5 Parkview Drive, Sydney Olympic Park

Arboricultural Impact Assessment

Prepared for
Data Exchange Network Ltd

21 November 2018

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Abbreviations

Abbreviation	Description
AQF	Australian Qualifications Framework
AS	Australian Standards
DBH	Diameter at Breast Height
ELA	Eco Logical Australia
m	Metre
mm	Millimetre
NDE	Non-Destructive Excavation
NO	Number
NSW	New South Wales
SP	Species
SRZ	Structural Root Zone
TPZ	Tree Protection Zone
VTA	Visual Tree Assessment

1 Background

1.1 Introduction

Eco Logical Australia Pty Ltd (ELA) was commissioned by the Data Exchange Network Ltd to prepare an Arboricultural Impact Assessment for the proposed development at 5 Parkview Drive, Sydney Olympic Park.

The purpose of this report is to:

- identify the trees within the site that are likely to be affected by the proposed works
- assess the current overall health and condition of the subject trees
- evaluate the retention value of the subject trees
- assess likely impacts.

1.2 The proposal

The key features of the proposed development with potential to negatively affect the subject trees can be summarised as follows:

- excavation and construction works
- external plant and equipment
- changes in soil grades

1.3 The study area

The study area is within Sydney Olympic Park in the local government area of Parramatta City Council. A map of the study area is in **Appendix A**.

1.4 The subject trees

A total of **94** subject trees were inspected on 14 September 2018. Further information, observations and measurements specific to each of the subject trees can be found in **Chapter 3.**

1.5 Documents and plans referenced

The conclusions and recommendations of this report are based on the *Australian Standard, AS 4970-2009, Protection of Trees on Development Sites*, the findings from the site inspections and analysis of the following documents/plans:

- POC+P Architects *5 Parkview Drive, Sydney Olympic Park NSW 2127, Site Plan Proposed, Revision D* dated 19/10/18
- Knox & Partners, *Sydney Olympic Park Authority, Master Plan 2030 Significant Tree Register* dated 04.12.08

2 Method

2.1 Visual tree assessment

The subject trees were assessed in accordance with a stage one visual tree assessment (VTA) as formulated by Mattheck & Breloer (1994)[1], and practices consistent with modern arboriculture.

The following limitations apply to this methodology:

- Trees were inspected from ground level, without the use of any invasive or diagnostic tools and testing.
- No aerial inspections or root mapping was undertaken.
- Tree heights, canopy spread and diameter at breast height (DBH) was estimated, unless otherwise stated.
- Tree identification was based on broad taxonomical features present and visible from ground level at the time of inspection.

2.2 Retention Value

The retention value/importance of a tree or group of trees, is determined using a combination of environmental, cultural, physical and social values.

- **Low:** These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.
- **Medium:** These trees are moderately important for retention. Their removal should only be considered if adversely affected by the proposed works and all other alternatives have been considered and exhausted.
- **High:** These trees are considered important and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by *Australian Standard AS4970 - Protection of trees on development sites*.

This tree retention assessment has been undertaken in accordance with the *Institute of Australian Consulting Arboriculturists* (IACA) *Significance of a Tree, Assessment Rating System* (STARS). Further details and assessment criteria are in **Appendix C**.

[1] VTA is an internationally recognised practice in the visual assessment of trees as prescribed by Mattheck, C. and Breloer, H. 1994. 'Field Guide for Visual Tree Assessment' *Arboricultural Journal*, Vol 18 pp 1-23.

2.3 Protection zones

- **Tree protection zone (TPZ):** The TPZ is the combination of crown and root area (as defined by AS 4970-2009) that requires restriction of access during the construction process. Tree sensitive construction measures must be implemented if works are to proceed within the Tree Protection Zone.
- **Structural root zone (SRZ):** The SRZ is the area of the root system (as defined by AS 4970-2009) used for stability, mechanical support and anchorage of the tree. It is critical for the support and stability of trees. Severance of roots within the SRZ is not recommended as it may lead to the destabilisation and/or decline of the tree.

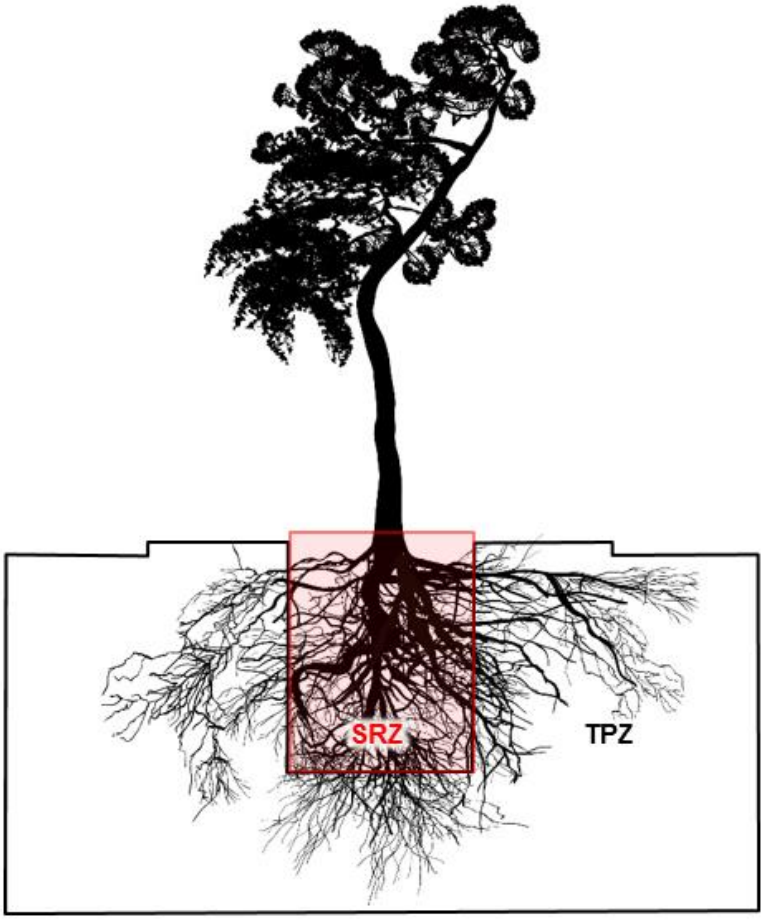

Figure 1: Indicative TPZ and SRZ

2.4 Impacts within the TPZ

- **No impact (0%):** No likely or foreseeable encroachment within the TPZ.
- **Low impact (<10%):** If the proposed encroachment is less than 10% (total area) of the TPZ, and outside of the SRZ, detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere.
- **Medium impact (<20%):** If the proposed encroachment is greater than 10% of the TPZ and outside of the SRZ, the project arborist must demonstrate that the tree(s) remain viable. The area lost to this encroachment should be compensated for elsewhere. All work within the TPZ must be carried out under the supervision of the project arborist.
- **High impact (>20%):** If the proposed encroachment is greater than 20% of the TPZ the SRZ may be impacted. Tree sensitive construction techniques may be used for minor works within this area providing no structural roots are likely to be impacted, and the project arborist can demonstrate that the tree(s) remain viable. Root investigation by non-destructive methods is essential for any proposed works within this area.

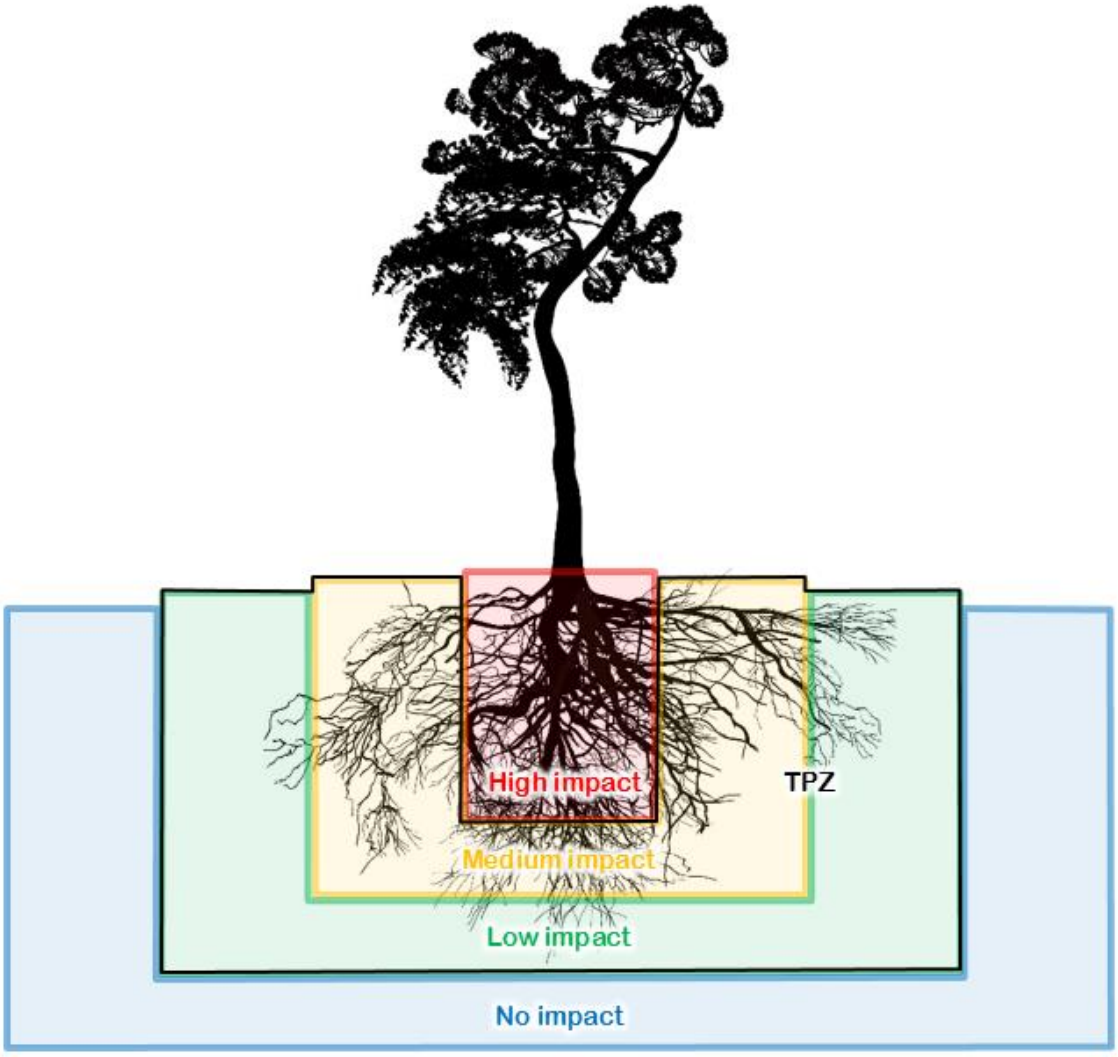

Figure 2: Indicative zones of impact within the TPZ

2.5 Mitigation measures

Encroachment within the TPZ must be offset with a range of mitigation measures to ensure that impacts to the subject tree(s) are reduced or restricted wherever possible. Mitigation must be increased relative to the level of encroachment within the TPZ to ensure the subject tree remains viable. **Table 1** outlines mitigation requirements under AS 4970-2009 within each category of encroachment.

Table 1: Mitigation measures

Impact	Requirements under AS 4970-2009	Mitigation (design phase)	Mitigation (construction phase)
Low impact (<10%)	• The area lost to this encroachment should be compensated for elsewhere, contiguous with the TPZ. • Detailed root investigations should not be required.	• N/A	• The area lost to this encroachment should be compensated for elsewhere, contiguous with the TPZ. • Tree protection must be installed.
Medium impact (<20%) **High impact** (>20%)	• The project arborist must demonstrate the tree(s) would remain viable. • Root investigation by non-destructive methods may be required. • Consideration of relevant factors including: Root location and distribution, tree species, condition, site constraints and design factors. • The area lost to this encroachment should be compensated for elsewhere, contiguous with the TPZ.	The following design changes should be considered to retain trees where practicable, considering the retention value of the tree and the complexity and cost of the change. • Relocate services/pathways outside of tree protection zones • Design services to be installed at a minimum depth of 1200mm below ground to avoid impact to the root zones of trees. • Design pathways to be installed on or above grade, minimising/eliminating excavation within tree protection zones. • Design pathways using porous materials (eco-paving, porous asphalt, decomposed granite) to allow water and oxygen to reach the root zone. • Design pathways using tree sensitive techniques (pier and beam, suspended slabs). • The area lost to encroachment should be compensated for elsewhere.	• The area lost to this encroachment should be compensated for elsewhere, contiguous with the TPZ. • The project arborist would be consulted for any works within the TPZ. • Tree protection must be installed. • Tree sensitive techniques can be used to install services within the TPZ. Horizontal directional drilling (HDD), boring, non-destructive excavation (NDE). • Location and distribution of roots may be determined through non-destructive excavation (NDE) methods such as hydro-vacuum excavation (sucker truck), air spade and manual excavation. • Removal of existing hard surfaces should be undertaken manually to avoid root damage.

3 Discussion

Table 2 shows the results of the arboriculture assessment. Key points are:

- **High impact (>20%):** **8** trees will be subject to a major encroachment (>20%) within the TPZ. These trees are unable to be sustainably retained without substantial modification of the proposal. Trees in this category have low retention values.

- **Medium impact (<20%):** **5** trees will be subject to a medium impact <20% of the TPZ. More detailed assessments will be required to determine the suitability of retention. Trees in this category have the following retention values:
    - **4** trees with a low retention value, including Tree 21a which is dead
    - **1** tree with a high retention value.

- **Low impact (<10%):** **12** trees will be subject to a low impact within the TPZ. The anticipated low impact of the proposed development will have negligible impacts to the trees' health, vigour or stability. Under the current proposal, these trees can be successfully retained. Trees within this category have the following retention values:
    - **10** trees with a low retention value, including Tree 19 which is dead
    - **2** trees with a high retention value, including Tree 16 which is listed on the Sydney Olympic Park Authority Master Plan 2030 Significant Tree Register

- **No impact:** **69** trees will not be impacted by the proposed development. Under the current proposal, these trees can be successfully retained. Of these:
    - **15** trees are of high retention
    - **54** trees are of low retention

Table 2: Results of the arboricultural assessment

Tree	Botanical Name	Trees in Group	Height (m)	Spread (m)	DBH(mm)	TPZ (mm)	SRZ (mm)	Retention Value	Impacts	Comments
1	*Syncarpia glomulifera*	1	8	1	100	2000	1500	Low	**No Impact: 0%**	
2	*Eucalyptus punctata*	1	12	10	300	3600	2000	High	**No Impact: 0%**	
3	*Eucalyptus sideroxylon*	1	12	10	400	4800	2300	High	**No Impact: 0%**	
4	*Eucalyptus sideroxylon*	1	15	12	500	6000	2500	Low	**Low Impact: <10%**	
5	*Eucalyptus sideroxylon*	1	10	8	350	4200	2100	Low	**No Impact: 0%**	
6	*Eucalyptus punctata*	1	15	10	400	4800	2300	Low	**Low Impact: <10%**	
7	*Corymbia maculata*	1	15	8	300	3600	2000	High	**Low Impact: <10%**	
8	*Corymbia maculata*	1	18	12	400	4800	2300	High	**Low Impact: <10%**	
9	*Corymbia maculata*	1	18	15	450	5400	2400	High	**Low Impact: <10%**	
10	*Eucalyptus sp*	1	8	8	200	2400	1700	Low	**No Impact: 0%**	
11	*Eucalyptus sp*	1	6	8	300	3600	2000	Low	**No Impact: 0%**	
12	*Eucalyptus moluccana*	1	8	6	250	3000	1800	High	**No Impact: 0%**	
13	*Eucalyptus sp*	1	8	8	100	2000	1500	Low	**No Impact: 0%**	
14	*Eucalyptus scoparia*	1	12	12	600	7200	2700	Low	**Low Impact: <10%**	
15	*Eucalyptus scoparia*	1	12	10	350	4200	2100	Low	**Low Impact: <10%**	
16	*Eucalyptus microcorys*	1	18	20	800	9600	3000	High	**Low Impact: <10%**	Tree is listed on SOPA Significant Tree Register
17	*E scoparia*	1	12	10	400	4800	2300	Low	**Low Impact: <10%**	
18	*Corymbia maculata*	1	10	6	350	4200	2100	Low	**No Impact: 0%**	
19	*Eucalyptus sp*	1	12	10	350	4200	2100	Low	**Low Impact: <10%**	
20	*E scoparia*	1	12	8	350	4200	2100	Low	**Low Impact: <10%**	Dead tree
21	*E sideroxylon*	1	18	10	400	4800	2300	Low	**Low Impact: <10%**	
21a	*Eucalyptus sp*	1	18	10	600	7200	2700	Low	**Low Impact: <10%**	Dead tree
22	*Eucalyptus microcorys*	1	18	12	500	6000	2500	Low	**Low Impact: <10%**	
23	*Eucalyptus microcorys*	1	18	10	600	7200	2700	Low	**Low Impact: <10%**	
24	*Eucalyptus microcorys*	1	12	10	400	4800	2300	Low	**No Impact: 0%**	
25	*Eucalyptus microcorys*	1	12	10	450	5400	2400	Low	**No Impact: 0%**	

Tree	Botanical Name	Trees in Group	Height (m)	Spread (m)	DBH(mm)	TPZ (mm)	SRZ (mm)	Retention Value	Impacts	Comments
26	*Eucalyptus microcorys*	1	15	12	600	7200	2700	Low	**Low Impact: <10%**	
27	*Callistemon citrinus*	1	5	5	200	2400	1700	Low	**Low Impact: <10%**	
28	*Melaleuca quinquenervia*	1	7	6	350	4200	2100	Low	**High Impact: >20%**	
29	*Melaleuca quinquenervia*	1	10	5	200	2400	1700	Low	**High Impact: >20%**	
30	*Melaleuca quinquenervia*	1	10	4	200	2400	1700	Low	**High Impact: >20%**	
31	*Melaleuca quinquenervia*	1	8	2	100	2000	1500	Low	**Low Impact: <10%**	
32	*Melaleuca quinquenervia*	1	10	4	300	3600	2000	Low	**Low Impact: <10%**	
33	*Melaleuca quinquenervia*	1	10	2	100	2000	1500	Low	**Low Impact: <10%**	
34	*Melaleuca quinquenervia*	1	10	2	150	2000	1500	Low	**Low Impact: <10%**	
35	*Melaleuca quinquenervia*	1	10	2	250	3000	1800	Low	**Low Impact: <10%**	
36	*Ficus macrophylla*	1	10	20	850	10200	3100	High	**Low Impact: <10%**	
37	*M linearifolia*	1	8	4	150	2000	1500	Low	**No Impact: 0%**	
38	*Acacia sp*	1	6	4	100	2000	1500	Low	**Low Impact: <10%**	
39	*M linearifolia*	1	5	3	150	2000	1500	Low	**Low Impact: <10%**	
40	*M linearifolia*	1	5	4	150	2000	1500	Low	**No Impact: 0%**	
41	*M linearifolia*	1	6	4	200	2400	1700	Low	**No Impact: 0%**	
42	*M linearifolia*	1	8	4	200	2400	1700	Low	**Low Impact: <10%**	
43	*M linearifolia*	1	8	4	200	2400	1700	Low	**No Impact: 0%**	
44	*Acacia sp*	1	8	4	200	2400	1700	Low	**Low Impact: <10%**	
45	*Ficus rubignosa*	1	10	20	1050	12600	3400	High	**Low Impact: <10%**	
46	*Ficus macrophylla*	1	12	20	1400	16800	3800	High	**Low Impact: <10%**	
47	*Jacaranda mimosifolia*	1	8	4	150	2000	1500	Low	**Low Impact: <10%**	
48	*Callistemon viminalis*	7	5	3	200	2400	1700	Low	**Low Impact: <10%**	
49	*Eucalyptus microcorys*	1	15	12	500	6000	2500	Low	**High Impact: >20%**	
50	*Eucalyptus microcorys*	1	15	10	400	4800	2300	Low	**High Impact: >20%**	
51	*Eucalyptus microcorys*	1	15	8	400	4800	2300	Low	**Low Impact: <10%**	
52	*Eucalyptus microcorys*	1	15	12	600	7200	2700	Low	**High Impact: >20%**	
53	*Callistemon viminalis*	5	5	5	250	3000	1800	Low	**Medium Impact: <20%**	
54	*Jacaranda*	1	5	5	200	2400	1700	Low	**Low Impact: <10%**	

Tree	Botanical Name	Trees in Group	Height (m)	Spread (m)	DBH(mm)	TPZ (mm)	SRZ (mm)	Retention Value	Impacts	Comments
55	*Jacaranda*	1	5	5	300	3600	2000	Low	**No Impact: 0%**	
56	*Acer palmatum*	1	5	5	250	3000	1800	Low	**Low Impact: <10%**	
57	*Brachychiton acerifolius*	1	6	4	250	3000	1800	Low	**High Impact: >20%**	
58	*Jacaranda mimosifolia*	1	6	6	300	3600	2000	Low	**High Impact: >20%**	
59	*Jacaranda mimosifolia*	1	6	5	250	3000	1800	Low	**No Impact: 0%**	
60	*Jacaranda mimosifolia*	1	6	5	250	3000	1800	Low	**No Impact: 0%**	
61	*Acer sp*	1	5	4	100	2000	1500	Low	**No Impact: 0%**	
62	*Jacaranda mimosifolia*	1	6	5	300	3600	2000	Low	**No Impact: 0%**	
63	*Jacaranda mimosifolia*	1	6	5	100	2000	1500	Low	**No Impact: 0%**	
64	*Brachychiton acerifolius*	1	8	6	400	4800	2300	Low	**No Impact: 0%**	
65	*Jacaranda mimosifolia*	1	5	6	300	3600	2000	Low	**Medium Impact: <20%**	
66	*Ficus macrophylla*	1	8	8	1000	12000	3300	Low	**Low Impact: <10%**	
67	*Jacaranda mimosifolia*	1	5	5	200	2400	1700	Low	**Low Impact: <10%**	
68	*E scoparia*	1	10	8	400	4800	2300	Low	**Low Impact: <10%**	
69	*E scoparia*	1	8	8	400	4800	2300	Low	**Medium Impact: <20%**	
70	*M linearifolia*	1	8	2	150	2000	1500	Low	**No Impact: 0%**	
71	*Acer sp*	1	6	5	150	2000	1500	Low	**No Impact: 0%**	
72	*Callistemon citrinus*	4	6	5	300	3600	2000	Low	**High Impact: >20%**	
73	*Lophostemon confertus*	1	15	10	650	7800	2800	High	**High Impact: >20%**	
74	*Lophostemon confertus*	1	15	10	650	7800	2800	High	**Low Impact: <10%**	
75	*Lophostemon confertus*	1	15	10	650	7800	2800	High	**Low Impact: <10%**	
76	*Lophostemon confertus*	1	15	10	300	3600	2000	High	**Low Impact: <10%**	
77	*Lophostemon confertus*	1	15	10	800	9600	3000	High	**Low Impact: <10%**	
78	*Lophostemon confertus*	1	15	10	600	7200	2700	High	**Low Impact: <10%**	
79	*Lophostemon confertus*	1	15	10	600	7200	2700	High	**Low Impact: <10%**	
80	*Lophostemon confertus*	1	15	10	800	9600	3000	High	**Low Impact: <10%**	

4 Recommendations

- **Tree 16** (*Eucalyptus microcorys*) has a high retention value and should be retained and protected within an exclusion area within the dripline of the tree canopy. This tree has been identified as being listed on the *Sydney Olympic Park Authority Master Plan 2030 Significant Tree Register* (page 14).
- Crown maintenance and deadwood removal from large trees over car parks and frequently used areas.
- Crown lifting where required over car parks.
- Remove any dead trees (Tree 19 and Tree 21A).
- All tree work (pruning or removal) is to be carried out by an arborist with a minimum AQF Level 3 qualification in Arboriculture.
- All tree work shall be in accordance with Australian Standard AS 4373-2007, Pruning of Amenity Trees and the NSW WorkCover Code of Practice for the Amenity Tree Industry (1998).
- Permission must be granted from the relevant consent authority, prior to removing or pruning of any of the subject trees.
- Any loss of trees should be offset with replacement planting in consultation with SOPA.

5 Tree protection plan

5.1 Tree protection measures

The following are tree protection measures required for trees to be retained:

- Tree protection fencing shall be established around the perimeter of the TPZ. If the protective fencing requires temporary removal, trunk, branch and ground protection shall be installed and must comply with *AS 4970-2009 - Protection of trees on development sites*. Existing fencing and site hoarding may be used as tree protection fencing.
- If temporary access for machinery is required within the TPZ, ground protection measures shall be required. The purpose of ground protection is to prevent root damage and soil compaction within the TPZ. Ground protection may include a permeable membrane such as geotextile fabric beneath a layer of mulch, crushed rock or rumble boards.
- Any additional construction activities within the TPZ of the subject trees must be assessed and approved by the project arborist and must comply with *AS 4970-2009 - Protection of trees on development sites.*

Further information and guidelines on tree protection are in **Appendix B**.

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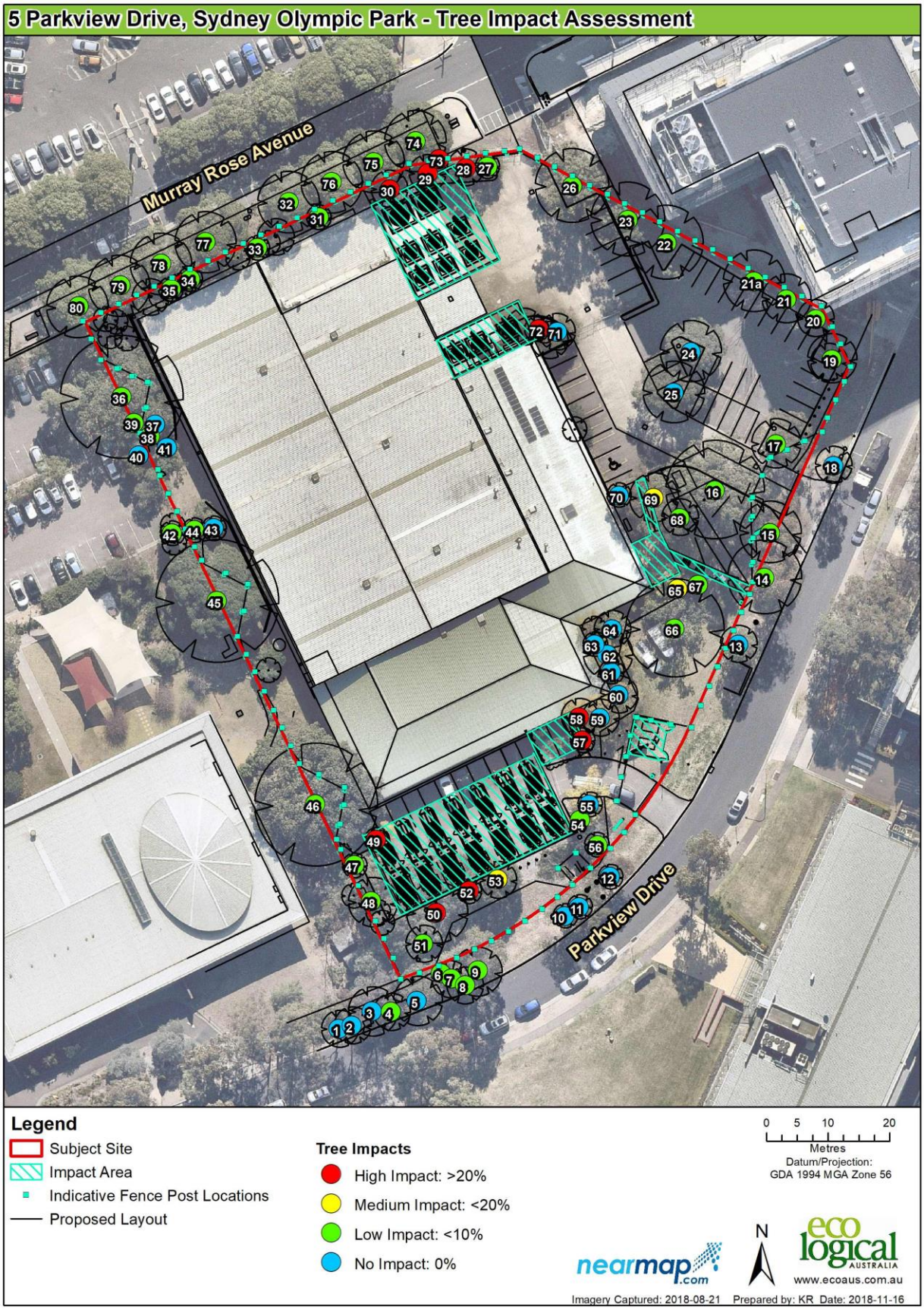
Appendix A Tree impacts



Appendix B Tree Protection Guidelines

The following tree protection guidelines must be implemented during the construction period if no tree-specific recommendations are detailed.

Tree protection fencing

The TPZ is a restricted area delineated by protective fencing or the use of an existing structure (such as a wall or fence).

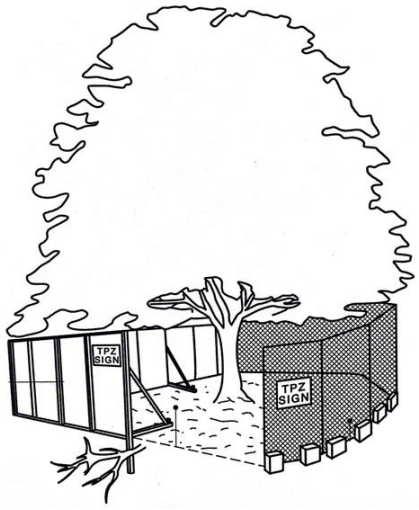
Trees that are to be retained must have protective fencing erected around the TPZ (or as specified in the body of the report) to protect and isolate it from the construction works. Fencing must comply with the *Australian Standard, AS 4687-2007, Temporary fencing and hoardings*.

Tree protection fencing must be installed prior to site establishment and remain intact until completion of works. Once erected, protective fencing must not be removed or altered without the approval of the project arborist.

If the protective fencing requires temporary removal, trunk, branch and ground protection must be installed and must comply with *AS 4970-2009, Protection of Trees on Development Sites*.

Tree protection fencing shall be:

- Enclosed to the full extent of the TPZ (or as specified in the Recommendations and Tree Protection Plan).
- Cyclone chain wire link fence or similar, with lockable access gates.
- Certified and Inspected by the Project Arborist.
- Installed prior to the commencement of works.
- Prominently signposted with 300mm x 450mm boards stating “NO ACCESS - TREE PROTECTION ZONE”.



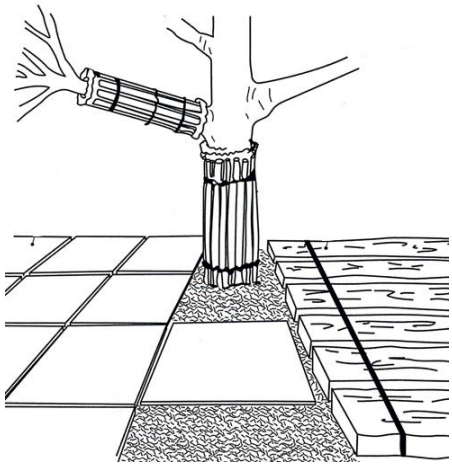
Crown protection

Tree crowns/canopy may be injured or damaged by machinery such as; excavators, drilling rigs, trucks, cranes, plant and vehicles. Where crown protection is required, it will usually be located at least one meter outside the perimeter of the crown.

Crown protection may include the installation of a physical barrier, pruning selected branches to establish clearance, or the tying/bracing of branches.

Trunk protection

Where provision of tree protection fencing is impractical or must be temporarily removed, truck protection shall be installed for the nominated trees to avoid accidental mechanical damage.



Trunk protection shall consist of a layer of either carpet underfelt, geotextile fabric or similar wrapped around the trunk, followed by 1.8 m lengths of softwood timbers aligned vertically and spaced evenly around the trunk (with an approx. 50 mm gap between the timbers).

The timbers must be secured using galvanised hoop strap (aluminium strapping). The timbers shall be wrapped around the trunk but not fixed to the tree, as this will cause injury/damage to the tree.

Ground protection

Tree roots are essential for the uptake/absorption of water, oxygen and mineral ions (solutes). It is essential to prevent the disturbance of the soil beneath the dripline and within the TPZ of trees that are to be retained. Soil compaction within the TPZ will adversely affect the ability of roots to function correctly.

If temporary access for machinery is required within the TPZ ground protection measures will be required. The purpose of ground protection is to prevent root damage and soil compaction within the TPZ. Ground protection may include a permeable membrane such as geotextile fabric beneath a layer of mulch, crushed rock or rumble boards.

If the grade is to be raised within the TPZ, the material should be coarser or more porous than the underlying material.

Root protection and investigation

If incursions/excavation within the TPZ are unavoidable, root investigation may be needed to determine the extent and location of roots within the area of construction activity. The location and distribution of roots are found through non-destructive excavation (NDE) methods such as hydro-vacuum excavation (sucker truck), air spade and manual excavation. Root investigation does not guarantee the retention of the tree.

If the project arborist identifies conflicting roots that requiring pruning, they must be pruned with a sharp implement such as; secateurs, pruners, handsaws or a chainsaw back to undamaged tissue. The final cut must be a clean cut.

Underground services

All underground services should be routed outside of the TPZ. If underground services need to be installed within the TPZ, they should be installed using horizontal directional drilling (HDD). The horizontal drilling/boring must be at minimum depth of 600mm below grade. Trenching for services is to be regarded as “excavation”

Appendix C Tree retention assessment method

Tree Significance - Assessment Criteria - STARS©		
Low	**Medium**	**High**
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 the surrounding properties or 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 dimensions 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 the potential to become structurally unsound. The tree is an environmental pest species due to its invasiveness or poisonous/allergenic properties. The tree is a declared noxious weed by legislation	The tree is in fair to good condition 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	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 Council's 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.

Tree Significance

Useful Life Expectancy	High	Medium	Low		
Long >40 years					
Medium 15-40 years					
Short <1-15 years					
Dead					

Legend for Matrix Assessment

	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 Protection of trees on development sites. Tree sensitive construction measures must be implemented if works are to proceed within the Tree Protection Zone.
	Consider for retention (Medium): These trees may be retained and protected. These are considered less critical; however their retention should remain priority with the removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.
	Consider for removal (Low): These tree are not considered important for retention, nor require special works or design modification to be implemented for their retention.
	Consider for removal (Low): These tree are not considered important for retention, nor require special works or design modification to be implemented for their retention.

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ISO 14001 Environmental Management

AS/NZS 4801:2001 Occupational Health and Safety Management

ISO 9001 Quality Management