to dismount and utilise the pedestrian crossings and islands.

Appendix F – Cross Section Detail

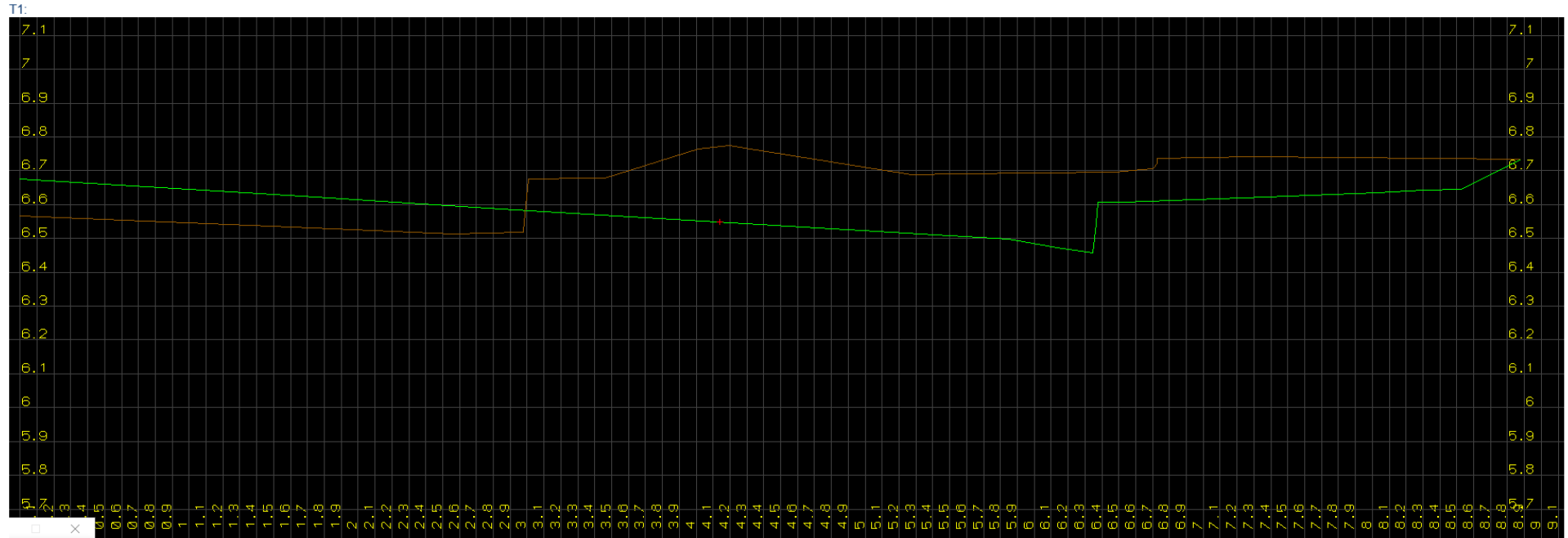


Figure 1 – T1 - Brown line denoted existing ground level, green line is proposed/finished ground level, red cross is tree location.

T2:

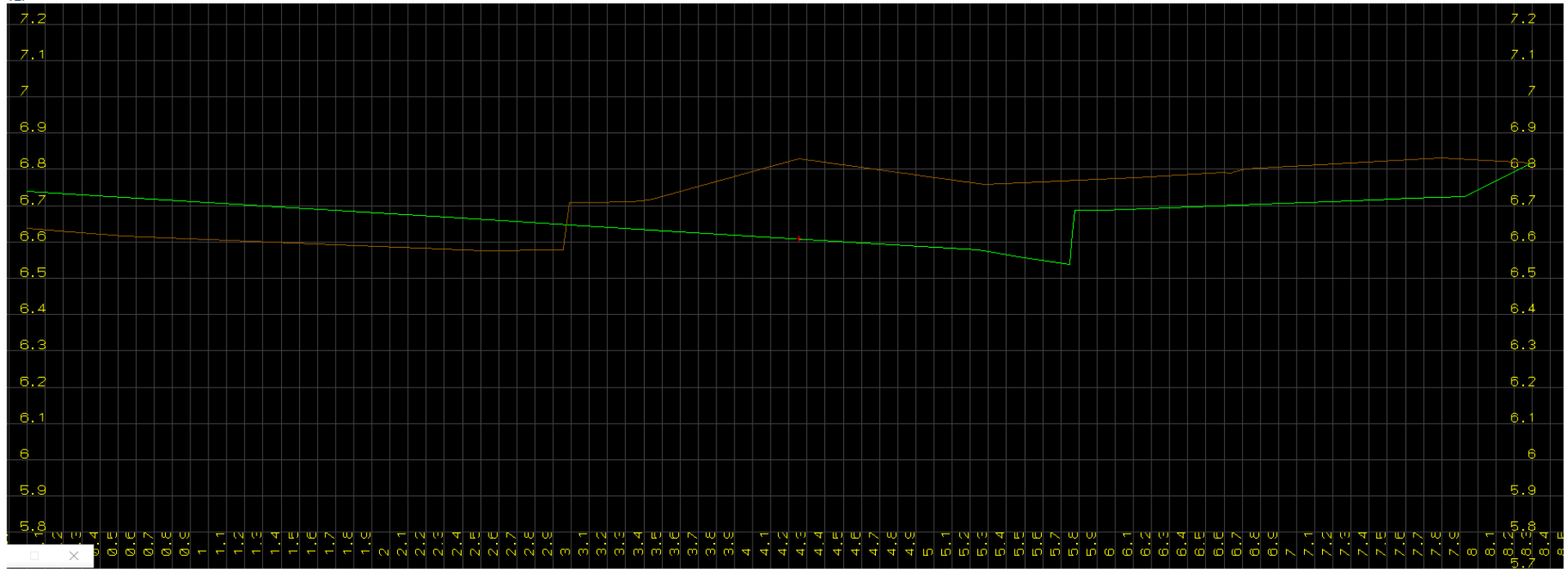


Figure 2 – T2 - Brown line denoted existing ground level, green line is proposed/finished ground level, red cross is tree location.

T3:

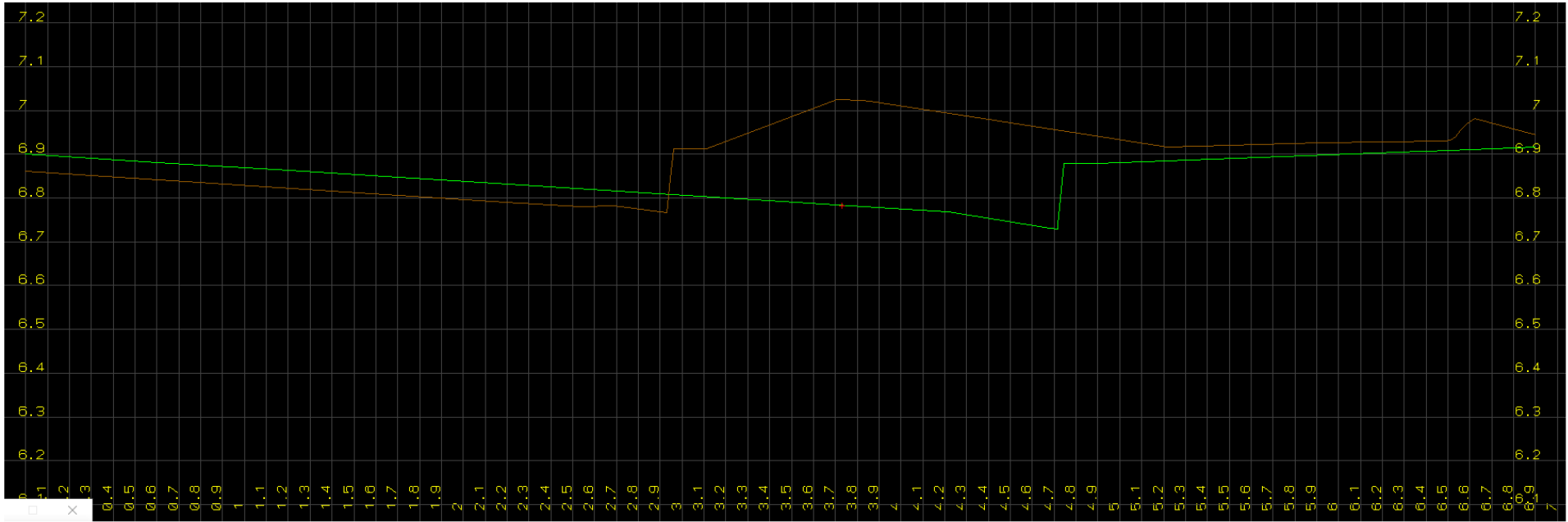


Figure 3 – T3 - Brown line denoted existing ground level, green line is proposed/finished ground level, red cross is tree location.

T4:

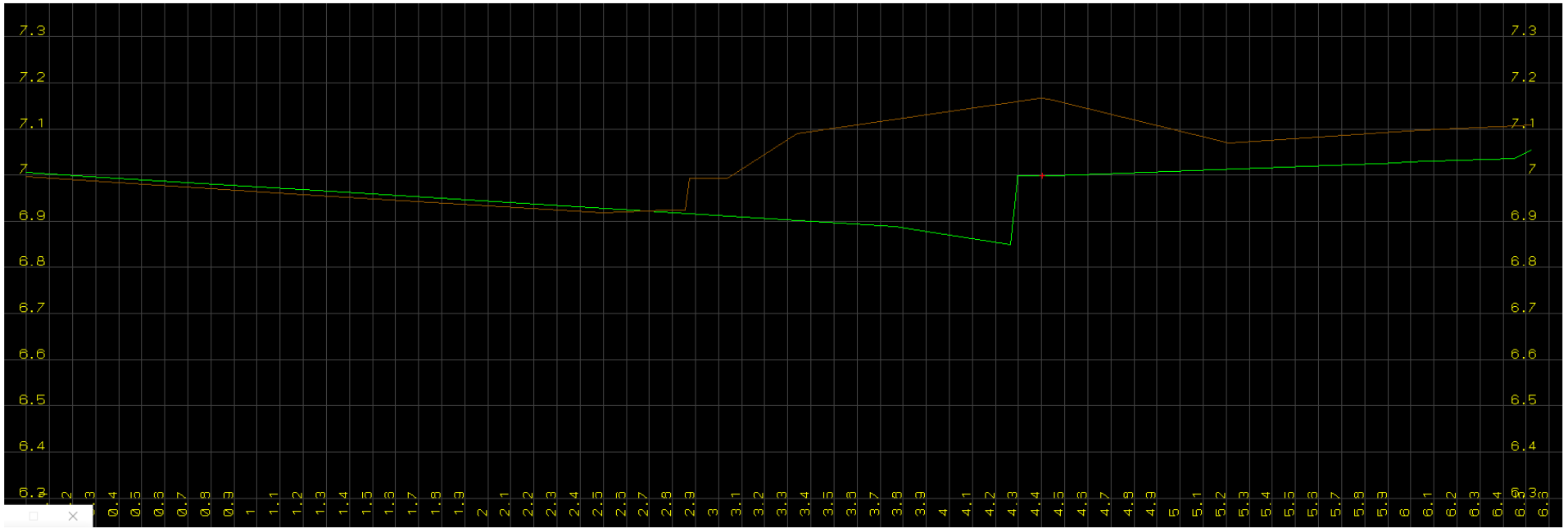
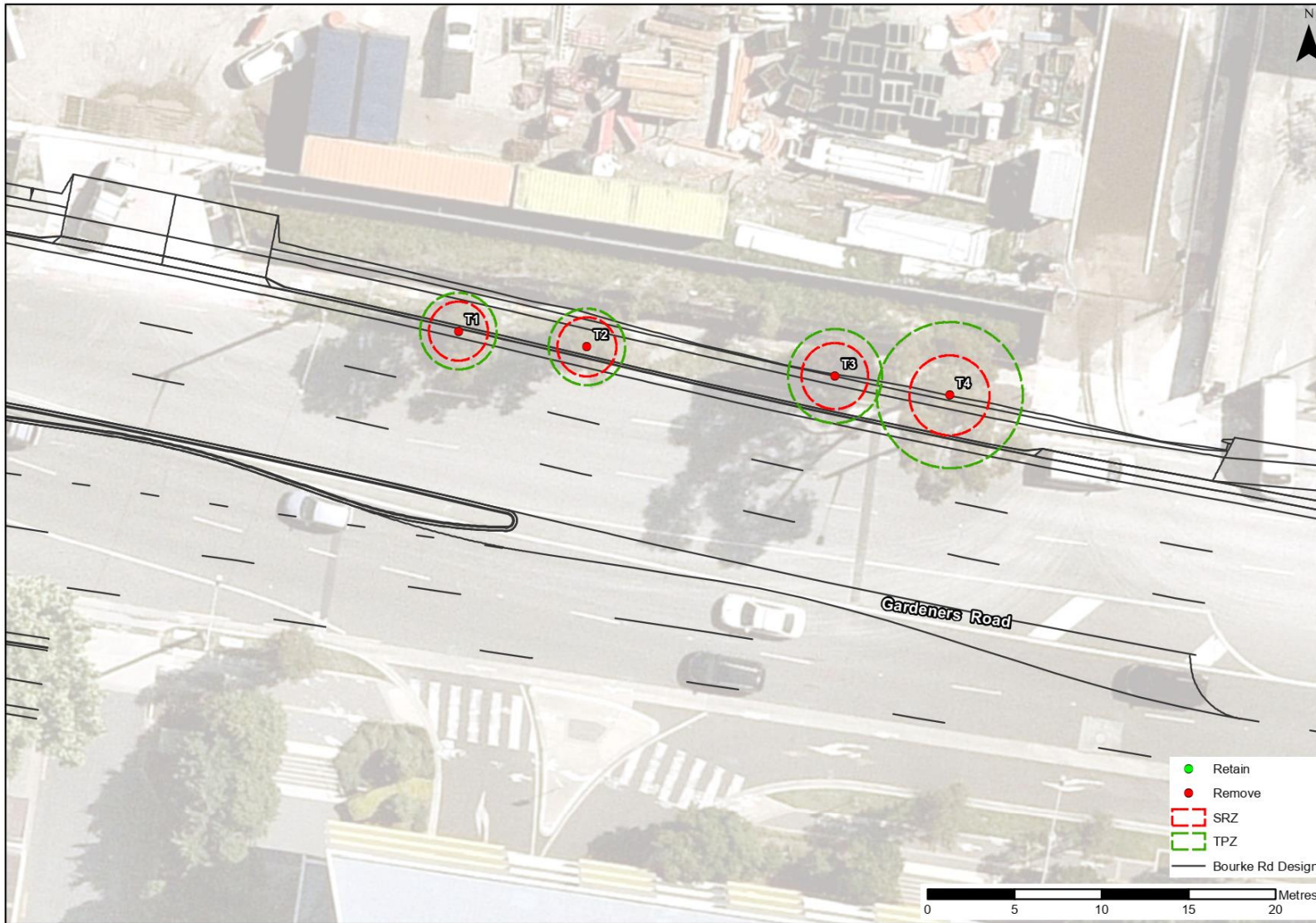


Figure 4 – T4 - Brown line denoted existing ground level, green line is proposed/finished ground level, red cross is tree location.

Appendix G - Tree Location Map



Appendix H - Site Photographs



Plate 1 – Arrow notes stem of T1. Trees growing in existing narrow verge.



Plate 2 – Tree 1 – upper canopy of this tree noted.



Plate 3 – Trees 2-4. T2 closest, onwards to T4.



Plate 4 – Trees 1-4 left to right. Photograph courtesy of Google maps street view 12/2/2019.

Appendix I - Schedule of Assessed Trees - M5 Site inspection Gardeners Road, Mascot - 6 November 2019.

Tree No.	Genus & species Common Name	Ht (m)	Sp (m)	DBH (mm)	Age	V	C	Comments	ULE	TSR	RV	SRZ (m)	TPZ (m)	TPZ (area)
T1	<i>Corymbia citriodora</i> Lemon Scented Gum	7	4	175	Y-EM	G	G	Introduced native species. Optus line above canopy noted. No special problems noted at time of assessment.	2A	M	M	1.7	2.2	15
T2	<i>Corymbia citriodora</i> Lemon Scented Gum	8	5	175	Y-EM	G	G	Introduced native species. Optus line above canopy noted. No special problems noted at time of assessment.	2A	M	M	1.7	2.2	15
T3	<i>Corymbia citriodora</i> Lemon Scented Gum	6.5	5	225	Y-EM	G	G	Introduced native species. Optus line above canopy noted. No special problems noted at time of assessment.	2A	M	M	1.9	2.7	23
T4	<i>Corymbia citriodora</i> Lemon Scented Gum	11	8	350	Y-EM	G	G	Introduced native species. Optus line runs through canopy. No special problems noted at time of assessment.	2A	M	M	2.3	4.2	55

KEY



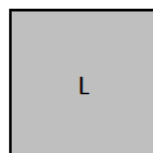
Tree to be retained.



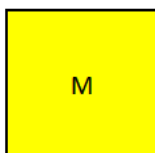
Not classed as 'a tree' under DPE conditions (see Part 1.3).



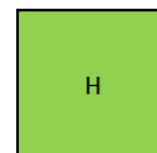
Tree proposed to be removed.



Low Retention Value-These trees are not considered as important for retention.



Medium Retention Value-These trees may be retained & protected.



High Retention Value -These trees are considered important for retention and should be retained and protected.

* DBH is visually estimated (usually adjoining trees or those that are hard to access). AB – above *buttress roots*. AGL - above ground level.

** Determined by the largest number found (i.e. broadest branch spread or highest DBH) within a tree group to ensure ample tree protection zone.

H refers to the approximate height of a tree in metres, from base of stem to top of tree crown.

Sp refers to the approximate and average spread in metres of branches/canopy (the ‘crown’) of a tree.

DBH refers to the approximate diameter of tree stem at breast height i.e. 1.4 metres above ground (unless otherwise noted) and expressed in millimetres.

Age refer to Appendix A -Terms and Definitions for more detail.

V refers to the tree’s vigour (health) Refer to Appendix A -Terms and Definitions for more detail.

C refers to the tree’s structural condition. Refer to Appendix A -Terms and Definitions for more detail.

ULE refers to the estimated *Useful Life Expectancy* of a tree. Refer to Appendices A and B for details.

TSR The *Tree Significance Rating* considers the importance of the tree as a result of its prominence in the landscape and its amenity value, from the point of view of public benefit. Refer to Appendix C – Significance of a Tree Assessment Rating for more detail.

RV Refers to the retention value of a tree, based on the tree’s ULE *and* Tree Significance. Refer to Appendix C – Significance of a Tree Assessment Rating for more detail.

SRZ Structural Root Zone (SRZ) refers to the critical area required to maintain stability of the tree. Refer to Appendix A -Terms and Definitions for more detail.

TPZ Tree Protection Zone (TPZ) refers to the *tree protection zones* for trees to be retained. Refer to Appendix A -Terms and Definitions for more detail.