

Arboricultural Impact Assessment



Prepared For

CPB Dragados Samsung Joint Venture (CDS-JV)
25-29 Burrows Rd,
St Peters NSW 2044

Site Address

McEvoy Street & Euston Road
ALEXANDRIA NSW 2015



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Introduction

1.1 Brief

This Arboricultural Impact Assessment (AIA) was prepared by [REDACTED] and was commissioned by CPB Dragados Samsung Joint Venture (CDS-JV).

The site is along McEvoy Street/Euston Road between Fountain and Maddox Street, Alexandria, New South Wales.

The subject site is within Road and Maritime Service owned land and the adjoining properties. The site location is attached as Appendix F – Overall Tree Location Plan.

The proposed works are part of the larger WestConnex New M5 project. Scope of works specifically for the subject area are:

- Trenching for the installation of conduit for underground 132kV electricity line; and
- Construction of joint bay and link pits.

This report gives recommendations for tree retention or removal and discusses the options of such. This report also provides guidelines for tree protection and maintenance.

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 or works within proximity to 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 works 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 23 years in the horticultural industry. 18 of these 23 years have been specifically within the field of arboriculture with roles varying from tree climber in private contracting companies to Council Tree Management Officer at several local Councils, and working with independent Consultants, prior to [REDACTED]. 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 (next page).

Condition	Requirement	Addressed in:
B63	The SSI must be designed to retain as many trees as possible and provide a net increase in the number of replacement trees. 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 –Sections 2.3-2.5
B63(a)	a visual tree assessment with inputs from the design, landscape architect, construction team;	VTA noted in Appendix H. Design discussions as per Appendix D.
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.	Appendix D, 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, and storage of materials and protection of public utilities.	Section 2 Part 2.3-2.6 & Section 3 - Recommendations
	In the event that trees are to be removed, then replacement trees are to be planted within, or in close proximity to, the SSI boundary, including along Euston Road where feasible and reasonable. The location of the trees must be determined in consultation with the relevant council(s). The replacement trees are to have a minimum pot size of 75 litres. 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.	Consistent with earlier approved Tree Reports replanting will be detailed in the Urban Design & Landscape Plan in consultation with the relevant Council.

Table 1 –Condition of Approval B63 Compliance Table

1.2 Methodology

In preparation for this report, ground-level, visual tree assessments (VTA), or limited VTA (e.g. where access was limited), were completed by the author of this report on 12th and 13th April 2017 and surveyed by a CDS JV surveyor to verify specific locations. Inspection details of these trees are provided in Appendix H —Schedule of Assessed Trees.

The tree heights were visually estimated or measured using a Nikon ForestryPro Laser measurer. Unless otherwise noted in Appendix H 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 Aerial maps detailing proposed works location. This plan is attached as Appendix F—Overall Tree Location Map

The subject trees are shown as dot markings on Aerial photography excerpts provided by the client. These marked-up plans are attached as Appendix E—Tree Location Plans.

1.3 Tree Preservation and Management Guidelines

The proposed works form part of the approved WestConnex New M5 State Significant Infrastructure project (SSI 6788), Clause 5.9 of the Sydney Local Environment Plan 2012 (SLEP) therefore does not apply.

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

- is equal to or greater than three 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 Noxious Weeds Act 1993.

1.4 Site Location Technicality

As part of design of the 132kv installation, it was identified that works are required on Euston Road and McEvoy Street, outside of the approved construction footprint identified in the Environmental Impact Statement (EIS) and Preferred Infrastructure Report (Section 2). As such, a consistency assessment was prepared to:

- Describe the approved design and activity;
- Describe the proposed change relative to the approved project;
- Assess the environmental risks associated with undertaking the proposed change confirming whether or not it is of minimal environmental impact; and
- Determine whether the proposed change is consistent with the project approval requirements.

The assessment (see Appendix H – Schedule of Assessed Trees) determined that the works are consistent with the EIS, conditions of the Minister’s approval and conditions specified in EPBC decision 2015/7520 (Roads and Maritime Services, *Consistency Review - Euston Road high voltage power supply modification New M5*, May 2017).

Observations and Discussion

2.1 Summary of Assessed Trees

One hundred and ten (110) trees were assessed and included in this report. The prefix 'HV' was used for tagging and numbering to denote tree surveying in relating to High Voltage (HV) utility works. Details of these trees are included in the Schedule of Assessed Trees – Appendix H.

All but two (tree numbers HV106 and HV107) of the assessed trees are *prescribed* (i.e. considered a 'tree' under DPE approval/conditions). Of the one hundred and eight (108) *prescribed* trees, the following Retention Value (RV- see Appendix C) was ascribed to each:

- four (4) trees have High RVs – Trees HV79, HV80, HV97 & HV99;
- eighty (80) trees have Medium RVs - Trees HV1-HV8, HV10, HV11, HV16, HV17, HV19, HV22, HV24, HV26, HV27, HV29-HV65, HV67-72, HV74-HV77, HV81, HV88, HV89, HV91, HV92, HV94-HV96, HV100-HV104, HV108-HV110;
- twenty four (24) trees have Low RVs - Trees HV9, HV12-HV15, HV18, HV20, HV21, HV23, HV25, HV28, HV66, HV73, HV78, HV82-HV87, HV90, HV93, HV98, HV105.

2.2 Threatened Species

No assessed tree is subject to conservation status under State Government legislation (i.e. NSW Threatened Species Conservation Act 1995) or Commonwealth legislation (i.e. Environment Protection and Biodiversity Conservation Act 1999).

2.3 Proposed Removal of Prescribed Trees

Nine (9) of the one hundred and eight (108) prescribed trees are proposed to be removed as they are located within the zone or adjacent to the proposed works and cannot be retained without detriment to the trees.

No tree determined to have a 'High' Retention Value (RV- see Appendix C) is proposed for removal. The 'avenue' planting along McEvoy St and Euston Rd will not be interrupted by any of the proposed removals.

Following meeting with CDS (see Appendix D), it is my understanding that the design approval states all electricity is to be underground, the utility locations have been set by the Utility Companies and are out of CDS control.

Table 2 below details prescribed trees proposed for removal, reason and Retention Value (RV- see Appendix C):

Tree No.	Common Name	Reason	RV
HV3	Brushbox	TPZ & SRZ encroachment for proposed 132kV underground service.	M
HV6	Brushbox	TPZ & SRZ encroachment for proposed 132kV underground service.	M
HV7	Brushbox	TPZ & SRZ encroachment for proposed 132kV underground service.	M
HV12	Manchurian Pear	TPZ & SRZ encroachment for proposed 132kV underground service.	L
HV13	Manchurian Pear	TPZ & SRZ encroachment for proposed 132kV underground service.	L

Tree No.	Common Name	Reason	RV
HV14	Manchurian Pear	TPZ & SRZ encroachment for proposed 132kV underground service.	L
HV20	Brushbox	TPZ & SRZ encroachment for proposed 132kV underground service.	L
HV72	Swamp She-oak	TPZ & SRZ encroachment for proposed 132kV underground service.	M
HV76	Swamp She-oak	TPZ & SRZ encroachment for proposed 132kV underground service.	M

Table 2—Trees proposed to be removed to facilitate works.

2.4 Proposed Tree Retention

Ninety nine (99) of the prescribed trees are proposed for retention. Only ten (10) of these prescribed trees will be subject to encroachment due to the proposed works.

2.5 Potential Impacts on Trees Proposed for Retention

Under the Australian Standard 4970-2009 Protection of trees on development sites (“AS4970”), encroachments of less than 10% of the Tree Protection Zone (TPZ) are considered to be minor. No specifications are provided in AS4970 for potential impacts of 10% or greater. This 10% is taken as the threshold figure, beyond which arboricultural investigations (as set out in clause 3.3.4 of AS4970) need to be considered.

Trees have been surveyed and estimates have been provided via the marked up aerial mapping to determine likely disturbance within the Structural Root Zone (SRZ), and into the TPZs of protected trees to be retained, these are summarised in Table 3, below.

Tree No.	Tree Common name	SRZ affected	TPZ area (m ²)	TPZ encroachment (approx m ²)	TPZ encroachment (approx %)
HV1	Brushbox	×	41	0	0
HV2	Brushbox	×	104	0	0
HV4	Brushbox	×	28	0	0
HV5	Brushbox	×	18	0	0
HV8	Brushbox	×	23	0	0
HV9	Gum	×	15	0	0
HV10	Brushbox	×	113	17.74	15.7
HV11	Brushbox	×	55	.39	.71
HV15	Manchurian Pear	×	7	0	0
HV16	Brushbox	×	28	0	0
HV17	Brushbox	×	28	0	0
HV18	Manchurian Pear	×	7	0	0
HV19	Brushbox	×	113	15.66	13.8
HV21	Sydney Green Wattle	×	18	0	0
HV22	Swamp She-oak	×	124	0	0
HV23	Sydney Green Wattle	×	18	0	0
HV24	Swamp She-oak	×	84	0	0
HV25	Swamp She-oak	×	7	0	0

Tree No.	Tree Common name	SRZ affected	TPZ area (m ²)	TPZ encroachment (approx m ²)	TPZ encroachment (approx %)
HV26	Swamp She-oak	×	64	0	0
HV27	Broad Leaved Paperbark	×	28	0	0
HV28	Swamp She-oak	×	28	0	0
HV29	Swamp She-oak	×	41	0	0
HV30	Swamp She-oak	×	64	0	0
HV31	Swamp She-oak	×	18	0	0
HV32	Swamp She-oak	×	28	0	0
HV33	Swamp She-oak	×	28	0	0
HV34	Swamp She-oak	×	15	0	0
HV35	Swamp She-oak	×	18	0	0
HV36	Tuckeroo	×	10	0	0
HV37	Swamp She-oak	×	15	0	0
HV38	Tuckeroo	×	18	0	0
HV39	Swamp She-oak	×	64	0	0
HV40	Swamp She-oak	×	18	0	0
HV41	Swamp She-oak	×	10	0	0
HV42	Swamp She-oak	×	7	0	0
HV43	Swamp She-oak	×	10	0	0
HV44	Swamp She-oak	×	23	0	0
HV45	Tuckeroo	×	10	0	0
HV46	Swamp She-oak	×	41	0	0
HV47	Swamp She-oak	×	15	0	0
HV48	Swamp She-oak	×	7	0	0
HV49	Swamp She-oak	×	113	0	0
HV50	Broad Leaved Paperbark	×	7	0	0
HV51	Swamp She-oak	×	64	0	0
HV52	Swamp She-oak	×	55	0	0
HV53	Swamp She-oak	×	48	0	0
HV54	Swamp She-oak	×	35	0	0
HV55	Brushbox	×	64	0	0
HV56	Swamp She-oak	×	191	0	0
HV57	Brushbox	×	35	0	0
HV58	Broad Leaved Paperbark	×	113	0	0
HV59	Brushbox	×	64	2.23	3.5
HV60	Brushbox	×	104	11.10	10.6
HV61	Brushbox	×	35	0	0
HV62	Brushbox	×	8	0	0
HV63	Brushbox	×	8	0	0
HV64	Brushbox	×	92	9.88	11
HV65	Broad Leaved Paperbark	×	41	0	0
HV66	Cedar Wattle	×	18	0	0
HV67	Tuckeroo	×	41	0	0
HV68	Broad Leaved Paperbark	×	41	0	0
HV69	Tuckeroo	×	72	0	0
HV70	Tuckeroo	×	15	0	0
HV71	Brushbox	×	64	0	0
HV73	Tuckeroo	×	10	0	0
HV74	Brushbox	×	35	0	0
HV75	Tallowwood	×	72	0.1	0.13
HV77	Brushbox	×	7	0	0
HV78	Dragon Tree	×	48	0	0

Tree No.	Tree Common name	SRZ affected	TPZ area (m ²)	TPZ encroachment (approx m ²)	TPZ encroachment (approx %)
HV79	London Plane Tree	×	391	49.15	12.5
HV80	London Plane Tree	×	191	0	0
HV81	Tuckeroo	×	41	0	0
HV82	Watergum	×	18	0	0
HV83	Watergum	×	18	0	0
HV84	Watergum	×	10	0	0
HV85	Brushbox	×	7	0	0
HV86	Weeping Lilly Pilly	×	7	0	0
HV87	Weeping Lilly Pilly	×	7	0	0
HV88	Brushbox	×	35	0	0
HV89	Brushbox	×	28	0	0
HV90	Weeping Lilly Pilly	×	7	0	0
HV91	Brushbox	×	18	0	0
HV92	Brushbox	×	35	0	0
HV93	Brushbox	×	28	0	0
HV94	Brushbox	×	28	0	0
HV95	Tuckeroo	×	35	0	0
HV96	Tuckeroo	×	55	0	0
HV97	Hills Weeping Fig	×	499	113.45	22.7
HV98	Watergum	×	28	0	0
HV99	Hills Weeping Fig	×	598	132.68	22.2
HV100	Paperbark	×	113	0	0
HV101	Brushbox	×	18	0	0
HV102	Brushbox	×	28	0	0
HV103	Tuckeroo	×	48	0	0
HV104	Brushbox	×	18	0	0
HV105	Brushbox	×	7	0	0
HV109	Tuckeroo	×	10	0	0
HV110	Spotted Gum	×	15	0	0

Table 3 – Estimated encroachments into the SRZ and TPZ of trees proposed for retention. Please note site-specific constraints will heavily influence the location. The type of construction materials and methods used, and/or extent of change to soil/grade conditions during works may result in encroachment impacts lower or higher than estimated at the time of preparing this tree impact assessment.

Tree HV10 - Brushbox

Under the Australian Standard 4970-2009 Protection of trees on development sites (“AS4970”) over 10% is considered *major* encroachment, the calculated encroachment has been estimated as 15.7%. However works will be outside the SRZ.

An existing footpath runs between the tree stem and proposed works site. It is possible root movement has been limited under the pathway and roots run parallel to the footpath. However it is recommended works are supervised by an appropriately qualified Arboriculturist within the Tree Protection Zone to assess the impact on the tree should roots be encountered.

Should roots over 40mm be found, non-destructive digging/excavation should be applied to retain roots and ensure stability and continued health of the subject tree.

Tree HV11 - Brushbox

This tree has a notional TPZ encroachment of 0.71%, Under the Australian Standard 4970-2009 Protection of trees on development sites ("AS4970") under 10% is considered *minor* encroachment.

The SRZ of this tree will not be affected and it is not expected that this trees would be affected by the proposed works.

Tree HV19 - Brushbox

Under the Australian Standard 4970-2009 Protection of trees on development sites ("AS4970") over 10% is considered *major* encroachment, the calculated encroachment has been estimated as 13.8%.

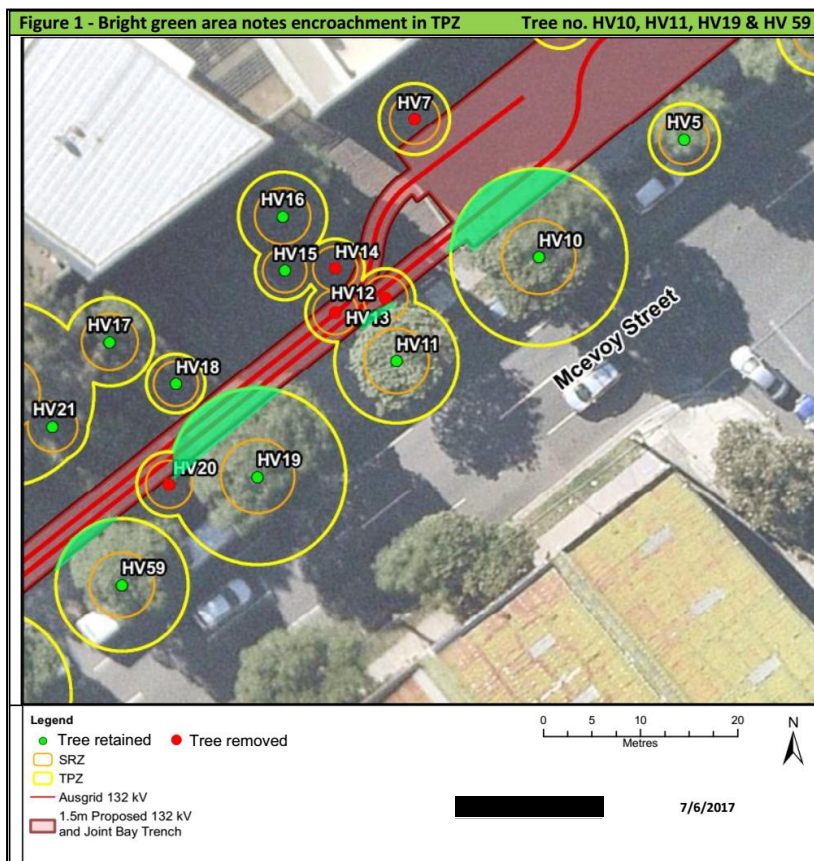
Works will not affect the SRZ of this tree. An existing footpath runs between the tree stem and proposed works site. It is possible root movement has been limited under the pathway and that existing roots run parallel to the footpath. However it is recommended works are supervised by an appropriately qualified Arboriculturist within the Tree Protection Zone to assess the impact on the tree should roots be encountered.

Should roots over 40mm be found, non-destructive digging/excavation should be applied to ensure continued longevity, stability and health of this tree.

Tree HV59 - Brushbox

This tree has a notional TPZ encroachment of 3.5%, under the Australian Standard 4970-2009 Protection of trees on development sites ("AS4970") less than 10% is considered *minor* encroachment.

The SRZ of this tree will not be affected and this trees health and condition will not be impacted from by the proposed works.



Tree HV60 - Brushbox

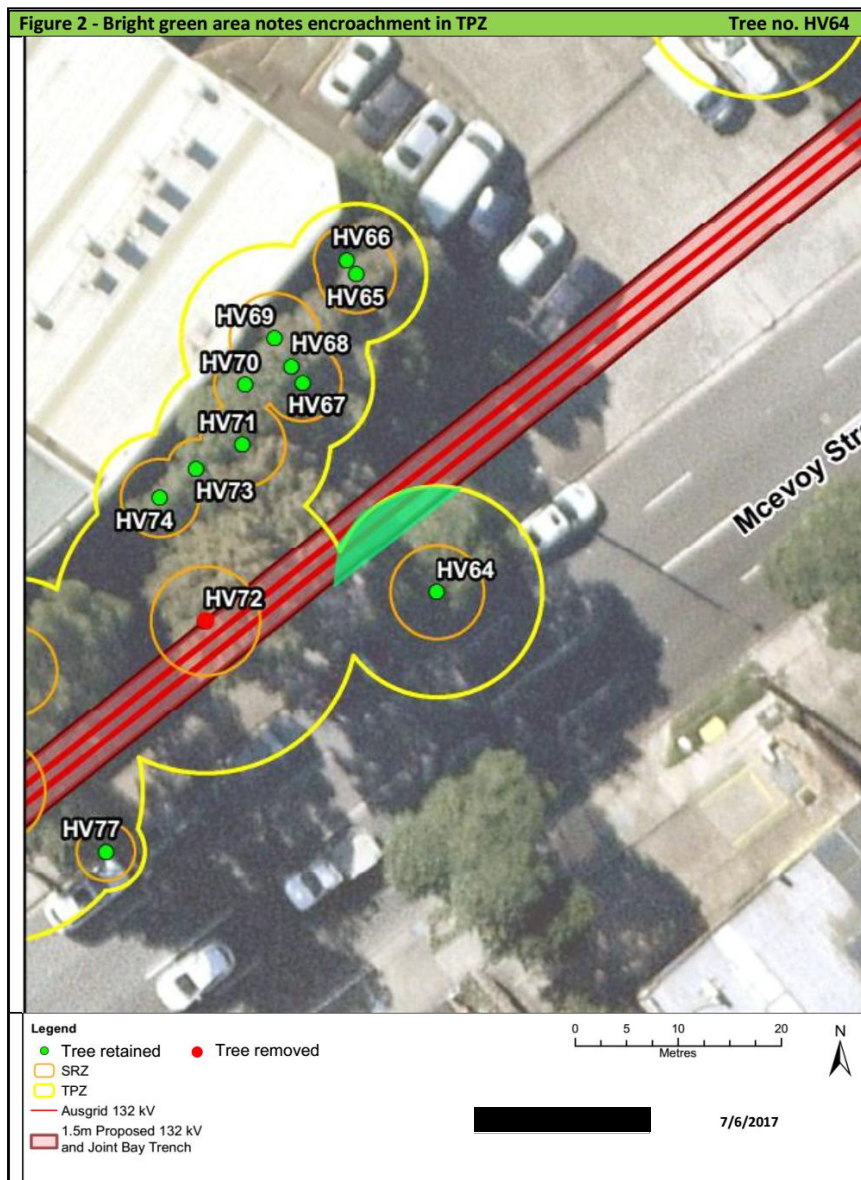
This tree has a notional TPZ encroachment of 10.6%, under the Australian Standard 4970-2009 Protection of trees on development sites ("AS4970") more than 10% is considered *major* encroachment.

The SRZ of this tree will not be affected and this tree health and condition it not expected to be impacted upon by the proposed works given it is just over the *minor* encroachment threshold of 10%.

Tree HV64 – Brushbox

This tree has a notional TPZ encroachment of 11%, under the Australian Standard 4970-2009 Protection of trees on development sites ("AS4970") more than 10% is considered *major* encroachment.

However the SRZ will not be affected by the proposed works and this trees health and condition is not expected to be impacted from by the proposed works given it is just 1% over the *minor* encroachment threshold.



Tree HV75 - Tallowwood

This tree has a notional TPZ encroachment of 0.14%, Under the Australian Standard 4970-2009 Protection of trees on development sites ("AS4970") under 10% is considered *minor* encroachment.

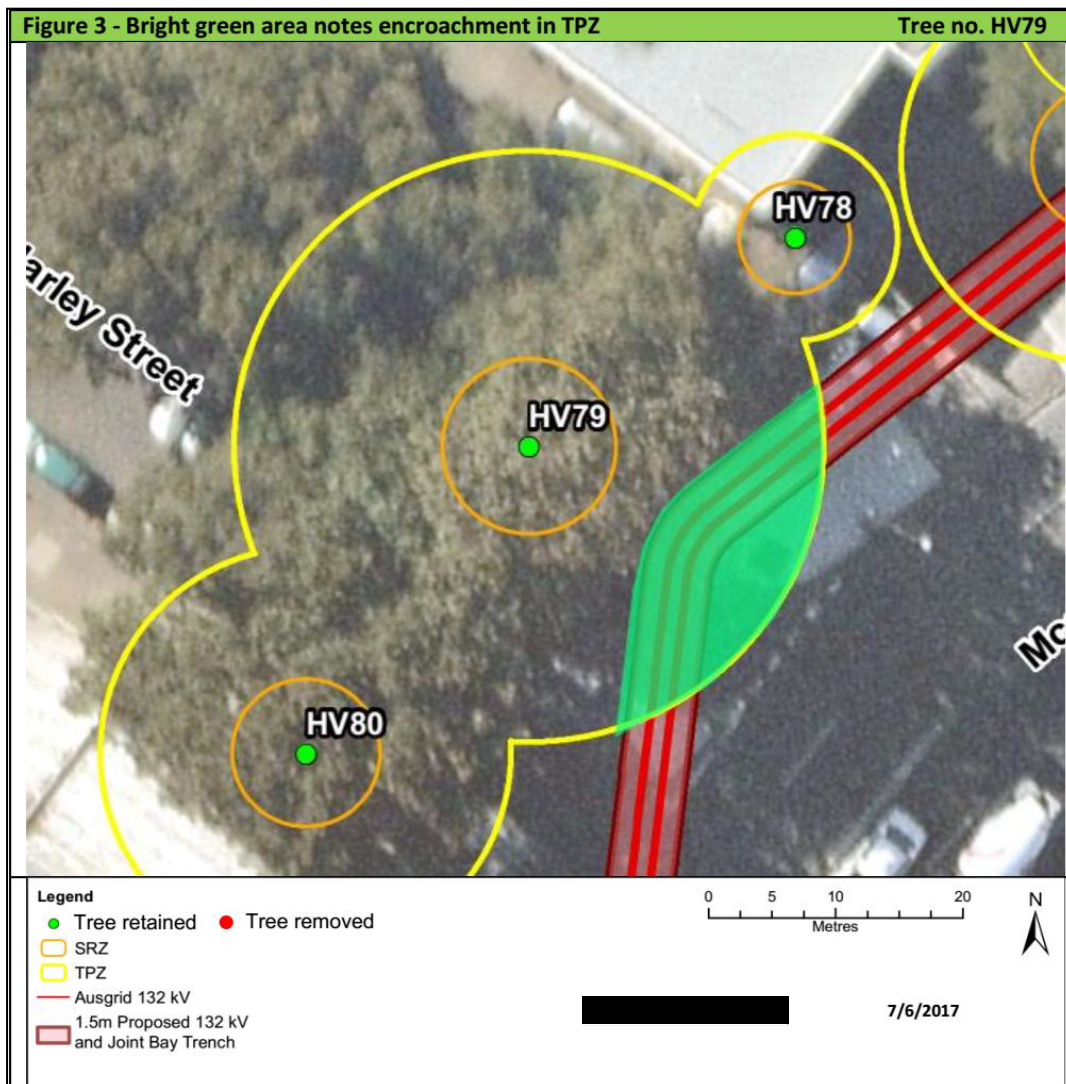
The SRZ of this tree will not be affected and this tree health and condition will not be impacted from by the proposed works given such minor encroachment.

Tree HV79 – London Plane Tree

Under the Australian Standard 4970-2009 Protection of trees on development sites ("AS4970") over 10% is considered *major* encroachment, the calculated encroachment has been estimated as 12.5%.

Works will not encroach the SRZ of this tree and the works will be trenching in the location of the current footpath. This tree is a significant specimen in the streetscape, it is recommended the proposed works are supervised by an appropriately qualified Arboriculturist within the Tree Protection Zone to assess the impact on the tree should any roots be encountered.

Should roots over 40mm be found, non-destructive digging/excavation should be applied to ensure continued longevity and to retain the current good health and condition of the this tree.



Tree HV97 – Hills Weeping Fig

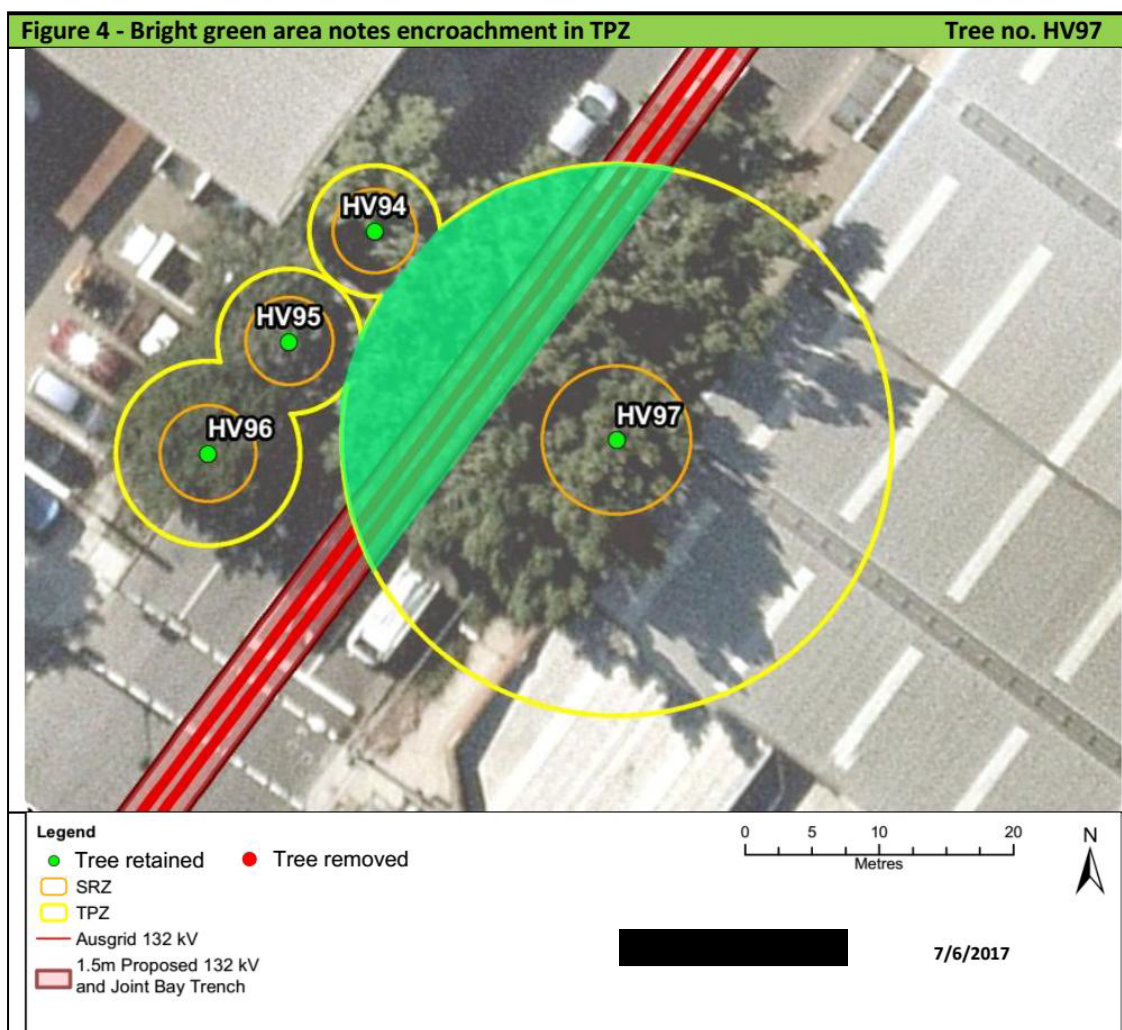
Under the Australian Standard 4970-2009 Protection of trees on development sites (“AS4970”) over 10% is considered *major* encroachment, the calculated encroachment has been estimated as 22.7%. The proposed works will not encroach the SRZ of this tree.

The proposed trenching works will be within the middle of the current roadway. It would be expected that root expansion would be limited within this area, given it is the middle of a busy road and this would be subject to heavy compaction thus limiting available oxygen and water to the tree. In my opinion this notional 22.7% encroachment figure does not adequately express the real impact the proposed works will subject this tree too.

This tree is a significant specimen in the streetscape, it is recommended the proposed works are supervised by an appropriately qualified Arboriculturist within the Tree Protection Zone to assess the impact on the tree should any roots be encountered.

Should roots over 40mm be found, non-destructive digging/excavation should be applied to ensure continued longevity, stability and to retain the current good health and condition of the tree.

Re-direction of traffic into the kerbside laneway will be required to carry out works, only small diameter branches overhang the roadway within the RMS defined clearances, the required pruning will be less than 5% total live canopy will not negatively impact this tree.



Tree HV99 – Hills Weeping Fig

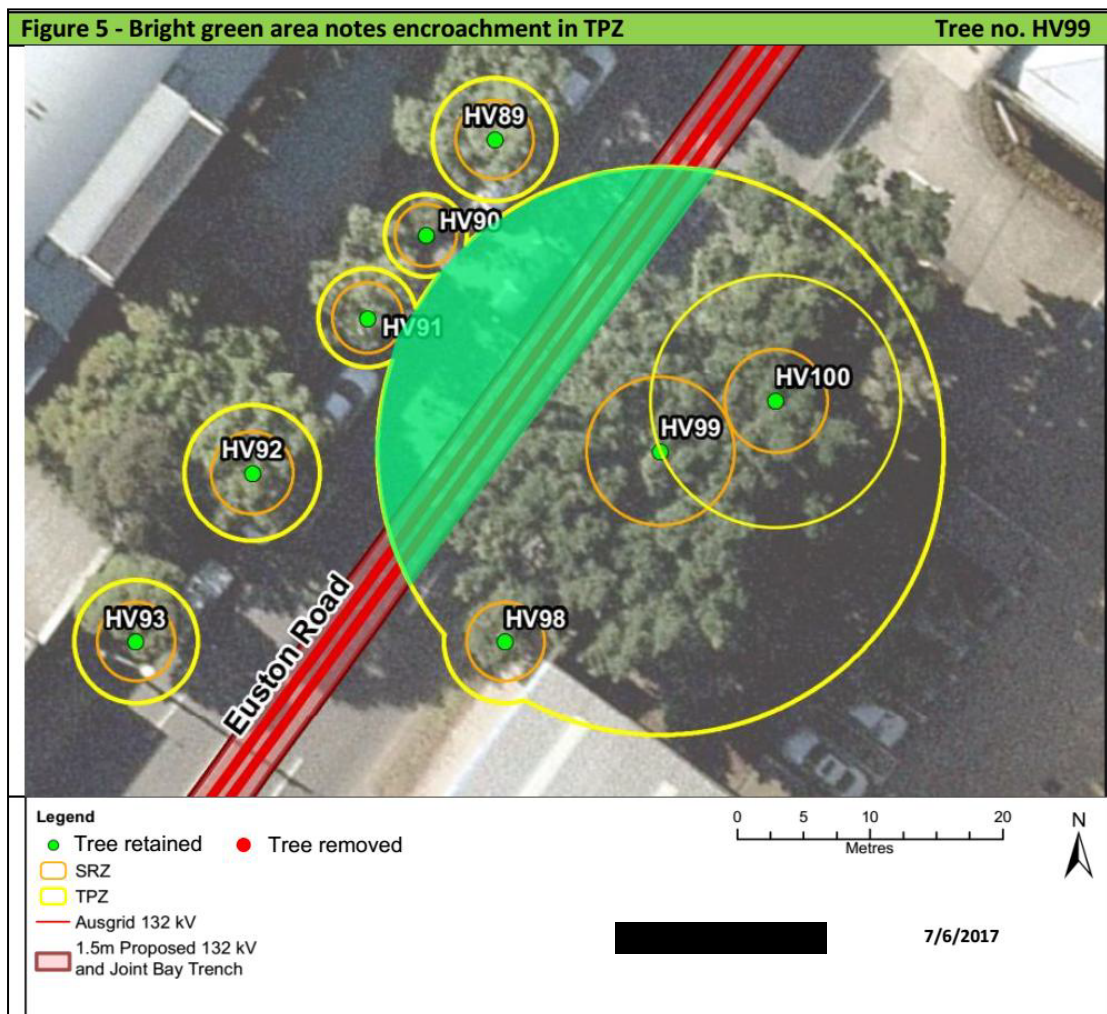
Under the Australian Standard 4970-2009 Protection of trees on development sites (“AS4970”) over 10% is considered *major* encroachment, the calculated encroachment has been estimated as 22.2%. The proposed works will not affect the SRZ of this tree.

The proposed trenching works will be within the middle of the current roadway. As per Tree HV97, it would be expected that root expansion would be limited within this area, given this area would be subject to heavy compaction thus limiting available oxygen and water to the tree. Again my opinion is that this notional 22.2% encroachment figure overestimates the real impact the proposed works

This tree is also a significant specimen in the streetscape, it is recommended the proposed works are supervised by an appropriately qualified Arboriculturist within the Tree Protection Zone to assess the impact on the tree should any roots be encountered.

Should roots over 40mm be found, non-destructive digging/excavation should be applied to ensure continued stability and retention of the current good health and condition of this tree.

Re-direction of traffic into the kerbside laneway will be required to carry out the proposed works and allow traffic flow however this is not possible in relation to this tree. A large diameter, low limb overhangs the kerb (see Photo 5) and inside laneway within the RMS clearance zone. Pruning is not an option as this limb would account for 1/3 of the total live canopy. Alternative measures will be required to allow heavy vehicle traffic movement during works.



Recommendations

3.1 Tree Removal

Nine (9) prescribed trees required to be removed to accommodate the proposed works. Replanting will be undertaken in accordance with the condition B63 of the Compliance Table.

Tree removal work shall be carried out by minimally qualified AQF Level 2 Arborist, these contractors shall be advised of trees in close proximity being retained and instructed to avoid damage to such.

Stumps to be removed within the TPZ of trees to be retained, shall be removed in a manner that avoids damaging or disturbing roots.

3.2 Minimising Impacts on Trees to be Retained

3.3 General for all subject trees to be retained -

Direct and continued liaison between CDS staff and the project arboriculturist or Council is highly recommended.

Project arboriculturist or Council is to advise on all aspects of tree protection prior to and during proposed works.

The tree protection devices cannot be relocated, removed or altered in any way without the project arboriculturist or Council approval.

Any required pruning for equipment or vehicle access must be carried prior to any works commencing, and if in excess of 10%, as advised by the project arboriculturist or Council. All work is to be to Australian Standard 4373-2007 Pruning of Amenity Trees and requires by a minimally qualified AQF Level 2 Arborist.

Tree 1, 2, 4, 5, 8, 9, 15-18, 21-58, 61-63, 65-71, 73, 74, 77, 78, 80-96, 98, 100-110 –

These trees will be located outside the works zone, no specific tree protection measures are required but protocols as stated in Section 4.2, 4.3 and 4.7 of this report shall be followed.

3.4 Specific Tree Retention Methods for subject trees to be retained -

Tree HV10 - Brushbox

- Any ground-level change within 6m of the tree is to be directly supervised by an arboriculturist with a minimum AQF5 in arboriculture or equivalent.
- Any required crown-lift pruning to Australian Standard 4373-2007 Pruning of Amenity Trees will be required by a minimally qualified AQF Level 3 Arborist prior to works commencing. Pruning is to be restricted to less than 5% of the total live canopy and this pruning shall be as advised by the project arboriculturist or Council.
- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.
- Should wood roots over 40mm in diameter be found, non-destructive methods are to be utilised to avoid root severance.

Tree HV11 – Brushbox

- Any required crown-lift pruning to Australian Standard 4373-2007 Pruning of Amenity Trees will be required by a minimally qualified AQF Level 3 Arborist prior to works commencing. Pruning is to be restricted to less than 5% of the total live canopy and this pruning shall be as advised by the project arboriculturist or Council.
- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.

Tree HV19 – Brushbox

- Any ground-level change within 6m of the tree is to be directly supervised by an arboriculturist with a minimum AQF5 in arboriculture or equivalent.
- Any required crown-lift pruning to Australian Standard 4373-2007 Pruning of Amenity Trees will be required by a minimally qualified AQF Level 3 Arborist prior to works commencing. Pruning is to be restricted to less than 5% of the total live canopy and this pruning shall be as advised by the project arboriculturist or Council.
- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.
- Should wood roots over 40mm in diameter be found, non-destructive methods are to be utilised to avoid root severance.

Tree HV59 - Brushbox

- Any required crown-lift pruning to Australian Standard 4373-2007 Pruning of Amenity Trees will be required by a minimally qualified AQF Level 3 Arborist prior to works commencing. Pruning is to be restricted to less than 5% of the total live canopy and this pruning shall be as advised by the project arboriculturist or Council.
- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.

Tree HV60 - Brushbox

- Any required crown-lift pruning to Australian Standard 4373-2007 Pruning of Amenity Trees will be required by a minimally qualified AQF Level 3 Arborist prior to works commencing. Pruning is to be restricted to less than 5% of the total live canopy and this pruning shall be as advised by the project arboriculturist or Council.
- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.

Tree HV64 - Brushbox

- Any required crown-lift pruning to Australian Standard 4373-2007 Pruning of Amenity Trees will be required by a minimally qualified AQF Level 3 Arborist prior to works commencing. Pruning is to be restricted to less than 5% of the total live canopy and this pruning shall be as advised by the project arboriculturist or Council.

- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.

Tree HV75 - Tallowwood

- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.

Tree HV79 – London Plane Tree

- Any ground-level change within 11.5m of the tree is to be directly supervised by an arboriculturist with a minimum AQF5 in arboriculture or equivalent.
- Should wood roots over 40mm in diameter be found, non-destructive methods are to be utilised to avoid root severance.
- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.

Tree HV97 – Hills Weeping Fig

- Any ground-level change within 12.6m of the tree is to be directly supervised by an arboriculturist with a minimum AQF5 in arboriculture or equivalent.
- Should wood roots over 40mm in diameter be found, non-destructive methods are to be utilised to avoid root severance.
- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.

Tree HV99 – Hills Weeping Fig

- Any ground-level change within 13.8m of the tree is to be directly supervised by an arboriculturist with a minimum AQF5 in arboriculture or equivalent.
- Should wood roots over 40mm in diameter be found, non-destructive methods are to be utilised to avoid root severance.
- Crown-lift pruning to Australian Standard 4373-2007 Pruning of Amenity Trees will be required by a minimally qualified AQF Level 3 Arborist prior to works commencing. Pruning is to be restricted to less than 10% of the total live canopy and this pruning shall be as advised by the project arboriculturist or Council.
- Tree protection devices are to be placed as advised by the project arboriculturist and prior to any site works commencing.
- Guidelines as per Tree Protection Measures Part 4.1 -5.3 below, prior to and during works.

Tree Protection Measures

4.1 Tree Protection Devices

The tree protection is to be in accordance with the following:

- Tree Protection Devices (TPD) may include mulching, tree guards and other devices other than fencing.
- The TPD must be in place prior to any site works commencing, including clearing, demolition or grading.
- The most appropriate fencing for tree protection is 1.8m chainlink with 50mm metal pole supports. During installation, care must be taken to avoid damage to significant roots. The practicality of providing this fencing on this site must be addressed by the arboriculturist.
- Locate large primary roots by careful removal of soil within the fencing area. Do not drive any posts or pickets into tree roots. Replace soil back over tree roots.
- Nothing should occur inside the tree protection fenced areas, so therefore all access is prohibited for personnel and machinery, storage of fuel, chemicals, cement and site sheds.
- Signage should explain exclusion from the area defined by TPD and carry a contact name for access or advice).
- The TPD cannot be removed, altered, or relocated without the project arborist's prior assessment and approval.

4.2 Stockpiling and Location of Site Sheds

- Any ground identified for proposed stockpiling that is within the TPZ of trees to be retained shall be covered with thick, coarse mulch, placement of wooden pallets over the mulch, covering of the pallets with a tarpaulin (or similar), and the placement of materials on top of this device to prevent loose or potentially contaminating materials from moving into the soil profile.

4.3 Fill Material

- Placement of fill material within the TPZ of trees to be retained should be avoided where possible. Where placement of fill cannot be avoided, the material should be a coarse, gap graded material such as 20 — 50mm crushed basalt or equivalent to provide some aeration to the root zone. Note that roadbase or crushed sandstone or other material containing a high percentage of fines is unacceptable for this purpose.
- The fill material should be consolidated with a non-vibrating roller to minimise compaction of the underlying soil.
- A permeable geotextile may be used beneath the sub-base to prevent migration of the stone into the sub-grade. No fill material should be placed in direct contact with the trunk.

4.4 Fencing and Walls within the SRZ and TPZ of Retained Trees.

- Where fencing and/or masonry walls are to be constructed along site boundaries, they must provide for the presence of any living woody tree roots greater than 50mm diameter.
- Hand digging must occur within the SRZ of trees to be retained.
- For masonry walls or fences it may be acceptable to replace continuous concrete strip footings with suspended in-fill panels (e.g. steel or timber pickets, lattice etc) fixed to pillars.

4.5 Pavements

- Where possible (new) pavements should be avoided within the TPZ of trees to be retained.
- Proposed paved areas within the TPZ of trees to be retained are to be placed above grade to minimise excavations within the root zone, avoiding root severance and damage.

4.6 Landscaping within Tree Root Zones.

- The level of introduced planting media into any proposed landscaped areas within the TPZ is not to be greater than 75mm depth, and be of a coarse, sandy material to avoid development of soil layers that may impede water infiltration.
- Container size of proposed plants within the SRZ of trees should be determined prior to purchase of plants. This is to identify planting locations, and container size of plants at the time of planting. Otherwise, any proposed landscaping within the SRZ must consist of tubestock only. This is required to ensure that damage to tree roots is avoided.
- Mattocks and similar digging instruments must not be used within the TPZ of the trees. Planting holes should be dug carefully by hand with a garden trowel, or similar small tool.
- Where possible, do not plant canopy trees beneath, or within 6 - 8m of, overhead power lines.

4.7 Hygiene Practices

- No washing or rinsing of tools or other equipment, preparation of any mortars, cement mixing, or brick cutting is to occur within 8m up slope of any palms/trees to be retained.

Post Construction Tree Care Measures

5.1 Mulching

The removal of mulch after construction to remove any contaminants and its replacement with a good quality mulch and addition of 10% organic matter will improve beneficial soil micro-organisms, retain moisture and improve aeration and water infiltration.

5.2 Irrigation

An arboriculturist should determine whether irrigation should be carried out during extended periods of drought.

5.3 Pest Management

Monitoring is required, as trees under stress are more prone to insect attack

References

Credit to [REDACTED] for general report layout and several areas of text.

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.

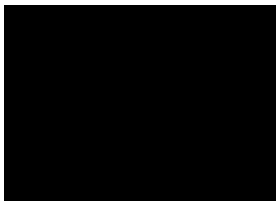
Standards Australia AS4373-2007: *Pruning of Amenity Trees*, Standards Australia, Sydney.

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.

Report prepared by [REDACTED] – June, 2017



[REDACTED]
Consulting arboriculturist and horticulturist.
Tree Surgery Certificate
Advanced Certificate Urban Horticulture
Diploma of Horticulture (Arboriculture) *Credit*
Member of the International Society of Arboriculture (ISA)
ISA Tree Risk Assessment Qualification (TRAQ) 2016

Appendices

7.1 Appendix A - Terms and Definitions

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.

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.

7.2 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

7.3 Appendix C – STARS – 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.

STARS – 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> 						
	<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

7.4 Appendix D – Record of Meeting

The following representatives were sought to provide input on the 13-16 June 2017:

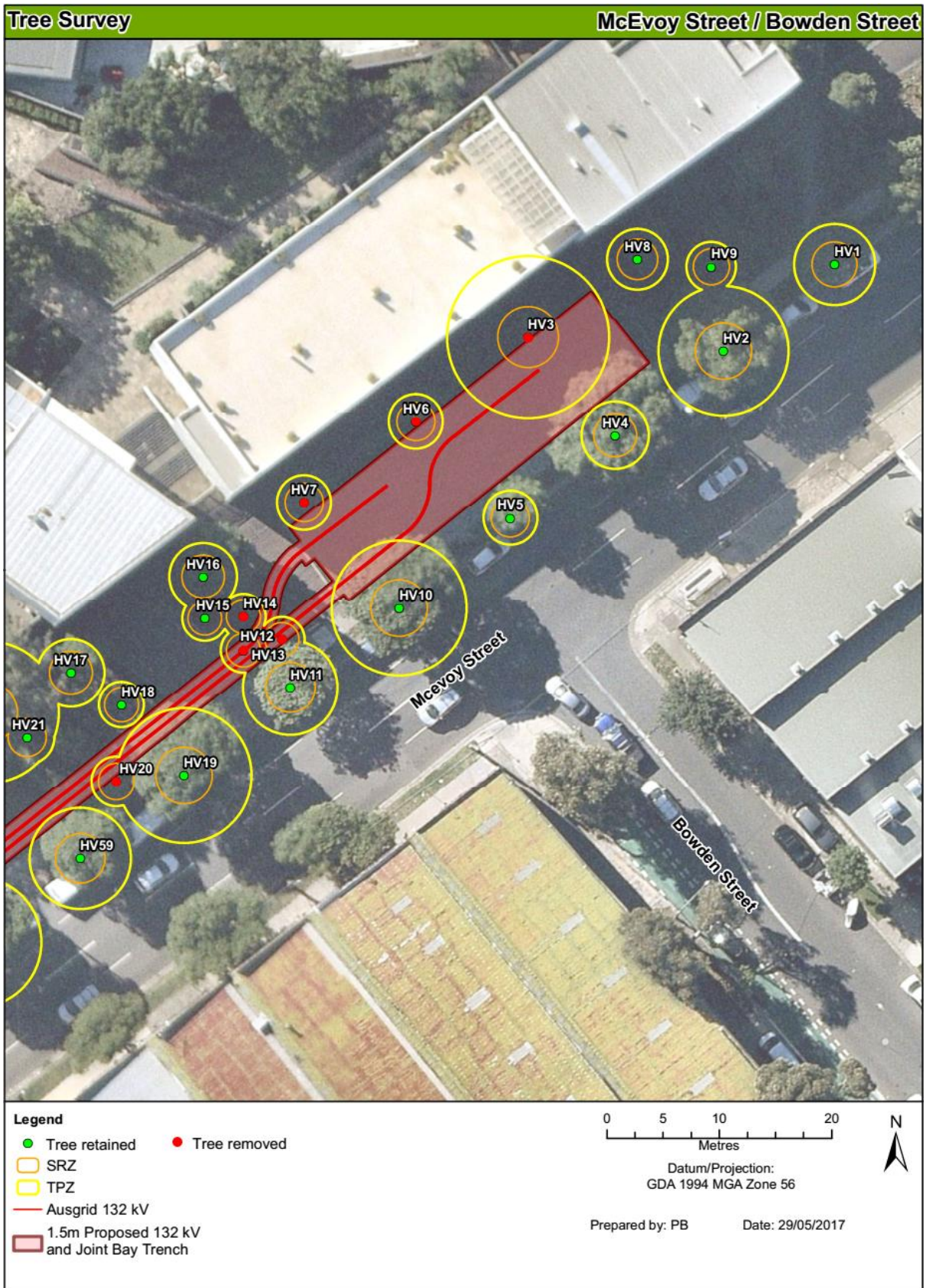
- CDS-JV Construction Project Manager, Local Road Works
- CDS-JV Senior Environment Advisor, Local Road Works
- CDS-JV Design Coordinator, Local Road Works
- [REDACTED] [REDACTED] Landscape Architect.

On site discussion regarding options to amend the State Significant Infrastructure (SSI) for this area were considered. 132kv power utilities are required to be placed in the specified service allocations in the study area. The services cannot be relocated in this instance.

Pruning, non-destructive digging techniques and changes to design have been considered so as to maximize opportunities to retain as many trees as possible.

The urban design and landscape plan will address the planting of trees, where feasible and reasonable, within the SSI boundary in accordance with the Conditions of Approval.

This report incorporates the input from the design, urban landscape and construction, identifies both trees to be retained and those needed to be removed in order to deliver the pieces of infrastructure required by the project and are based on Australian Standard AS 4970-2009: Protection of Trees on Development Sites.



Map 1

Tree Survey

McEvoy Street



Legend		0 5 10 20		N
● Tree retained	● Tree removed	Metres		
○ SRZ		Datum/Projection:		
○ TPZ		GDA 1994 MGA Zone 56		
— Ausgrid 132 kV		Prepared by: PB		Date: 26/05/2017
▭ 1.5m Proposed 132 kV Trench				

Map 2



Legend

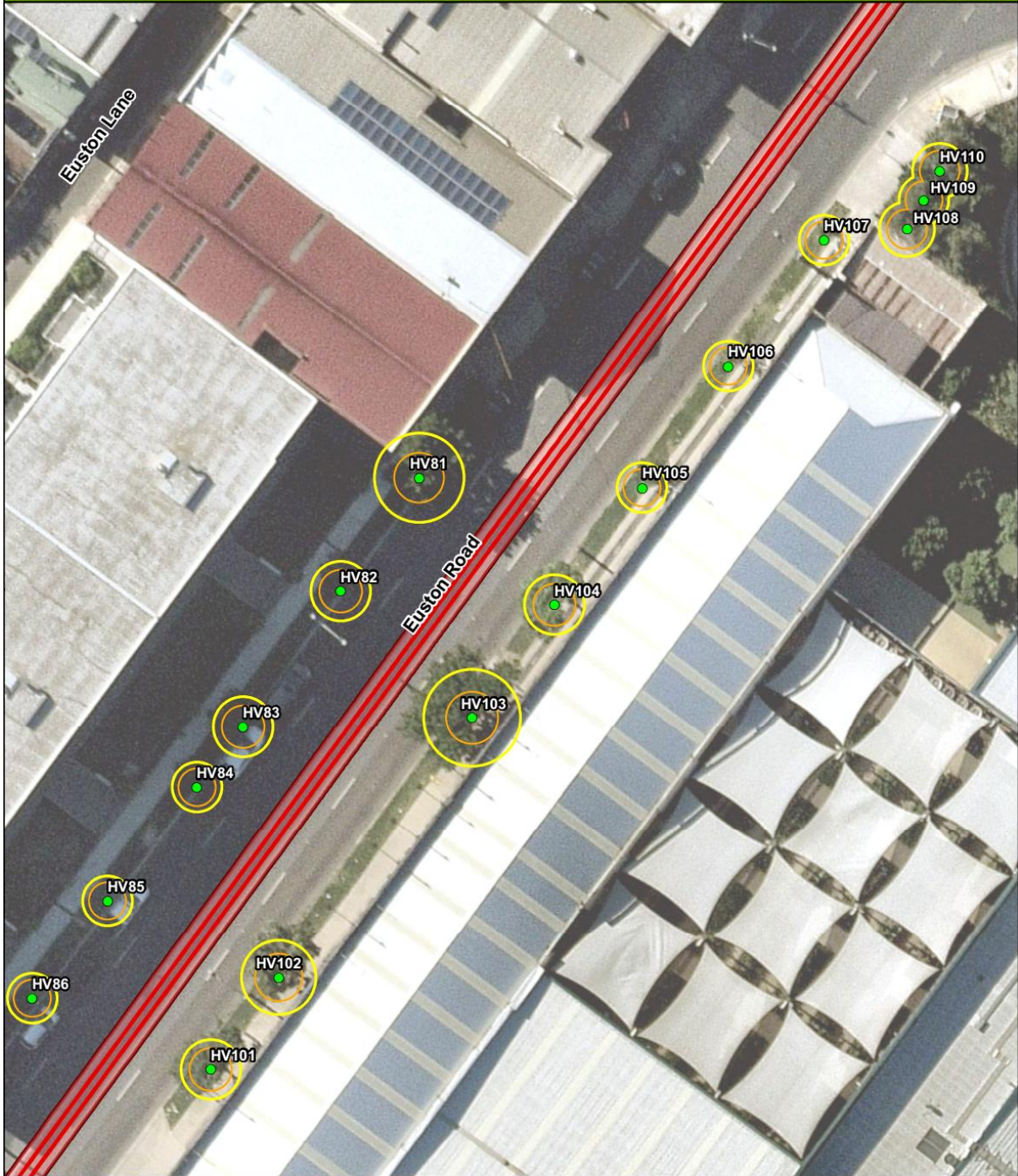
- Tree Retained ● Tree removed
- SRZ
- TPZ
- Ausgrid 132 kV
- ▬ 1.5m Proposed 132 kV Trench

0 5 10 20
Metres

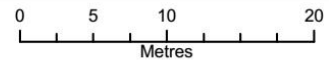
Datum/Projection:
GDA 1994 MGA Zone 56

Prepared by: PB Date: 26/05/2017

Map 3



- Legend**
- Tree Retained
 - Tree removed
 - SRZ
 - TPZ
 - Ausgrid 132 kV
 - ▭ 1.5m Proposed 132 kV Trench

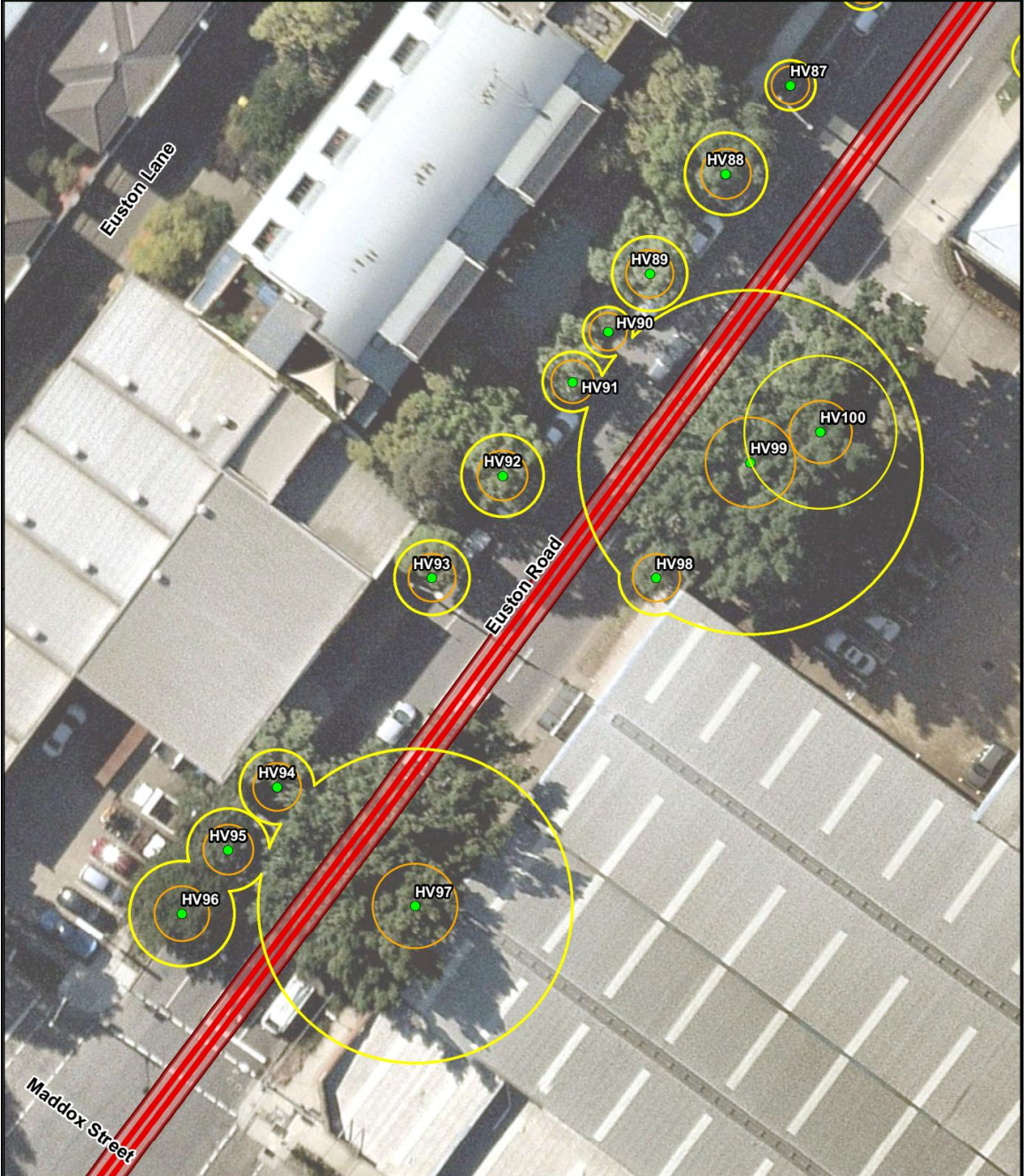


Datum/Projection:
GDA 1994 MGA Zone 56

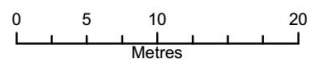


Prepared by: PB Date: 26/05/2017

Map 4



- Legend**
- Tree Retained
 - Tree removed
 - SRZ
 - TPZ
 - Ausgrid 132 kV
 - 1.5m Proposed 132 kV Trench

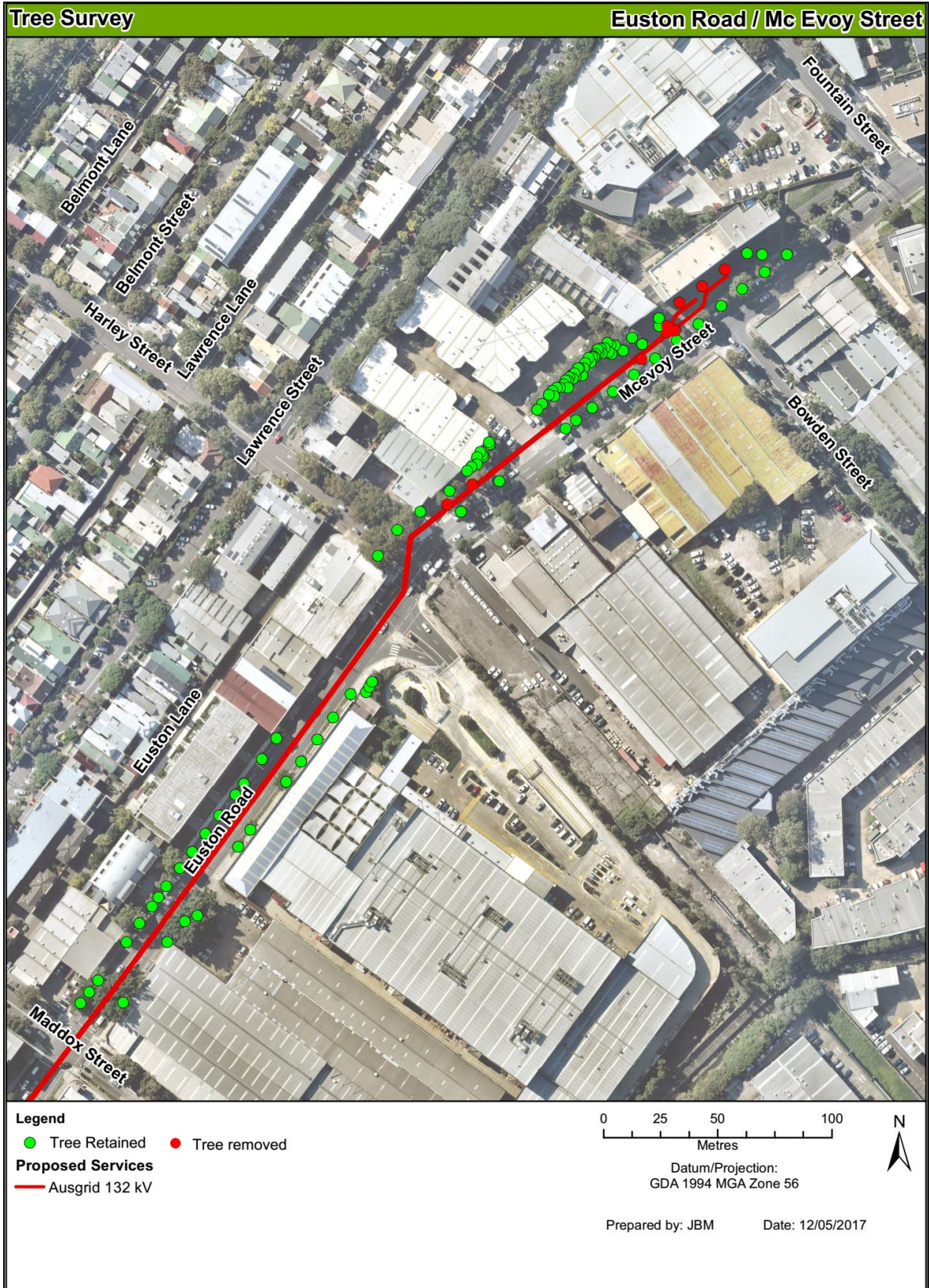


Datum/Projection:
GDA 1994 MGA Zone 56

Prepared by: PB

Date: 26/05/2017

Map 5



7.7 Appendix G - Excerpt of RMS Consistency Review

Roads and Maritime Services, *Consistency Review – Euston Road high voltage power supply modification New M5*, May 2017

1.2 Background

Roads and Maritime prepared an environmental impact statement (the EIS) for the New M5 which considered a range of environmental, social and planning issues. A number of measures to mitigate or manage the potential impacts were identified within the EIS.

The EIS was publicly exhibited between 27 November 2015 and 29 January 2016. A total of 10,147 submissions were received by the Department of Planning and Environment during the public exhibition. A Submissions and Preferred Infrastructure Report was prepared by Roads and Maritime in response to these submissions, as well as changes to the project (as exhibited). The changes were largely focused around design changes in the vicinity of the St Peters interchange and the inclusion of the Green and Golden Bell Frog Habitat Creation and Captive Breeding program at Arncliffe. The report was lodged with the Secretary of the Department of Planning and Environment in March 2016.

After consideration of the EIS and Submissions and Preferred Infrastructure Report, the Minister for Planning approved the New M5 under Part 5.1 and section 115ZB of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 20 April 2016, subject to the conditions of approval being met.

For the purposes of this environmental assessment, the project as described and assessed in the EIS (and as modified in the Submissions and Preferred Infrastructure Report), and consequently approved by the Minister, is referred to as the Approved Project.

1.3 The Approved Project

As part of the Approved Project, Roads and Maritime proposes to undertake upgrades to local roads around the St Peters interchange to ensure safe and efficient connections with the New M5, and to cater for additional traffic demands. As part of these works, Euston Road would be widened between the upgraded Campbell Road / Euston Road intersection and the intersection with Maddox Street, to the north of Sydney Park. In addition, the existing roundabout located at the intersection of Euston Road, Sydney Park Road and Huntley Street would be converted to a signalled intersection. **As a result, existing utilities within Euston Road would be modified to minimise the potential for future traffic impacts during maintenance activities.**

The approved scope of works and activities that are the subject of this consistency assessment were described in the EIS, and amended in the Submissions and Preferred Infrastructure Report.

Figures 1 provides an overview of the approved road widening works and the extent of the boundary as approved in the EIS ending south of the intersection of Euston Road with Maddox Street.

7.8 Appendix H – Schedule of Assessed Trees
Euston & McEvoy St, ALEXANDRIA

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)
HV1	<i>Lophostemon confertus</i> Brushbox	4.5	8	300	Y	G	G-F	Introduced native species. Heavily crown raised, vase shaped.	5A	M	M	2.0	3.6	41
HV2	<i>Lophostemon confertus</i> Brushbox	9	12	475	M	G	G	Introduced native species. Crown raised, twiggy deadwood. Canopy slightly thin.	2A	M	M	2.5	5.8	104
HV3	<i>Lophostemon confertus</i> Brushbox	14	7	600 @ 1.2m AGL	M	G	G	Introduced native species. Multiple stems @ 1.4m AGL. Crown raised.	2A	M	M	2.7	7.2	163
HV4	<i>Lophostemon confertus</i> Brushbox	8	7	250	EM	G	G	Introduced native species. Clear stem to 4m AGL.	2A	M	M	1.9	3.0	28
HV5	<i>Lophostemon confertus</i> Brushbox	7.4	5	200	Y	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	1.7	2.4	18
HV6	<i>Lophostemon confertus</i> Brushbox	7	6	200	Y	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	1.7	2.4	18
HV7	<i>Lophostemon confertus</i> Brushbox	7	6	200	Y	G	G	Introduced native species. Minor girdled root noted.	2A	M	M	1.7	2.4	18
HV8	<i>Lophostemon confertus</i> Brushbox	8	6	225	Y	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	1.8	2.7	23
HV9	<i>Eucalyptus</i> sp. Gum	7	12	185	Y	G-F	P	Native species. Located in middle of garden bed. Main leader and several branches torn out. High percentage of deadwood.	4C	L	L	1.6	2.2	15
HV10	<i>Lophostemon confertus</i> Brushbox	14	12	550	M	G	G	Introduced native species. Co-dominant stems @ 2.5m AGL. Swollen base of stem (typical of species) over kerb.	2A	M	M	2.5	6.0	113
HV11	<i>Lophostemon confertus</i> Brushbox	6	8	350	EM	G	G	Introduced native species. Heavily crown raised, small wound to NE.	2A	M	M	2.2	4.2	55

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)
HV12	<i>Pyrus ussuriensis</i> Manchurian Pear	3.5	2	75	Y	G	G	Introduced exotic species. Located in garden bed. No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV13	<i>Pyrus ussuriensis</i> Manchurian Pear	3	2	75	Y	G	G	Introduced exotic species. No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV14	<i>Pyrus ussuriensis</i> Manchurian Pear	3	2	75	Y	G	G	Introduced exotic species. No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV15	<i>Pyrus ussuriensis</i> Manchurian Pear	3.5	2	75	Y	G	G	Introduced exotic species. No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV16	<i>Lophostemon confertus</i> Brushbox	7.5	8	250	EM	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	1.9	3.0	28
HV17	<i>Lophostemon confertus</i> Brushbox	7.5	5	250	EM	G	G-F	Introduced native species. Leans to east, likely to be phototropic lean. Co-dominant @ 4m AGL. Torn smaller limbs.	2A	M	M	1.9	3.0	28
HV18	<i>Pyrus ussuriensis</i> Manchurian Pear	3.4	2	75	Y	G	G	Introduced exotic species. No special problems noted at time of assessment. A further three (3) Manchurian Pears in garden bed less than 3m in height.	5A	L	L	1.5	2	7
HV19	<i>Lophostemon confertus</i> Brushbox	12.8	16	500	M	G	G	Introduced native species. Heavily crown raised.	2A	M	M	2.5	6.0	113
HV20	<i>Lophostemon confertus</i> Brushbox	5	6	175	Y	G	G-F	Introduced native species. Suppressed, canopy all to north. Twiggy deadwood and thin canopy.	5B	L	L	1.6	2.2	15
HV21	<i>Acacia parramattensis</i> Sydney Green Wattle	6	6 to SE	200	M	F	F-P	Locally native species. Likely to be self sown. Leans heavily to SE. High percentage of deadwood.	4E	L	L	1.7	2.4	18
HV22	<i>Casuarina glauca</i> Swamp She-oak	16.6	10	525 @ 1m AGL	LM	G	G-F	Locally native species. Canopy mainly to East due to surrounding trees in close proximity.	2A	M	M	2.6	6.3	124
HV23	<i>Acacia parramattensis</i> Sydney Green Wattle	8.2	10 to E	200	M	P-F	P	Locally native species. Almost dead, leans into east.	4A	L	L	1.7	2.4	18

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)
HV24	<i>Casuarina glauca</i> Swamp She-oak	13.2	12	425	M	F	G-F	Locally native species. Co-dominant @ 2.4m AGL. Located close to electricity sub-station.	2A	M	M	2.4	5.1	84
HV25	<i>Casuarina glauca</i> Swamp She-oak	4.5	3	75	Y	G	G	Locally native species. Sucker off Tree (HV) 26.	5A	L	L	1.5	2	7
HV26	<i>Casuarina glauca</i> Swamp She-oak	12	7 to S	375 @ .5m AGL	M	G	G	Locally native species. Trifurcate @ 1m AGL.	2A	M	M	2.2	4.5	64
HV27	<i>Melaleuca quinquenervia</i> Broad Leaved Paperbark	9.5	5.5	250 @ 1m AGL.	EM	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	1.9	3.0	28
HV28	<i>Casuarina glauca</i> Swamp She-oak	9	4 to N	300	M	G	F-P	Locally native species. Heavily pruned to clear over car-parking. Poor form and suppressed.	3C	L	L	2.0	3.6	41
HV29	<i>Casuarina glauca</i> Swamp She-oak	16	10	375	M	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	2.2	4.5	64
HV30	<i>Casuarina glauca</i> Swamp She-oak	15	5	250	M	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	1.9	3.0	28
HV31	<i>Casuarina glauca</i> Swamp She-oak	14	6	200	M	G	G	Locally native species. Stem is rubbing on branch from tree (HV) 28.	2A	M	M	1.7	2.4	18
HV32	<i>Casuarina glauca</i> Swamp She-oak	14	5 to W	250	M	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	1.9	3.0	28
HV33	<i>Casuarina glauca</i> Swamp She-oak	14	5	250 AB	EM	G	G	Locally native species. Secondary stem @ .1m AGL.	2A	M	M	1.9	3.0	28
HV34	<i>Casuarina glauca</i> Swamp She-oak	14	5	175	EM	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	1.6	2.2	15
HV35	<i>Casuarina glauca</i> Swamp She-oak	14	5	200	EM	G	G	Locally native species. Peeling bark at base of stem.	2A	M	M	1.7	2.4	18



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)
HV36	<i>Cupaniopsis anacardioides</i> Tuckeroo	3.5	10	100/ 100	EM	G	G-F	Locally native species. Co-dominant stems from root crown.	5A	M	M	1.5	2	10
HV37	<i>Casuarina glauca</i> Swamp She-oak	8	4	175 AB	EM	G	G	Locally native species. Located close to car-park.	2A	M	M	1.6	2.2	15
HV38	<i>Cupaniopsis anacardioides</i> Tuckeroo	5	8	200	EM	G	G	Locally native species. Twisted, sprawling form. Co-dominant @ .5m AGL.	2A	M	M	1.7	2.4	18
HV39	<i>Casuarina glauca</i> Swamp She-oak	16	10	375	M	G	G-F	Locally native species. Canopy slightly thin.	2A	M	M	2.2	4.5	64
HV40	<i>Casuarina glauca</i> Swamp She-oak	15	5	200	EM	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	1.7	2.4	18
HV41	<i>Casuarina glauca</i> Swamp She-oak	15	3	150	Y	G	G-F	Locally native species. Dog-leg in stem @ 2.5m AGL.	2A	M	M	1.5	2	10
HV42	<i>Casuarina glauca</i> Swamp She-oak	8	5 to N	100	Y	G	G	Locally native species. Leans over car-park, suppressed.	3B	M	M	1.5	2	7
HV43 (G)	<i>Casuarina glauca</i> Swamp She-oak	14 5 10	8	150 100 50	EM	G	G	Locally native species. Three (3) stems – G-group, arising from one root crown (suckering as typical of species). Surveyed as one tree. Largest stem diameter used for SRZ & TPZ.	2A	M	M	1.5	2	10
HV44 (G)	<i>Casuarina glauca</i> Swamp She-oak	15	10	200 225 125 175 100 150	EM	G	G	Locally native species. Six (6) stems – G-group, arising from one root crown (suckering as typical of species). Surveyed as one tree. Largest stem diameter used for SRZ & TPZ.	2A	M	M	1.8	2.7	23

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)
HV45	<i>Cupaniopsis anacardioides</i> Tuckeroo	5	10	150 AB	Y	G	G	Locally native species. Three (3) stems – G-group, arising from one root crown (suckering as typical of species). Surveyed as one tree. Largest stem diameter used for SRZ & TPZ.	2A	M	M	1.5	2	10
HV46	<i>Casuarina glauca</i> Swamp She-oak	15	8	300	EM	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	2.0	3.6	41
HV47	<i>Casuarina glauca</i> Swamp She-oak	15	3	175	Y	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	1.6	2.2	15
HV48	<i>Casuarina glauca</i> Swamp She-oak	6	3	100 AB	Y	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	1.5	2	7
HV49	<i>Casuarina glauca</i> Swamp She-oak	14	12	500 AB	M	G	G	Locally native species. Co-dominant @ .4m AGL, tight union	2A	M	M	2.5	6.0	113
HV50	<i>Melaleuca quinquenervia</i> Broad Leaved Paperbark	6	4	100	Y	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	1.5	2	7
HV51	<i>Casuarina glauca</i> Swamp She-oak	14.6	13	375	M	G	G	Locally native species. Low, sprawling habit.	2A	M	M	2.2	4.5	64
HV52	<i>Casuarina glauca</i> Swamp She-oak	14	5	350	M	G	G	Locally native species. Stem sweeps to north, secondary stem noted from root crown.	2A	M	M	2.2	4.2	55
HV53	<i>Casuarina glauca</i> Swamp She-oak	14	10	300/ 125	M	G	G	Locally native species. Sucker from root crown. Main stem co-dominant @ 5m AGL, included with no reaction wood noted.	2A	M	M	2.1	3.9	48
HV54	<i>Casuarina glauca</i> Swamp She-oak	14	6	275	M	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	2.0	3.3	35
HV55	<i>Lophostemon confertus</i> Brushbox	8.5	10	375 AB	M	G	F-G	Introduced native species. Multiple stems, squeezing @ .5m AGL. Poor form.	2D	M	M	2.2	4.5	64
HV56	<i>Casuarina glauca</i> Swamp She-oak	16	12	650 @ 1m AGL.	M	G	G-F	Locally native species. Co-dominant stems with inclusion @ 1.4m AGL. Reaction wood noted but pointy.	2D	M	M	2.8	7.8	191

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)
HV57	<i>Lophostemon confertus</i> Brushbox	7	8 to W	275	EM	G	G	Introduced native species. Canopy orientated to west. Curve to stem.	2A	M	M	2.0	3.3	35
HV58	<i>Melaleuca quinquenervia</i> Broad Leaved Paperbark	9	12	500	M	G	G	Locally native species. Woody aerial roots noted. Secondary stem @ 2m AGL, main stem then bifurcates.	2A	M	M	2.5	6.0	113
HV59	<i>Lophostemon confertus</i> Brushbox	9	9	375	M	G	G	Introduced native species. Crown raised.	2A	M	M	2.2	4.5	64
HV60	<i>Lophostemon confertus</i> Brushbox	12.4	9	475	M	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	2.5	5.8	104
HV61	<i>Lophostemon confertus</i> Brushbox	6.2	9	275	EM	G	G	Introduced native species. Crown raised. Stem sweeps to the north.	2A	M	M	2.0	3.3	35
HV62	<i>Lophostemon confertus</i> Brushbox	5.6	5	125	Y	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	1.5	2	8
HV63	<i>Lophostemon confertus</i> Brushbox	5.6	4	125	Y	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	1.5	2	8
HV64	<i>Lophostemon confertus</i> Brushbox	9.5	12	450 @ 1m AGL	M	G	G	Introduced native species. Deadwood to 40mm.	2A	M	M	2.4	5.4	92
HV65	<i>Melaleuca quinquenervia</i> Broad Leaved Paperbark	9.2	8	300	M	G	G	Locally native species. No special problems noted at time of assessment.	2A	M	M	2.0	3.6	41
HV66	<i>Acacia elata</i> Cedar Wattle	7	8 to N	200	EM	G	P	Native species. Re-shoot from stump. Failed stub still remaining.	5B	L	L	1.7	2.4	18
HV67	<i>Cupaniopsis anacardioides</i> Tuckeroo	7	8 to SE	300	M	G	G	Locally native species. Phototropic lean to South-east. Low branches, ends touching ground.	2A	M	M	2.0	3.6	41

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)
HV68	<i>Melaleuca quinquenervia</i> Broad Leaved Paperbark	9.2	10	400	M	G	G	Locally native species. Co-dominant @ 3.5m AGL.	2A	M	M	2.0	3.6	41
HV69	<i>Cupaniopsis anacardioides</i> Tuckeroo	7	10	400 AB	EM	G	G	Locally native species. Multiple stems from ground level.	2A	M	M	2.3	4.8	72
HV70	<i>Cupaniopsis anacardioides</i> Tuckeroo	7	6	175	EM	G	P	Locally native species. Main leader lost, old termite damage noted. Located close to building.	3B	M	M	1.6	2.2	15
HV71	<i>Lophostemon confertus</i> Brushbox	10.5	10	375	M	G	G	Introduced native species. Co-dominant @ 2.2m AGL.	2A	M	M	2.2	4.5	64
HV72	<i>Casuarina cunninghamiana</i> Swamp She-oak	19	16	650	M	G	F-G	Locally native species. Four (4) stems @ 6m AGL, suspect lopped previously. Large diameter deadwood noted.	2A	M	M	2.8	7.8	191
HV73	<i>Cupaniopsis anacardioides</i> Tuckeroo	5	4	150	Y	G	G	Locally native species. No special problems noted at time of assessment.	5A	L	L	1.5	2	10
HV74	<i>Lophostemon confertus</i> Brushbox	10	5 to E	275	M	G	F-G	Introduced native species. Excessively crown raised over building to west.	2A	M	M	2.0	3.3	35
HV75	<i>Eucalyptus microcorys</i> Tallowwood	13	12	325/ 250	M	G	G-F	Introduced native species. Co-dominant @ .1m AGL. Lots of twiggy deadwood, crown raised to west over building.	2A	M	M	2.3	4.8	72
HV76	<i>Casuarina cunninghamiana</i> Swamp She-oak	14	16	500/ 425	LM	G	G	Locally native species. Secondary stem @ 1m AGL. Lots of twiggy deadwood and deadwood to 40mm in diameter.	2A	M	M	2.8	7.8	191
HV77	<i>Lophostemon confertus</i> Brushbox	6	2.5	100	Y	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	1.5	2	7

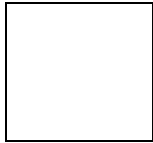
Tree No.	Genus & species Common Name	Ht (m)	Sp (m)	DBH (mm)	Age	V	C	Comments	ULE	TSR	RV	SRZ (m)	TPZ (m)	TPZ (area)
HV78	<i>Dracaena marginata</i> Dragon Tree	4.4	4	325 AB	M	G	G	Introduced exotic species. Multiple stems, located hard against building.	5A	L	L	2.1	3.9	48
HV79	<i>Platanus x acerifolia</i> London Plane Tree	20	18	925	M	G	G	Introduced exotic species. Part of avenue planting on Harley St. No special problems noted at time of assessment.	2A	H	H	3.3	11.2	391
HV80	<i>Platanus x acerifolia</i> London Plane Tree	19	20	650	M	G	G	Introduced exotic species. Minor lean to west, gully pruned for power lines. Crossing/fused limbs noted. Maturing epicormic branches in canopy.	2A	H	H	2.8	7.8	191
HV81	<i>Cupaniopsis anacardioides</i> Tuckeroo	7.6	10	300 @ 1m AGL	M	G	G	Locally native species. Multiple branches @ 1.2m AGL. Crown raised.	2A	M	M	2.0	3.6	41
HV82	<i>Tristaniopsis laurina</i> Watergum	5	4	200 AB	Y	F	F-P	Locally native species. Mechanical damage to stem in several areas. Co-dominant @ 1m AGL. Suckering at base.	5A	L	L	1.7	2.4	18
HV83	<i>Tristaniopsis laurina</i> Watergum	5	5	200	Y	G	G-F	Locally native species. Mechanical damage to stem road side. Stem twists to north-west.	5A	L	L	1.7	2.4	18
HV84	<i>Tristaniopsis laurina</i> Watergum	4	3	150	Y	G	F	Locally native species. Mechanical wounding to lower stem.	5A	L	L	1.5	2	10
HV85	<i>Lophostemon confertus</i> Brushbox	4	3	75	Y	G	F	Introduced native species. Mechanical wounding to lower stem road side. Stem obscured with material wrapped around it.	5A	L	L	1.5	2	7
HV86	<i>Waterhousia floribunda</i> Weeping Lilly Pilly	3	2	50	Y	G	G	Introduced native species. New planting, No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV87	<i>Waterhousia floribunda</i> Weeping Lilly Pilly	3	2	50	Y	G	G	Introduced native species. New planting, No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV88	<i>Lophostemon confertus</i> Brushbox	11	10	275	M	G	G	Introduced native species. Crown raised and small mechanical wounds road side of stem.	2A	M	M	2.0	3.3	35

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)
HV89	<i>Lophostemon confertus</i> Brushbox	8.5	9	250	M	G	G	Introduced native species. Crown raised over road, stubs remain. Twiggy deadwood.	2A	M	M	1.9	3.0	28
HV90	<i>Waterhousia floribunda</i> Weeping Lilly Pilly	3	2	50	Y	G	G	Introduced native species. New planting, No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV91	<i>Lophostemon confertus</i> Brushbox	7.5	7	200	EM	G	G	Introduced native species. Crown raised.	2A	M	M	1.7	2.4	18
HV92	<i>Lophostemon confertus</i> Brushbox	10	10	275	EM	G	G	Introduced native species. Crown raised.	2A	M	M	2.0	3.3	35
HV93	<i>Tristaniopsis laurina</i> Watergum	5.2	6	250 @ 1m	M	G	F	Locally native species. Trifurcate @ 1.1m AGL.	5A	L	L	1.9	3.0	28
HV94	<i>Lophostemon confertus</i> Brushbox	7.2	10	250	M	G	F-P	Introduced native species. Twiggy deadwood noted.	2D	M	M	1.9	3.0	28
HV95	<i>Cupaniopsis anacardioides</i> Tuckeroo	7.5	8	275	M	G	F	Locally native species. Heavily crown raised, epicormic growth noted.	2A	M	M	2.0	3.3	35
HV96	<i>Cupaniopsis anacardioides</i> Tuckeroo	7	12	350 @ 1m AGL	M	G	G	Locally native species. Crown raised, trifurcate @ 1.2m AGL.	2A	M	M	2.2	4.2	55
HV97	<i>Ficus macrocarpa</i> var <i>Hillii</i> Hills Weeping Fig	23	30 N to S	1025	LM	G	G-F	Introduced native species. Canopy restricted to the east due to building. Large roots run laterally along nature-strip. Roughly 450mm diameter limb over kerb lane @ 4.2m.	2A	H	H	3.4	12.6	499
HV98	<i>Tristaniopsis laurina</i> Watergum	4	5	250	M	G	G-F	Locally native species. Decay pockets noted. Multiple stems @ .6m AGL. Crown raised.	5A	L	L	1.9	3.0	28
HV99	<i>Ficus macrocarpa</i> var <i>Hillii</i> Hills Weeping Fig	22.5	32	700/ 900	LM	G	G-F	Introduced native species. Co-dominant @ 1m AGL. Low large diameter limbs over footpath. Smaller diameter (max 50mm) limbs low over kerb side lane. Large roots noted in nature-strip.	2A	H	H	3.6	13.8	598

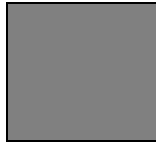
Tree No.	Genus & species Common Name	Ht (m)	Sp (m)	DBH (mm)	Age	V	C	Comments	ULE	TSR	RV	SRZ (m)	TPZ (m)	TPZ (area)
HV100	<i>Melaleuca</i> sp. Paperbark	15	9	*500	M	G	F	Native species. Located on private property. Co-dominant 300mm diameter limb to north previously removed. Twiggy deadwood.	2A	M	M	2.5	6.0	113
HV101	<i>Lophostemon confertus</i> Brushbox	7	8	200	Y	G	G	Introduced native species. Stem sweeps to south, twisted branches.	2A	M	M	1.7	2.4	18
HV102	<i>Lophostemon confertus</i> Brushbox	7	8	250	Y	G	G-F	Introduced native species. Heavily crown raised, poor form. Pruned for bundled cable.	2A	M	M	1.9	3.0	28
HV103	<i>Cupaniopsis anacardioides</i> Tuckeroo	9	13	325	M	G	G-F	Locally native species. Wounds noted road side of stem.	2A	M	M	2.1	3.9	48
HV104	<i>Lophostemon confertus</i> Brushbox	7	8	200	EM	G	G	Introduced native species. No special problems noted at time of assessment.	2A	M	M	1.7	2.4	18
HV105	<i>Lophostemon confertus</i> Brushbox	4.5	4	100	Y	G	G	Introduced native species. New planting, No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV106	<i>Waterhousia floribunda</i> Weeping Lilly Pilly?	2.5	2	50	Y	G	G	Introduced native species. New planting, thin canopy.	5A	L	L	1.5	2	7
HV107	<i>Lophostemon confertus</i> Brushbox	2.5	2	50	Y	G	G-F	Introduced native species. No special problems noted at time of assessment.	5A	L	L	1.5	2	7
HV108	<i>Corymbia maculata</i> Spotted Gum	9	5	175	Y-EM	G	G	Introduced native species. In private property. No special problems noted at time of assessment.	2A	M	M	1.6	2.2	15
HV109	<i>Cupaniopsis anacardioides</i> Tuckeroo	6	5.5	150	Y-EM	G	G	Locally native species. In private property. No special problems noted at time of assessment.	2A	M	M	1.5	2	10
HV110	<i>Corymbia maculata</i> Spotted Gum	9	5	175	Y-EM	G	G	Introduced native species. In private property. No special problems noted at time of assessment.	2A	M	M	1.6	2.2	15



KEY



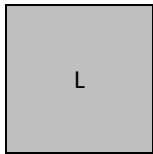
Tree to be retained.



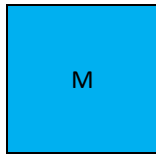
Not classed as 'a tree' under DPE conditions (see Section 1.3).



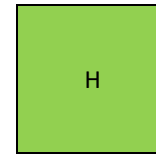
Tree proposed to be removed.



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



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



H 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.



7.9 Appendix I - Photographs



Photo 1 –Red arrow notes Tree HV6 & HV7 that require removal to accommodate works.

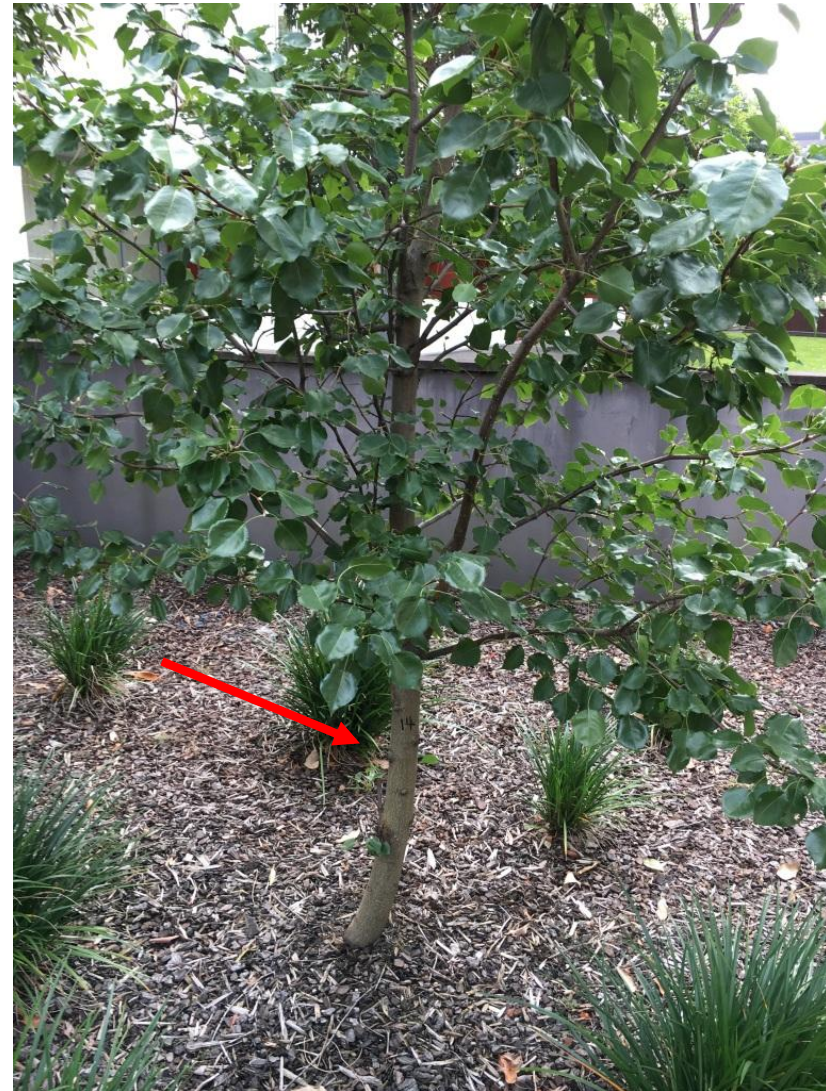


Photo 2 –Tree HV12 – small specimen requires removal to accommodate works.



Photo 3 –Tree HV97, note large diameter roots running along kerb line, it is likely roots will be limited in roadway.

• McEvoy Street and Euston Road, ALEXANDRIA - AIA - June 2017



Photo 4 –Left Tree HV99 and right HV97, significant in the streetscape.



Photo 5 –Tree HV97, red arrow notes low limb over roadway within RMS clearances.

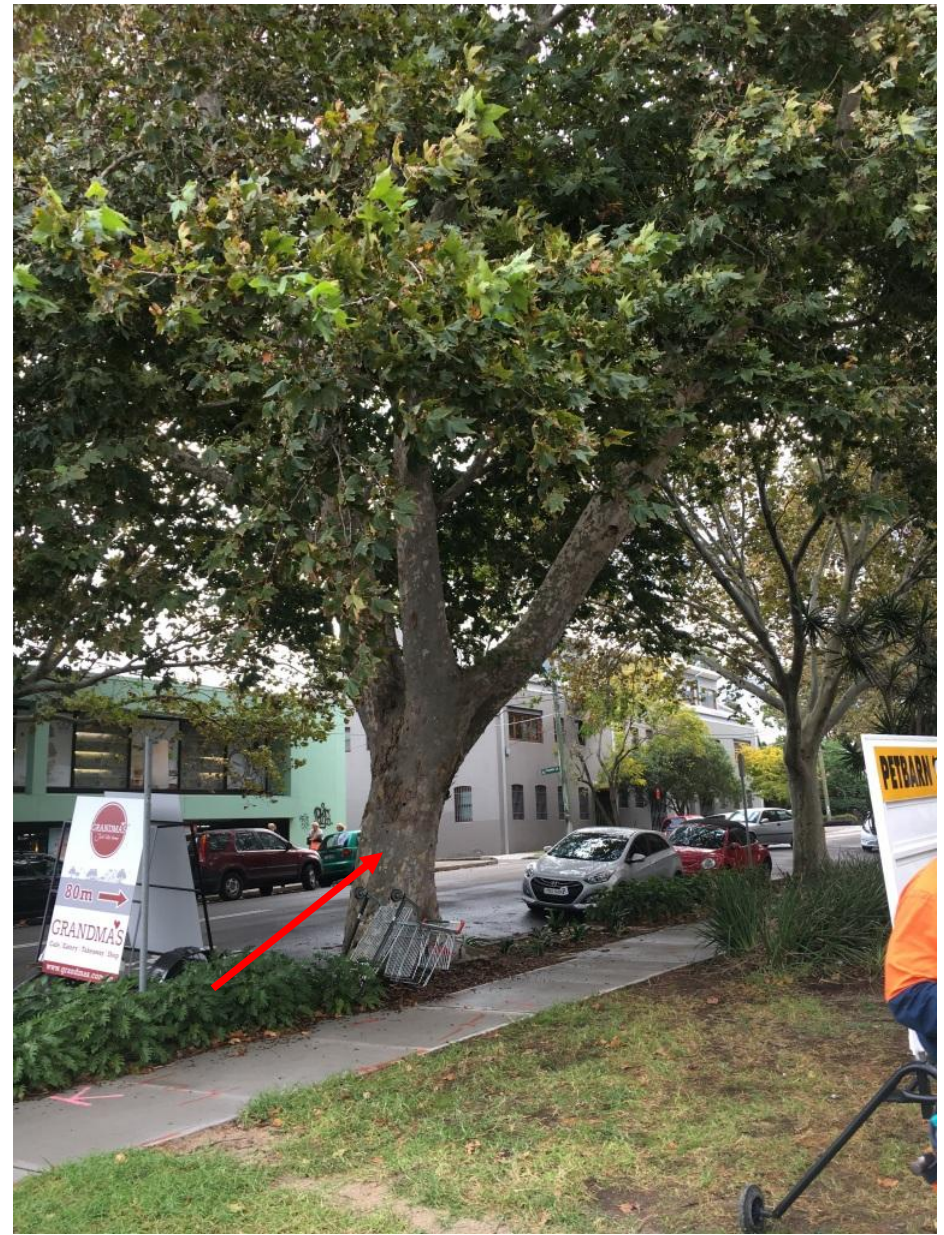


Photo 6 – Tree HV79 (noted with arrow), to be protected and retained during works.



Photo 7 – Tree HV72 (noted with red arrow). Tree requires removal to accommodate proposed works.



Photo 8 – Tree HV3, this Brushbox is located close to new townhouses and will need to be removed to accommodate proposed works. The street avenue will not be affected.



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