

Urban Tree Management
Australia Pty Ltd
ACN 098 599 805
ABN 56 098 599 805

65 Excelsior Street
Merrylands NSW 2160
D Draper m. 0418 471 806

L Dorfer m. 0439 605 038

admin@utma.com.au
www.utma.com.au



Our ref: 26006.loc.1

15 September 2023

Sydney Metro City & Southwest Line-wide Works
Attn: Tristan McCormick - Environmental Advisor - Systems Connect
Level 1, 116 Miller Street
North Sydney NSW 2060

Dear Tristan McCormick,

**ARBORICULTURAL ASSESSMENT – Pruning of 2 street trees, clearance for scaffolding and hoarding for demolition,
CHATSWOOD DIVE, 607 Pacific Highway, Chatswood NSW (the site)
Sydney Metro City & Southwest Line-wide Works**

PURPOSE

- Pruning of 2 street trees, clearance for scaffolding and hoarding for demolition
- Tree 1 – pruning to be avoided if possible but where the solid branch is impacting the hoarding, pruning is to be undertaken, and
- Tree 2 – pruning of smaller outer branches required to avoid breaking.

INTRODUCTION

This report was prepared to provide conformance with CSSI Sydney Metro City and Southwest Chatswood to Sydenham, Conditions of Approval E6:

“The CSSI must be designed to retain as many trees as possible and provide replacement trees such that there a net increase in the number of trees. The Proponent must commission an independent, experienced and suitably qualified arborist to prepare a comprehensive Tree Report before removing any trees as detailed in the EIS, as amended by the documents listed in A1. The Tree Report must include:

- a description of the conditions of the tree(s) and its amenity and visual value;*
- consideration of all options to avoid tree removal, including relocation of services, redesign or relocation of ancillary components (such as substations, fencing etc.) and reduction of standard offsets to underground services; and*
- measures to avoid tree removal, minimise damage to, and ensure the health and stability of those trees to be retained and protected. This includes details of any proposed canopy or root pruning, root protection zone, excavation, site controls on waste disposal, vehicular access, materials storage and protection of public utilities.*

In the event that tree removal cannot be avoided, then replacement trees are to be planted within, or in close proximity to the CSSI or other location in consultation with the Relevant Councils and agreed by the Secretary. The size of the replacement trees will be determined in consultation with the relevant Council. A copy of the Tree Report must be submitted to the Secretary before the removal, damage and/or pruning of any trees, including those affected by the site establishment works. All recommendations of the Tree Report must be implemented by the Proponent, unless otherwise agreed by the Secretary.

The Tree Report may be prepared for the entire CSSI or separate reports may be prepared for individual areas where tree removal and/or pruning is proposed.”

Danny Draper (*the author*) as an independent Consulting Arboriculturist (AQF) Level 5, assessed the trees and minor pruning works proposed from photographs on Friday 15/9/2023 and *the trees* and their growing environment were examined by a visual tree assessment (Appendix A – Tree Assessment). The Trees are shown in Appendix B - Tree Location Plan and Appendix C – Pruning Specifications and Pruning Diagrams.

Of the two trees Tree 1 *Cupaniopsis anacardioides* – Tuckeroo, requires minor crown pruning for 2438 mm clearance from the building for scaffolding to provide safe working access during demolition but the option remains to tie the one branch back to the area outside of the scaffold.

Tree 2 *Lagerstroemia indica* – Crepe Myrtle, requires minor crown pruning for 1268 mm clearance from the building for scaffolding to provide safe working access during demolition but the option remains to tie the one branch back to the area outside of the scaffold.

DISCUSSION

B-class Hoarding Installation

- Tree works required for A-class hoarding installation – Tree 1.
- Tree works required for B-class hoarding installation – Tree 2.
- Pruning of Tree 1 and 2 required to allow for scaffold to be installed to face of building.

Crown protection by pruning of Tree 1

Option 1

Tree to be retained with the one branch tied back to the area outside of the scaffold if suitable without cracking or breaking the branch (Appendix C - Pruning Specifications and Pruning Diagrams - Option 2). The proposed works are generally minor in extent and the tree is expected to remain viable and stable. If this is not viable minor crown pruning per Option 2 should be conducted.

Option 2

Tree to be retained with minor crown pruning (<10%) to provide a 2438 mm horizontal clearance from the building for scaffolding and Class A hoarding to provide safe working access during demolition, and to prevent further crown damage from the installation of the curtain covering of steel chain link and fine mesh over the front of the scaffold from becoming entangled in the crown of each tree, (Appendix C - Pruning Specifications and Pruning Diagrams). The proposed works are generally minor in extent and the tree is expected to remain viable and stable.

Crown protection by pruning of Tree 2

Tree to be retained with minor crown pruning (<10%) of lower order branches 5-<25 mm diameter to provide a 1268 mm horizontal clearance from the building for scaffolding and Class B hoarding to provide safe working access during demolition, and to prevent further crown damage from the installation of the curtain covering of steel chain link and fine mesh over the front of the scaffold from becoming entangled in the crown of each tree, (Appendix C - Pruning Specifications and Pruning Diagrams). The proposed works are generally minor in extent and the tree is expected to remain viable.

CONCLUSION

Tree 1 - The encroaching branch on Tree 1 should be tied back to clear it from the scaffold and hoarding area – Option 1 or pruned if this is not viable – Option 2, as *Crown Modification as Reduction Pruning* (AS4970, 2009, pp. 13 and 15).

Tree 2 - The encroaching small diameter branches on Tree 2 should be pruned as *Crown Modification as Reduction Pruning* (AS4970, 2009, pp. 13 and 15).

The crown pruning proposed to each tree is minor (<10%) and the trees expected to remain viable and stable. For all works proposed see Appendix C - Pruning Specifications and Pruning Diagrams.



Danny Draper

Principal Consultant

IACA Accredited Member #001 2003

Urban Tree Management Australia P/L

Dip. Hort. (Arboriculture), (AQF Level 5),

Assoc. Dip. Hort. (Pk. Mgmt.),

Hort. Cert.

TRAQ (ISA) Tree Risk Assessment

REFERENCES

1. IACA, 2010, *Sustainable Retention Index Value (SRIV)*, Version 4, A visual method of objectively rating the viability of urban trees for development sites and management, based on general tree and landscape assessment criteria, Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au.
2. IACA, 2010, *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au.
3. Standards Australia 2007, *Australian Standard 4373 Pruning of amenity trees*, Standards Australia, Sydney, Australia.

DISCLAIMER

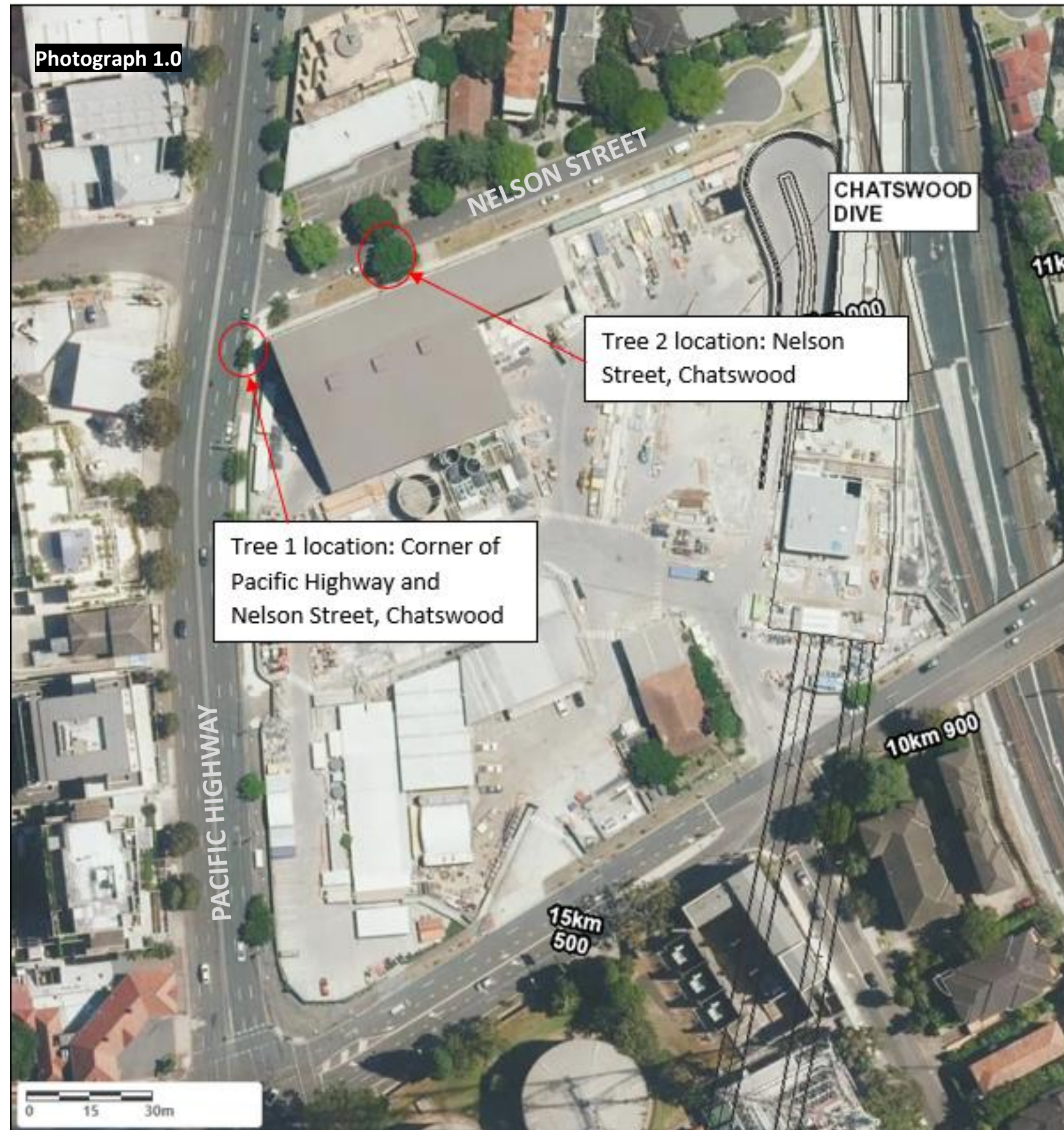
The author and Urban Tree Management take no responsibility for actions taken and their consequences, contrary to those expert and professional instructions given as recommendations pertaining to safety by way of exercising our responsibility to our client and the public as our duty of care commitment, to mitigate or prevent hazards from arising or risks from being eliminated or mitigated or managed to reduce harm or damage, from a failure moment in full or part, from a structurally deficient or unsound tree or a tree likely to be rendered thus by its retention and subsequent deterioration from modification/s to its growing environment either existing or proposed, either above or below ground, contrary to our advice.

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Appendix A – Tree Assessment

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Appendix B – Tree Location Plan (aerial photograph – Photograph 1.0), CHATSWOOD DIVE, 607 Pacific Highway, Chatswood NSW, showing location of Trees 1 and 2 requiring pruning for clearance from scaffolding and hoarding for demolition works. Trees numbered per Appendix A – Tree Assessment. Photograph 1.1 provided by Tristan McCormick, Sydney Metro City & Southwest Line-wide Works. Prepared by Urban Tree Management Australia Pty Ltd, reference 26006 – Loc.1, 15/9/2023.



Appendix B – Tree Location Plan, (Photograph 1.1), CHATSWOOD DIVE, 607 Pacific Highway, Chatswood NSW, showing location of Trees 1 and 2 requiring pruning for clearance from the scaffolding and hoarding during demolition works. Trees numbered per Appendix A – Tree Assessment. Photograph 1.1 provided by Tristan McCormick, Sydney Metro City & Southwest Line-wide Works. Prepared by Urban Tree Management Australia Pty Ltd, reference 26006 – Loc.1, 15/9/2023.



Appendix C – Pruning Specifications and Pruning Diagrams, (Subject tree numbered per Appendix A – Tree Assessment, and Appendix B - Tree Location Plan)
 CHATSWOOD DIVE, 607 Pacific Highway, Chatswood NSW. Photographs 1.2 and 1.3 provided by Tristan McCormick, Sydney Metro City & Southwest Line-wide Works.
 Prepared by Urban Tree Management Australia Pty Ltd, reference 26006 – Loc.1, 15/9/2023.



Tree No.	Photographs showing tree and branches to be pruned	Order of branches and number of branches to be pruned and total No. of branches to be pruned	Orientation of branches to be pruned	Percent (%) of crown to be pruned	Pruning Classes per (AS4373, 2007)	Development activities requiring pruning including building envelope, hoarding, scaffolding, piling rigging, craneage, work zones, vehicle access.	Comments.
1	1.2 and 1.3	1 st order - 0 2 nd order - 1 3 rd order - 1 4 th order - 1 5 th order - 0 TOTAL = 3	North	<10	<i>Crown Maintenance by Selective Pruning (AS4373, 2007, pp. 13 and 14).</i>	<p><u>Option 1</u> The single branch encroaching into the area of the scaffold and hoarding appeared to be 2.5 – 3.5 m long and 25-35 mm diameter. The generally smaller diameter branch is expected to be flexible and pliable which may allow for its careful manipulation to negate pruning and to minimise harm to the tree during the installation of the A-Class Hoardings and Demolition Rated Scaffold. However, the larger branch where that is attached was 35-50 mm diameter and protruded slightly into the scaffolding area and may not be viable to be tied back, requiring pruning. In this situation refer to Option 2.</p> <p><u>Option 2</u> Pruning to facilitate a 2438 mm horizontal clearance from the building for scaffolding and Class B hoarding to provide safe working access during demolition, and to prevent further crown damage from the installation of the curtain covering of steel chain link and fine mesh over the front of the scaffold from becoming entangled in the crown of each tree.</p>	<p><u>Option 1</u> Ratchet strap to be installed an AQF Level 3 Arboriculturist. The strap is to be threaded through the crown to hold it in place. Plywood boxing out the scaffold can be installed to support the branch and once in place the ratchet strap removed.</p> <p>The tension on the strap to fasten it is to be conducted gradually to draw in the branches without cracking or breaking them.</p> <p>Every 3 months the same AQF Level 3 Arboriculturist will monitor the tension on the ratchet strap for damage to branches or additional tightening where required.</p> <p>Damage to any branches is to be remediated by pruning per AS4373(2007). Where branch is damaged see Option 2.</p> <p><u>Option 2 - Pruning Diagram</u></p> <p>5 x 4th order branches (<10 - 15 mm diameter approx.), and 5 x 5th order branch (>15 - 25 mm diameter approx.).</p> <p>Cut to branch collars or laterals to minimise reduction of branch length.</p> <p>All branches to be pruned are to be checked on site before work begins.</p> <p>Branches will be cut in increments cutting from the ends to laterals, working back toward the proposed final cut. This is to allow the branch to recoil as mass is reduced to allow less pruning overall.</p> <p>As works progress some additional branches may require pruning due to them having been obscured by foliage and other branches at the time of assessment, or due to pruning, breakages, or movement since assessment.</p> <p>As works progress some branches may not require pruning or may require less pruning due to the recoil of pruned or crossed branches becoming unimpeded and lighter, and therefore achieving the desired clearances while removing fewer branches or branch sections, to minimise harm to the tree.</p>

Appendix C – Pruning Specifications, Pruning Diagram, CHATSWOOD DIVE, 607 Pacific Highway, Chatswood NSW. Tree 1, Photographs 1.2 and 1.3 provided by Tristan McCormick, Sydney Metro City & Southwest Line-wide Works. Tree numbered per Appendix A – Tree Assessment. Reference 25101 – loc.5 Addendum, 13/9/2023. Prepared by Urban Tree Management Australia Pty Ltd.



Photograph 1.2


Option 1 - Tree 1 *Cupaniopsis anacardioides* – Tuckeroo showing red encircled branch (BR1) to be tied back to outside of scaffold. If this is not viable minor crown pruning per Option 2 should be conducted.

Option 2 - Tree 1 showing red bold line in approximate location of a final cut at branch collar, dotted line showing the subject branch (BR1) to be pruned.

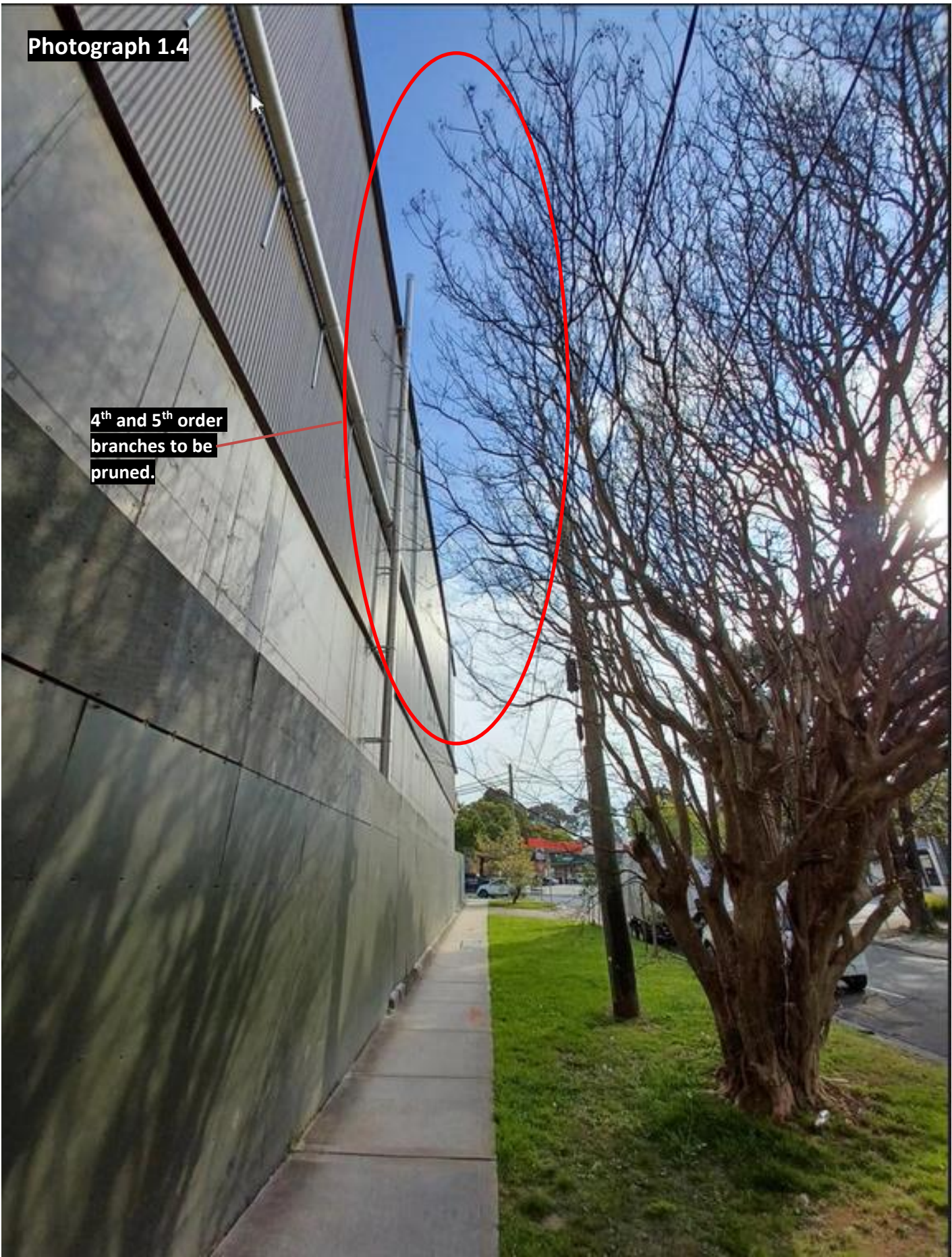


Photograph 1.3

Tree 1 *C. anacardioides* – Tuckeroo showing red bold line in approximate location of a final cut at branch collar, dotted line showing the subject branch (BR1) to be pruned or tied back.

<div>Appendix C – Pruning Specifications and Pruning Diagrams, (Subject tree numbered per Appendix A – Tree Assessment, and Appendix B - Tree Location Plan)</div> <div>CHATSWOOD DIVE, 607 Pacific Highway, Chatswood NSW. Photographs provided by Tristan McCormick, Sydney Metro City & Southwest Line-wide Works.</div> <div>Prepared by Urban Tree Management Australia Pty Ltd, reference 26006 – Loc.1, 15/9/2023.</div> <div></div>							
Tree No.	Photographs showing tree and branches to be pruned	Order of branches and number of branches to be pruned and total No. of branches to be pruned	Orientation of branches to be pruned	Percent (%) of crown to be pruned	Pruning Classes per (AS4373, 2007)	Development activities requiring pruning including building envelope, hoarding, scaffolding, pilling rigging, craneage, work zones, vehicle access.	Comments.
2	1.4	1 st order - 0 2 nd order - 0 3 rd order - 0 4 th order - 5 5 th order - 5 TOTAL = 10	North	<10	Crown Maintenance by Selective Pruning (AS4373, 2007, pp. 13 and 14).	Pruning to facilitate a 1268 mm horizontal clearance from the building for Class A Hoarding to provide safe pedestrian access along the road reserve during demolition, and to prevent further crown damage from the installation of the curtain covering of steel chain link and fine mesh over the front of the scaffold from becoming entangled in the crown of each tree.	<div>Pruning Diagram</div> <div>5 x 4th order branches (<10 - 15 mm diameter approx.), and 5 x 5th order branch (>15 - 25 mm diameter approx.).</div> <div>Cut to branch collars or laterals to minimise reduction of branch length.</div> <div>All branches to be pruned are to be checked on site before work begins.</div> <div>Branches will be cut in increments cutting from the ends to laterals, working back toward the proposed final cut. This is to allow the branch to recoil as mass is reduced to allow less pruning overall.</div> <div>As works progress some additional branches may require pruning due to them having been obscured by foliage and other branches at the time of assessment, or due to pruning, breakages, or movement since assessment.</div> <div>As works progress some branches may not require pruning or may require less pruning due to the recoil of pruned or crossed branches becoming unimpeded and lighter, and therefore achieving the desired clearances while removing fewer branches or branch sections, to minimise harm to the tree.</div>

Appendix C – Pruning Specifications, Pruning Diagram, CHATSWOOD DIVE, 607 Pacific Highway, Chatswood NSW. Tree 2, Photograph 1.4 provided by Tristan McCormick, Sydney Metro City & Southwest Line-wide Works. Tree numbered per Appendix A – Tree Assessment. Reference 25101 – loc.5 Addendum, 13/9/2023. Prepared by Urban Tree Management Australia Pty Ltd.



Photograph 1.4

Tree 2 *Lagerstroemia indica* – Crepe Myrtle showing red encircled 4th and 5th order branches to be cut back with final cuts to the junction of lateral branches or to branch collars. Pruning is minor, <10% of the crown.