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12 September 2019 **Ref: 5338**

Preliminary Arboricultural Report[1]

for part of

Australian War Memorial, (Block 3 Section 39) Campbell, ACT,

for Poppy's Car Park Extension

Prepared for:

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Assessment:

- **Date:** 11 September. 2019
- **By:** Alan Mann & Hayley Crossing

Prepared by:

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Site
Part of Block 3 Section 39, Campbell, that is east of the existing buildings as shown on Figure 1

Brief:
Canopy Tree Experts were engaged to carry out a tree assessment and prepare a Preliminary Arboricultural Assessement of the trees on this site. The Assessment was to conform to the requirements of *'Notifiable Instrument NI2007-422'*, and, AS4970-2009 *'Protection of trees on development sites'*.

Method, terms and limits:
For explanations and terminology used please refer to the Apppenix 1. For method and limitations please refer to Appendix 2.

[1] Preliminary Arboricultural Reports are designated in AS4979-2009 'Protection of trees on development sites' and include indicative Tree Protection Zones (TPZ) to guide development layout.

Tree Location Plan

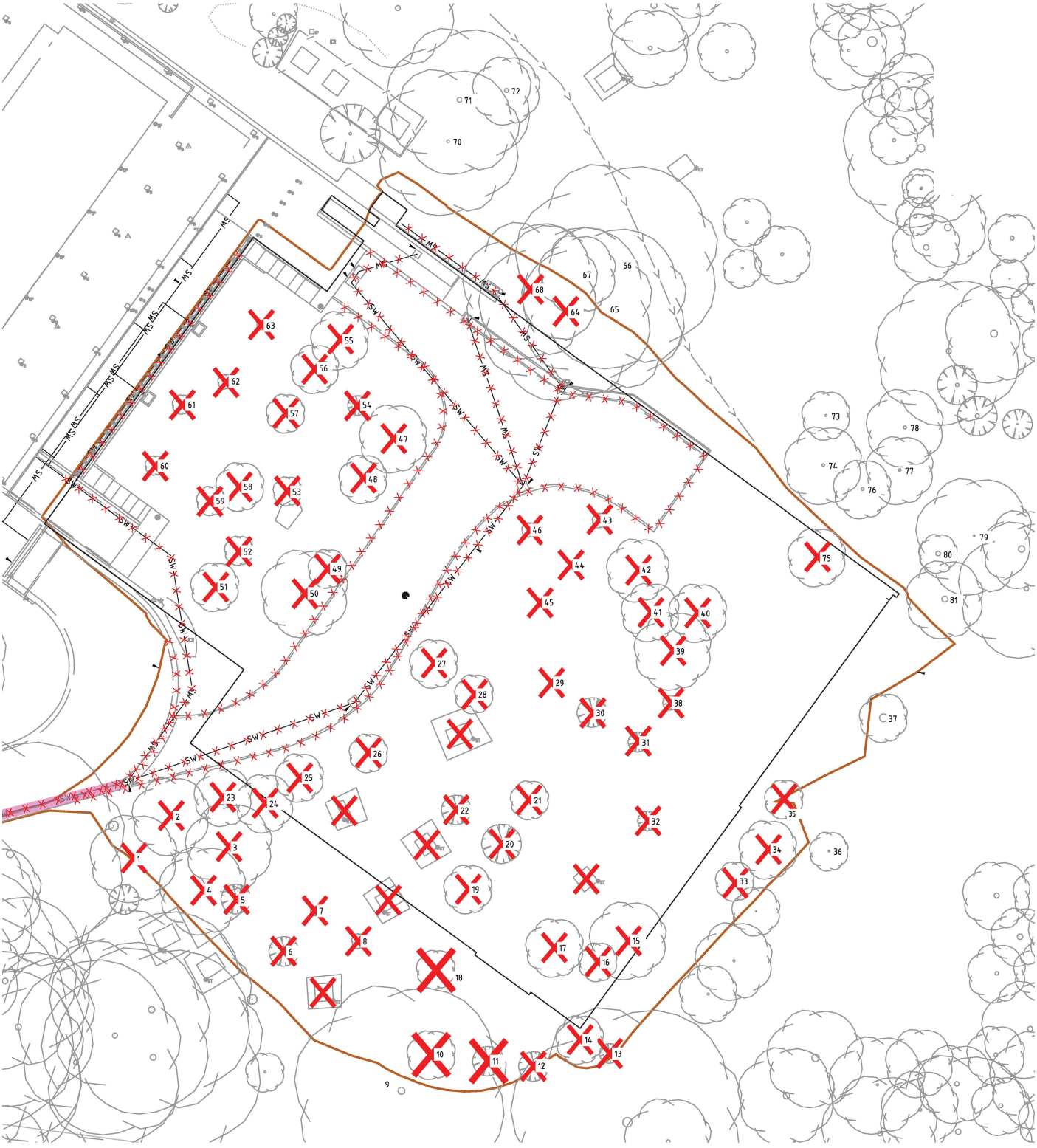

Figure 1 Tree location. The trees were allocated numbers for this assessment. The numbers are shown plotted onto AWM-0269-1005 DD-C-105 Rev B by Spiire dated 10.10.19

Tree Schedule

Tree no.	Species	Height (m)	Directional Canopy Radii (m)				Tree Condition		Tree Protection Status[2]	Tree Quality Classification	Comments	Circumference AS4970 (m)				Radius TPZ^{4970} (m)	$D10^{TPZ}$ (m)	Radius SRZ^{4970} (m)
			North	East	South	West	Health	Structure				1	2	3	4			
1	Eucalyptus melliodora -Yellow Box	9	3	4	4	3	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.70				2.7	1.8	1.9
2	Stump only															0.0	0.0	0.0
3	Eucalyptus pauciflora - Snow Gum	6	5	5	1	3	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree and borers	0.63				2.4	1.6	1.8
4	Eucalyptus pauciflora - Snow Gum	5	2	5	0	0	Good	Poor	Not Regulated	Low	Poor form leaning	0.54				2.1	1.4	1.7
5	Eucalyptus melliodora -Yellow Box	4	0	2	2	0	Good	Poor	Not Regulated	Low	Poor form leaning	0.28				2.0	0.7	1.3
6	Eucalyptus melliodora -Yellow Box	4	1	1	1	1	Fair	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.34				2.0	0.9	1.4
7	Eucalyptus pauciflora - Snow Gum	5	2	1	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.32				2.0	0.8	1.4
8	Tree is missing															0.0	0.0	0.0
9	Eucalyptus viminalis - Ribbon Gum	27	4	5	3	6	Good	Good	Regulated Tree	High	Tall tree clean trunked canopy tree, minor deadwood, scar at base possibly root damage	2.05				7.8	5.3	3.0
10	Eucalyptus elata - River Peppermint Gum	5	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.35				2.0	0.9	1.4
11	Eucalyptus melliodora -Yellow Box	3	1	1	1	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.30				2.0	0.8	1.3
12	Eucalyptus melliodora -Yellow Box	3	1	1	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.35				2.0	0.9	1.4
13	Eucalyptus mannifera - Red Spotted Gum	8	2	3	3	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.45				2.0	1.2	1.6
14	Eucalyptus melliodora -Yellow Box	4	1	2	1	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.26				2.0	0.7	1.3
15	Eucalyptus bicostata - Blue Gum	12	4	4	4	4	Good	Good	Regulated Schedule 2	High		0.90				3.4	2.3	2.1
16	Eucalyptus melliodora -Yellow Box	4	1	2	1	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.33				2.0	0.9	1.4
17	Eucalyptus nicholii - Narrow Leaf Peppermint	8	3	2	3	3	Good	Poor	Not Regulated	Poor	Poor forks	0.67				2.6	1.7	1.9

[2] Note the allocated Tree Protection Status displayed in this column may not strictly apply for this site as they are based on the Tree Protection Act 2005 which applies to lease urban land in the ACT

Tree no.	Species	Height (m)	Directional Canopy Radii (m)				Tree Condition		Tree Protection Status[2]	Tree Quality Classification	Comments	Circumference AS4970 (m)				Radius TPZ[4970] (m)	D10[TPZ] (m)	Radius SRZ[4970] (m)
			North	East	South	West	Health	Structure				1	2	3	4			
18	Eucalyptus polyanthemos - Red Box	8	3	3	2	3	Good	Poor	Not Regulated	Poor	Previously branch failure	0.76				2.9	2.0	2.0
19	Eucalyptus polyanthemos - Red Box	7	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.64				2.4	1.7	1.8
20	Eucalyptus melliodora -Yellow Box	4	2	2	2	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.36				2.0	0.9	1.4
21	Eucalyptus melliodora -Yellow Box	6	2	2	2	1	Poor	Good	Not Regulated	Poor	Poor health	0.44				2.0	1.1	1.6
22	Eucalyptus melliodora -Yellow Box	3	0	3	0	0	Good	Poor	Not Regulated	Poor	Poor form	0.26				2.0	0.7	1.3
23	Eucalyptus melliodora -Yellow Box	4	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.42				2.0	1.1	1.5
24	Eucalyptus melliodora -Yellow Box	7	3	3	3	3	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.47				2.0	1.2	1.6
25	Eucalyptus melliodora -Yellow Box	4	2	3	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.44				2.0	1.1	1.6
26	Eucalyptus melliodora -Yellow Box	4	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.41				2.0	1.1	1.5
27	Eucalyptus melliodora -Yellow Box	7	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.58				2.2	1.5	1.8
28	Eucalyptus polyanthemos - Red Box	8	2	3	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.60				2.3	1.6	1.8
29	Tree is missing															0.0	0.0	0.0
30	Eucalyptus melliodora -Yellow Box	3	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.24				2.0	0.6	1.2
31	Eucalyptus melliodora -Yellow Box	3	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.22				2.0	0.6	1.2
32	Eucalyptus melliodora -Yellow Box	3	1	1	1	1	Poor	Good	Not Regulated	Poor	Poor health scale present	0.20				2.0	0.5	1.1
33	Eucalyptus melliodora -Yellow Box	4	3	2	3	3	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.38				2.0	1.0	1.5
34	Eucalyptus mannifera - Red Spotted Gum	5	2	4	4	3	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree minor trunk damage vandalism	0.65				2.5	1.7	1.8
35	Eucalyptus melliodora -Yellow Box	2	2	2	2	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.30				2.0	0.8	1.3
36	Eucalyptus mannifera - Red Spotted Gum	5	2	2	2	2	Good	Good	Not Regulated	Poor	Almost ring barked by vandals	0.43				2.0	1.1	1.6

Tree no.	Species	Height (m)	Directional Canopy Radii (m)				Tree Condition		Tree Protection Status[2]	Tree Quality Classification	Comments	Circumference AS4970 (m)				Radius TPZ[4970] (m)	D10[TPZ] (m)	Radius SRZ[4970] (m)
			North	East	South	West	Health	Structure				1	2	3	4			
37	Eucalyptus melliodora -Yellow Box	23	7	8	9	11	Poor	Good	Regulated Remnant	Poor	In decline, major deadwood present	2.69				10.3	7.0	3.3
38	Eucalyptus pauciflora - Snow Gum	3	0	0	4	0	Good	Very Poor	Not Regulated	Poor	Leaning tree is held up by stakes	0.20				2.0	0.5	1.1
39	Eucalyptus melliodora -Yellow Box	20	4	7	9	4	Good	Good	Regulated Tree	High	Minor deadwood	1.19				4.5	3.1	2.4
40	Eucalyptus melliodora -Yellow Box	18	4	8	4	3	Good	Fair	Regulated Tree	Medium	Twin leader, remove one leader and it becomes a good quality tree	0.74	0.52			3.5	2.4	2.1
41	Eucalyptus melliodora -Yellow Box	23	7	6	8	5	Good	Good	Regulated Tree	High		1.34				5.1	3.5	2.5
42	Eucalyptus melliodora -Yellow Box	9	3	3	4	4	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.92				3.5	2.4	2.1
43	Tree is missing															0.0	0.0	0.0
44	Eucalyptus melliodora -Yellow Box	4	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.27				2.0	0.7	1.3
45	Eucalyptus melliodora -Yellow Box	3	1	1	1	1	Poor	Good	Not Regulated	Poor	Poor health	0.31				2.0	0.8	1.4
46	Eucalyptus melliodora -Yellow Box	5	3	4	3	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.52				2.0	1.4	1.7
47	Eucalyptus bicostata - Blue Gum	11	4	4	4	4	Fair	Good	Not Regulated	Poor	Thinning canopy	0.88				3.4	2.3	2.1
48	Eucalyptus melliodora -Yellow Box	7	2	2	3	3	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.53				2.0	1.4	1.7
49	Eucalyptus mannifera - Red Spotted Gum	5	1	1	2	2	Fair	Good	Not Regulated	Poor	Scale present	0.35				2.0	0.9	1.4
50	Eucalyptus bicostata - Blue Gum	23	2	12	3	0	Fair	Good	Regulated Schedule 2	Medium	Thinning canopy, scar on trunk and	2.53				9.7	6.6	3.3
51	Eucalyptus bicostata - Blue Gum	7	2	3	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.70				2.7	1.8	1.9
52	Eucalyptus bicostata - Blue Gum	5	1	1	1	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.29				2.0	0.8	1.3
53	Eucalyptus melliodora -Yellow Box	4	2	2	1	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.31				2.0	0.8	1.4
54	Eucalyptus mannifera - Red Spotted Gum	3	1	1	1	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.23				2.0	0.6	1.2
55	Eucalyptus melliodora -Yellow Box	5	0	5	4	0	Good	Poor	Not Regulated	Poor	Poor form	0.55				2.1	1.4	1.7

Tree no.	Species	Height (m)	Directional Canopy Radii (m)				Tree Condition		Tree Protection Status[2]	Tree Quality Classification	Comments	Circumference AS4970 (m)				Radius TPZ[4970] (m)	D10[TPZ] (m)	Radius SRZ[4970] (m)
			North	East	South	West	Health	Structure				1	2	3	4			
56	Eucalyptus mannifera - Red Spotted Gum	5	5	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.37				2.0	1.0	1.5
57	Eucalyptus mannifera - Red Spotted Gum	4	1	2	1	1	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.31				2.0	0.8	1.4
58	Eucalyptus melliodora -Yellow Box	5	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.43				2.0	1.1	1.6
59	Eucalyptus melliodora -Yellow Box	3	0	1	3	2	Good	Fair	Not Regulated	Low	Juvenile tree could develop into a good tree	0.34				2.0	0.9	1.4
60	Eucalyptus bicostata - Blue Gum	8	3	3	3	3	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.89				3.4	2.3	2.1
61	Eucalyptus bicostata - Blue Gum	9	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.60				2.3	1.6	1.8
62	Eucalyptus bicostata - Blue Gum	14	4	4	4	4	Good	Good	Regulated Schedule 2	High		1.70				6.5	4.4	2.8
63	Eucalyptus bicostata - Blue Gum	11	2	2	2	2	Good	Good	Not Regulated	Low	Juvenile tree could develop into a good tree	0.57				2.2	1.5	1.7
64	Eucalyptus bicostata - Blue Gum	28	3	9	8	2	Good	Good	Regulated Schedule 2	High	Copse of trees retain as group, past branch failure at10m	2.05				7.8	5.3	3.0
65	Eucalyptus bicostata - Blue Gum	28	3	9	4	3	Good	Good	Regulated Schedule 2	High	Copse of trees retain as group	1.49				5.7	3.9	2.6
66	Eucalyptus bicostata - Blue Gum	28	2	12	9	2	Good	Fair	Regulated Schedule 2	Medium	Copse of trees retain as group skewed Canopy and cockatoo damage and large first order branch has been removed, deadwood present	1.96				7.5	5.1	2.9
67	Eucalyptus bicostata - Blue Gum	28	4	4	4	7	Good	Fair	Regulated Schedule 2	Medium	Retain as a group, no lower branches	1.66				6.3	4.3	2.7
68	Eucalyptus bicostata - Blue Gum	28	4	4	8	7	Good	Good	Regulated Schedule 2	Medium	Retain as a group, deadwood present and some cockatoo damage	1.92				7.3	5.0	2.9
69	Tree is missing															0.0	0.0	0.0
70	Eucalyptus melliodora -Yellow Box	14	4	9	4	7	Good	Poor	Regulated Tree	Medium	Minor deadwood and poor form	0.89				3.4	2.3	2.1
71	Eucalyptus melliodora -Yellow Box	18	8	4	4	9	Good	Fair	Regulated Tree	Medium	Minor deadwood and poor form	1.54				5.9	4.0	2.6

Tree no.	Species	Height (m)	Directional Canopy Radii (m)				Tree Condition		Tree Protection Status[2]	Tree Quality Classification	Comments	Circumference AS4970 (m)				Radius TPZ[4970] (m)	D10[TPZ] (m)	Radius SRZ[4970] (m)
			North	East	South	West	Health	Structure				1	2	3	4			
72	Eucalyptus melliodora -Yellow Box	22	5	3	2	5	Fair	Fair	Regulated Tree	Poor	Deadwood present, one dead leader	1.22				4.7	3.2	2.4
73	Eucalyptus polyanthemos - Red Box	8	5	3	3	4	Good	Good	Not Regulated	Medium	Minor deadwood	0.80				3.1	2.1	2.0
74	Eucalyptus polyanthemos - Red Box	11	6	3	5	6	Good	Good	Not Regulated	Medium	Minor deadwood	0.87				3.3	2.3	2.1
75	Eucalyptus melliodora -Yellow Box	14	9	6	5	6	Good	Good	Regulated Tree	Medium	Minor deadwood present, scar on trunk	1.37				5.2	3.6	2.5
76	Eucalyptus melliodora -Yellow Box	14	5	4	3	3	Good	Good	Regulated Tree	Medium	Minor deadwood present, scar on trunk	1.16				4.4	3.0	2.4
77	Eucalyptus polyanthemos - Red Box	12	4	4	4	4	Good	Good	Regulated Tree	High	Minor deadwood	0.87				3.3	2.3	2.1
78	Eucalyptus polyanthemos - Red Box	13	6	8	4	5	Good	Good	Regulated Tree	High	Minor deadwood	1.40				5.4	3.6	2.5
79	Eucalyptus bicostata - Blue Gum	8	0	2	0	0	Poor	Very Poor	Not Regulated	Poor	In decline	0.54				2.1	1.4	1.7
80	Eucalyptus bicostata - Blue Gum	16	8	3	3	9	Good	Poor	Regulated Schedule 2	Poor	Two major branch failure	1.50				5.7	3.9	2.6
81	Eucalyptus maidenii - Maiden's Blue Gum	22	12	3	0	9	Good	Good	Regulated Tree	Medium	Deadwood present tight forks and poor form	1.81				6.9	4.7	2.8

Appendix 1

Explanations of Terms Used in the Tree Assessments

This Assessment form has been developed to conform to the requirements of *'Notifiable Instrument NI2007-422'*, and; The AS4970-2009 *'Protection of trees on development sites'*

1. Tree Number

This is a unique sequential identification number allocated to each tree located on the block, overhanging the block or on the verge. The numbers are allocated in Figure 1. Note that these numbers do not match those allocated by Capital Ecology in the 'Australian War Memorial underground carpark – Ecological Impact Assessment' job 2890 dated 12 August 2019

2. Species

The binomial species name is given

3. Height

The tree height was estimated except where the height was determined to be near 12m in which case it was measured using a clinometer from a measured offset. Heights of between 11 and 12 metres are recorded as 11metres.

4. Directional Canopy Radii'

Canopy radii were measured at 90^0 intervals starting at north by stepping. Where it is indicated that a more accurate radius may be important, it was measured by tape measure.

The four radial canopy diameters are shown (in meters) in the 'table. Where measurement of these would require entry onto neighbouring blocks or access was difficult, the measurements have been estimated. If required, the broadest canopy diameter is also measured to determine if a tree is regulated.

5. Health

Is an indication of the tree's health and vigour. It has been judged against the following range:

Very Good (VG), Good (G), Fair (F), Poor (P), or **Very Poor (VP)**
General comments on the tree's health and vigour, and specific comments on evidence of **insect** infestation or **disease** presence in the tree are included in the **Comments Column** if significant.

6. Structure

The structural integrity of the tree has been judged against the following range:

Very Good (VG), Good (G), Fair (F), Poor (P), or **Very Poor (VP)**
General comments on the tree's structure and specific comments on evidence of **Root Zone Disturbance** and **Structural Damage** to the tree are included in the **Comments Column** if significant.

7. Tree Protection Status

The legal status of each of the trees is given as one of the following:

Not Regulated -no protection required, can be retained or removed.

Park Tree -protected by legislation other than the Tree Protection Act 2005. To be protected by the LMPP (Landscape Management and Protection Plan), or otherwise negotiated with Urban treescapes section of TCCS.

Pest Plant - is a weed: no protection required, may be removed without permit (or retained: - depending on level of classification).

Regulated Tree -a tree that, due to its size, is classified as a 'Regulated Tree' under 'The Tree Protection Act 2005' and therefore a permit would be required to:

- Remove the tree;
- Prune the tree, except where the pruning is done by a qualified arborist and is done to the 'Australian Standard for Pruning of Amenity Trees' AS 4373;
- Carry out ground works within 2m of the 'drip line' of the tree.

A Tree Management Plan that is formulated according to the 'Notifiable Instrument NI2007-422: *Tree Protection (Guidelines for Tree Management Plans) Determination 2007' is* designed to act as an application for the Tree Damaging Activities associated with this development.

Registered Tree -a tree that has been nominated to the 'Significant Tree' Register. It may have more rigorous protection measures than a regulated tree (refer to its listing on the Tree Register.

Remnant – a regulated tree that is also a remnant eucalypt. For a Remnant, the Approval Criteria 1 (1) (d) (Inappropriate location) & (e) (substantially affecting solar access) in Disallowable Instrument *Tree Protection (Approval Criteria) Determination (No.2) DI2006-60* do not apply. Remnant eucalypt is not defined in the DI2006-60. In this assessment, it is taken as a eucalypt that was likely to be present at the time of initial subdivision of the land on which it stands.

Schedule 2 – a regulated tree that is of a species listed in Schedule 2 of Disallowable Instrument *Tree Protection (Approval Criteria) Determination (No.2) DI2006-60*. Schedule 2 lists problematic tree species for which the conservator may give approval for removal, if on a block of less than $1200m^2$

Street Tree -protected by legislation other than the Tree Protection Act 2005. To be protected by the Landscape Management and Protection Plan (LMPP).

8. Tree Quality Classification t

These classifications are based on the guidelines in the 'Draft Guidelines for the Preparation of Tree Management Reports for Development on unleased Territory Land 2004 Draft'.

Poor – A poor quality tree is of poor form, structure or health or is likely to represent a significant safety hazard.

Low - A tree that does not have significant amenity value. (the classification Low Quality has been added (by Canopy Tree Experts) to this classification to indicate a tree that has no formal reason for removal other than is lack of significance in the landscape. Some of these trees may have potential to become significant, in which case this is indicated in the comments column.

Medium - A medium quality tree is one of reasonable form, structure and health and is not likely to represent a significant safety hazard.

High – A high quality tree is one that is of good form and condition and without structural defect. It should not represent a significant hazard.

Exceptional- A tree may be considered exceptional on the basis that it is an important part of the landscape due to factors such as prominence of location, contribution to the surrounding landscape and its general appearance. An exceptional tree should be free of any defects that cannot be addressed by remedial treatment. A tree may also be assessed as being exceptional for its **botanic/scientific, cultural** and **natural heritage** values. Trees with significant **botanic/scientific, cultural** and **natural heritage** values may not be ruled out of the exceptional classification due to health, structure or safety concerns.

9. ***Comments***
   Any comments that are relevant are recorded in this column especially those related to health and structure and value.
10. ***Circumference^{4970}***
    Trunk Circumference for the calculation of the Tree Protection Zone as per Australian Standard AS4970-2009 (TPZ^{4970}) is the trunk circumference at 1.4m above ground level. It is expressed in metres and lists the individual trunk circumferences, if there are more than 1 trunk at that height. These are used to calculate the DBH and subsequently the **Radius TPZ^{4970}**. Where there is more than one trunk at 1.4 m AGL then the DBH is calculated by the formula presented in AS4970-2009. (Branches, c.f. trunks, are not included).

11. ***Radius TPZ4970***
    The radius of the Root Protection Zone component of the Tree Protection Zone as calculated from the trunk diameter at 1.4m AGL as recommended by the AS4970-2009. Note the final TPZ^{4970} may need to be extended to include crown protection.

12. ***D10 ^{TPZ}***
    This is a construct of Canopy Tree Experts. It is the distance from the centre of the trunk to a straight-line excavation past the trunk that would excise 10% of the area of the TPZ^{4970}. This measurement has no regulatory standing. It is only an indication how much root loss may occur with the such an excavation but should be interpreted in conjunction with on-site observations as to where active absorptive roots are likely to be, species knowledge and water availability. It is presented here as one example of how a 10% loss of TPZ^{4970} area could occur.

13. ***Radius SRZ^{4970}***
    The figure given here is an approximation of the Structural Root Zone diameter as proposed in AS4970-2009. It is approximate as it is calculated from the circumference at 1.4m AGL + 20%, instead of the measurement at the root buttress. It is an indication only of the size of root ball required for tree stability
    Accurate calculation of the SRZ may be required if a major encroachment into the TPZ^{4970} is envisaged.

Appendix 2– Method and Limits

Method
The inspection of the trees was limited to a visual examination from ground level without the use of boring or testing devices.

The VTA method[3] was used. Defects were identified and evaluated along with the tree's response to those defects, the tree's health and tree's vigour to produce an understanding of the tree's soundness.

Where indications suggest that 'sounding' would be worthwhile the trunk was 'sounded' with a mallet.

Limits
Covers only those trees listed
The information in this report covers only those trees listed and reflects the condition of those trees at the time of the inspection.

Natural variability of trees and their environment
Canopy Tree Experts' arborists conscientiously apply their knowledge in assessing trees and recommending treatments with the aim of achieving the best outcomes for their clients' trees. However, given the natural variability of trees, the arborist may not be able to detect every possible way a tree, or part of a tree, may fail above or below ground. The arborist may not be able to predict when a tree may fail, but the arborist will be able to identify most problems, and the risk of failure will be reduced by having your trees inspected and carrying out of the arborist's recommendations.

Verbal Advice
Caution should be taken in interpreting advice given verbally as understanding and recollection may be unreliable.

Further studies that may be required
No **heritage**, **ecological** or **habitat assessments** were carried out for this site by Canopy Tree Expert's arborists or their agents.

No assessment of the **benefits** of these trees was made.

Tree Risk Assessment
Although the arborist is qualified and authorised to assess risk by both the QTRA and TRAQ methods of assessment, neither method was carried out for this report. However, the training for these authorisations will have influenced the way in which the assessor views the risk associated with trees. A QTRA assessment can be carried out if requested. (www.qtra.co.uk, www.isa-arbor.com)

[3] VTA Method (Visual Tree Assessment) as presented in *The body language of trees1994 Mattheck, Claus & Breloer, Helge, The Stationery office, Norwich, UK pp.118-120.*