



## **Arboricultural Impact Assessment Report**

### **For the project/site address**

Safe Accessible Transport Program  
Macquarie Fields Station  
MACQUARIE FIELDS, NSW

### **Prepared for**

Aurecon P/L  
C/- Transport for NSW

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## 1.0 Introduction

**1.1** Allied Tree Consultancy (ATC) has been commissioned by Aurecon on behalf of Transport for NSW (Transport) to prepare an Arboricultural Impact Assessment for the Macquarie Fields Station upgrade which is being delivered under the Safe Accessible Transport program. This proposal includes work related to upgrading the station infrastructure to meet requirements of the Commonwealth *Disability Discrimination Act 1992*. This report includes five (5) trees located on and adjacent to the site and discusses the viability of these trees based on the proposed work.

**1.2** This report will address for these trees, the:

- species' identification, location, dimensions, and condition;
- SULE (Safe Useful Life Expectancy) and STARS (Significance of a Tree Assessment Rating System) rating;
- discussion and impact of the proposed works on each tree;
- tree protection zones and protection specifications for trees recommended for retention.

**1.3** The subject site resides within Macquarie Fields; for this reason, Campbelltown City Council is typically the consenting authority for any tree works recommended in this report. However, this project is subject to part 5, Division 5.1 assessment, where Transport is the Determining Authority.

## 2.0 Standards

**2.1** ATC provides an ethical and unbiased approach to all assignments, possessing no association with private utility arboriculture or organisations that may reflect a conflict of interest.

**2.2** This report must be made available to all Contractors during the tendering process so that any cost associated with the required works for the protection of trees can be accommodated.

**2.3** It is the responsibility of the project manager to provide the requirements outlined in this report relative to the Protection Zones, Measures (Section 7.0) and Specifications (Section 8.0) to all Contractors associated with the project before the initiation of work.

**2.4** All tree-related work outlined in this report is to be conducted in accordance with the:

- Australian Standard – AS4373; Pruning of Amenity Trees.

- Guide to Managing Risks of Tree Trimming and Removal Work<sup>1</sup>.
- All tree works must be carried out by a tertiary level (minimum Certificate-level 3) qualified and experienced (minimum five years) arboriculturist.
- For any works in the vicinity of electrical lines, the arboriculturist must possess the ISSC26 endorsement (Interim guide for operating cranes and plant in proximity to overhead powerlines).

**2.5** Any tree stock subject to conditions for works carried out in this report must be supplied by a registered Nursery that adheres to the AS 2303; 2015<sup>2</sup>.

- All tree stock must be of at least 'Advanced' size (minimum 75 litres) unless otherwise requested.
- All tree stock requested must be planted with adequate protection. This may include tree guards (protect stem and crown) and if planted in a lawn area, a suitable barrier (planter ring) of an area, at least, 1m<sup>2</sup> to prevent grass from growing within the area adjacent to the stem.

### **3.0 Disclosure Statement**

Trees are living organisms and, for this reason, possess natural variability. This cannot be controlled. However, risks associated with trees can be managed. An arborist cannot guarantee that a tree will be safe under all circumstances, nor predict the time when a tree will fail. To live or work near a tree involves some degree of risk, and this evaluation does not preclude all the possibilities of failure.

### **4.0 Methodology**

**4.1** The following tree assessment was undertaken using criteria based on the guidelines issued by the International Society of Arboriculture.

**4.2** The format of the report is summarised below;

**4.2.1 Plan 1;** Tree Location Relative to Site: This is an unscaled plan reproduced from the Survey Plan as referenced in Section 4.4.1, depicting the area of assessment.

**4.2.2 Table 1;** This table compiles the tree species, dimensions, brief assessment (history, structure, pest, disease or any other variables subject to the tree), significance, allocation of the zones of protection (i.e., Tree Protection Zone<sup>3</sup> ;TPZ and Structural Root

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<sup>1</sup> Safe Work Australia; July 2016; Guide to Managing Risks of Tree Trimming and Removal Work, Australia

<sup>2</sup> Australian Standard; 2015, AS2303, Tree stock for landscape use, Australia

<sup>3</sup> Australian Standard, 4970; 2009 – Protection of Trees on Development Sites, Australia

Zone; SRZ) for each tree illustrated in Plan 1, Section 5.0. All measurements are in metres.

**4.2.3** Discussion relating to the site assessment and proposed works regarding the trees, see Section 7.0.

**4.2.4 Protection Specification;** Section 8.0 details the requirements for that area designated as the Tree Protection Zone (TPZ), for those trees recommended for retention.

**4.3** The opinions expressed in this report, and the material, upon which they are based, were obtained from the following process and data supplied:

**4.3.1** Site assessment on the 11th of June 2024 using the method of the Visual Tree Assessment<sup>4</sup>. This has included a Level 2 risk assessment, being a Basic Assessment<sup>5</sup>. The assessment has been conducted by Geoff Beisler<sup>6</sup> on behalf of ATC, and limited to the trees within the station lot.

**4.3.2** No survey drawings have been issued to ATC as part of the document set, although the drawing set referenced in Section 4.4.1 caters for a demolition plan that represents the existing landscape including trees. Therefore, this drawing set has been utilised in Section 5.0 of this report for identifying the site trees. This drawing set has also been utilised for illustrating the extent of works required.

**4.3.3** Trees included in this report are those that conform to the description of a prescribed tree by the local government policy. That is, plants less than 3m in height are not a defined tree, nor are tree species, irrespective of size that are listed as exempt included in Table 1<sup>7</sup>.

**4.3.4** All measurements, unless specified otherwise are taken from the centre of the root crown.

**4.3.5** Raw data from the preliminary assessment including the specimen's dimensions was compiled by the use of a diameter tape, height clinometer, angle finder, compass, steel probes, Teflon hammer, binoculars and recording instruments.

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<sup>4</sup> Mattheck, C. Breloer, H., 1994, The Body Language of Trees – A handbook for failure analysis  
The Stationary Office, London

<sup>5</sup> Dunster J.A., 2013, Tree Risk Assessment Manual, International Society of Arboriculture, 2013, USA

<sup>6</sup> Consulting Arborist, Diploma of Arboriculture (level 5)

<sup>7</sup> See Campbelltown City Council, 2015, Development Control Plan, Chapter 11, Part 3, Section 11.3.2

#### **4.4 Documentation provided**

The following documentation has been provided to ATC and utilised within the report. Further drawings sets have been issued, although only those drawings that present a significant impact on site trees has been included.

##### **4.4.1 Design**

Drawn by *Jacobs Architectural*

Date: 18 July 2023

Reference: not referenced

Drawing No: 22 sheets, Revision C-D

Note 1: See Section 4.5.1.

#### **4.5 Limitations of the assessment/discussion process**

**4.5.1** Tree No. 2 has been omitted from the plans provided; however, it is required for inclusion because it conforms to the definition of a prescribed tree within the local government tree policy. The tree location has been plotted onto Plan 2 by ATC. The tree location was established by measuring from known points and scaling onto the drawing. ATC is not a registered surveyor; however, the accuracy of the survey is attempted; the true position of this tree may marginally deviate. Any such deviation provides the potential for changing the actual impact (encroachment) provided to a tree.

**4.5.2** Tree No. 5 has formed part of the scope of the works, therefore the data has been compiled based on Google street view mapping.

**4.5.3** The assessment has considered only those target zones that are apparent to the author and the visually apparent tree conditions, during the time of assessment.

**4.5.4** Any tree, regardless of apparent defects, would fail if the forces applied exceed the strength of the tree or its parts, for example, in extreme storm conditions.

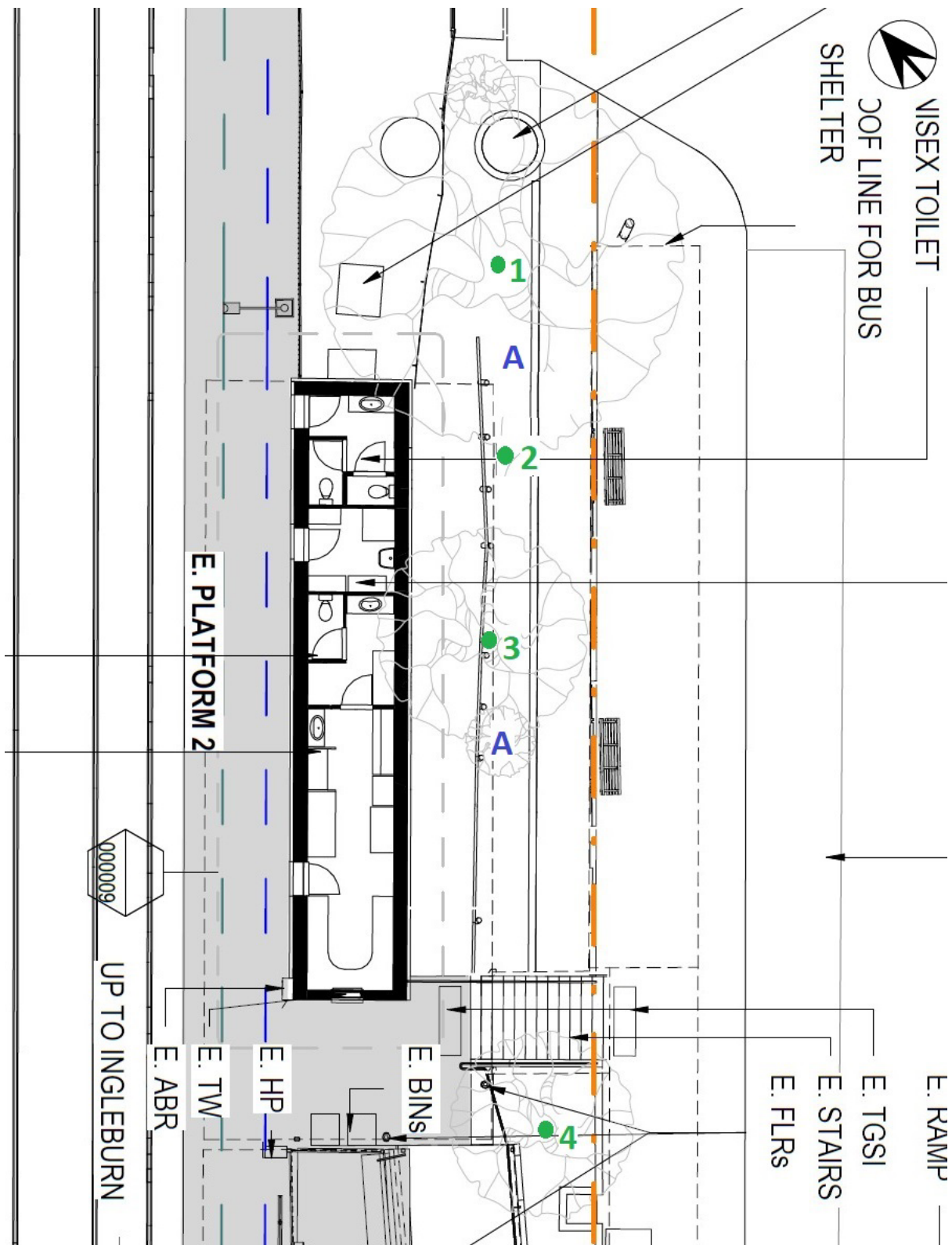
**4.5.5** The assessment has been limited to that part of the tree which is visible, existing from the ground level to the crown. Root decay can exist and in some circumstances provide no symptoms of its presence. This assessment responds to all the symptoms provided by a tree, however, cannot provide a conclusive recommendation regarding any tree that may have extensive root decay that leads to windthrow without the appropriate symptoms.





### 5.1 Plan 2; Area of assessment illustrating tree location

Indicative only, subject to detailed design



Not to scale

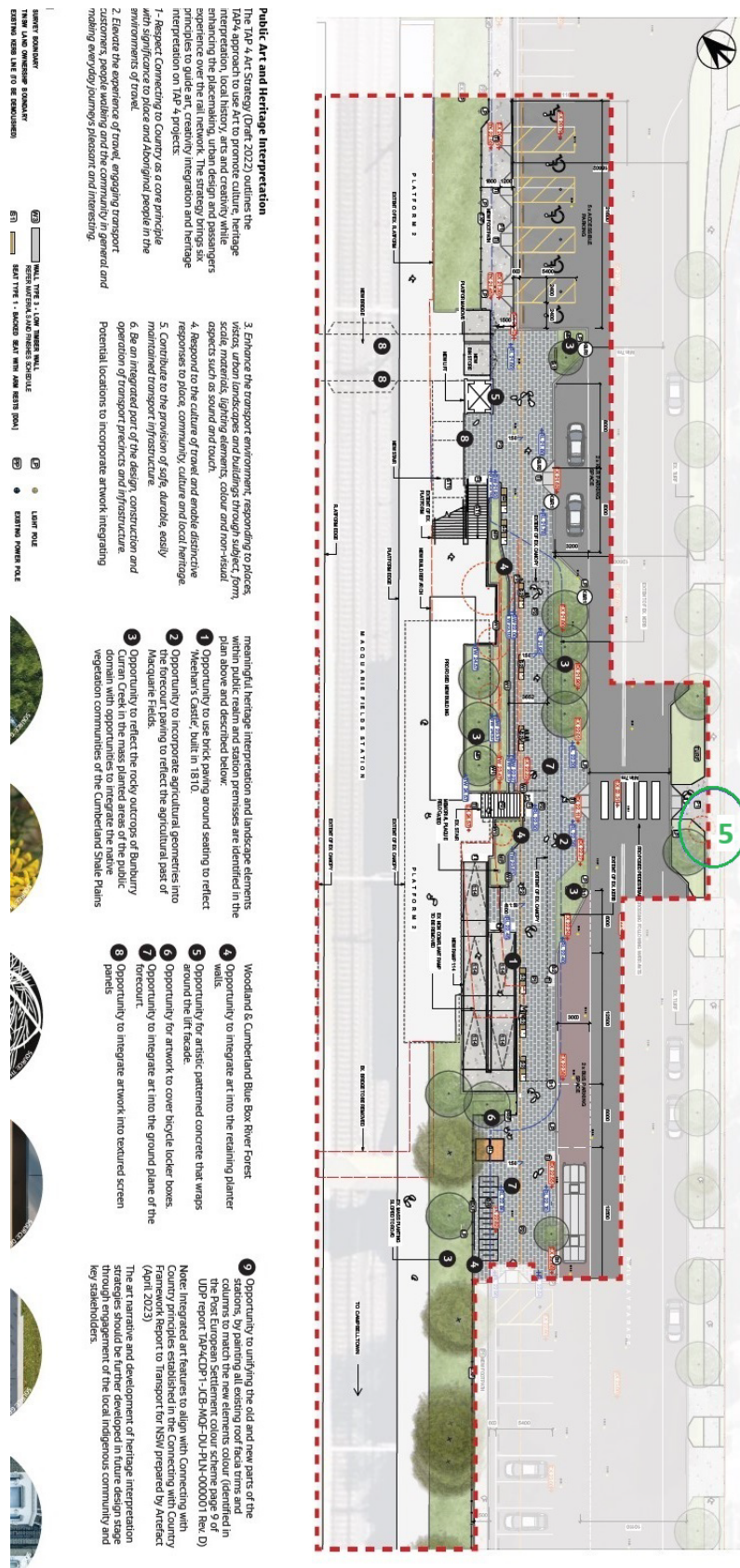
Trees Labelled 'A', see Section 7.0.

Source: Adapted from *Jacobs Architectural*, see Section 4.4.1.



## 5.2 Plan 3; Area of assessment illustrating tree location

Indicative only, subject to detailed design



Not to scale

Source: Adapted from *Jacobs Architectural*, see Section 4.4.1.

## 6.0 Table 1 – Tree Species Data

Terminology/references provided in Appendix A.

See Photos, Appendix B

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
1	<i>Triadica sebifera</i> Chinese Tallow	8	0.47 <sup>C</sup>	8 x 8	M	D	Sym	A	3D	Low	5.64	2.41
<b>Assessment</b> This tree presents as typical of the species; however, the assessment is limited by surrounding structures and the station fencing. The surrounds and retaining wall indicate restricted root mass. This tree conflicts with the adjacent structures, fencing, power pole, and power line- this tree is poorly suited to the location.											<b>Development Impact</b> See Section 7.1.1	
2	<i>Callistemon viminalis</i> Weeping Red Bottlebrush	6	0.18 0.17 <sup>C</sup>	4 x 4	M	I	E	A	3D	Low	2.97	1.84
<b>Assessment</b> Not located on the drawing supplied. This tree is composed of two leaders, extending from a small stem. This tree is impacting surrounding structures and the covered seating area. This tree is poorly suited to the location and has reflected on the SULE rating.											<b>Development Impact</b> See Section 7.1.1	
3	<i>Triadica sebifera</i> Chinese Tallow	6	0.40 0.18 <sup>B,C</sup>	4 x 3	M	C	E	- <sup>C,D</sup>	3D	Low	5.26	2.34
<b>Assessment</b> This is two trees sharing a common root mass. The more northerly stem is not located on the survey, and the southern stem appears to be coppiced regrowth from a lopped tree. The deciduous state voids the ability to accurately assess the vitality. This tree is impacting surrounding structures and the covered seating area. This tree is poorly suited to the location and has reflected on the SULE rating.											<b>Development Impact</b> See Section 7.1.1	
4	<i>Syzygium smithii</i> Lilly Pilly	5	0.14 0.13 0.13 <sup>B,C</sup>	4 x 2	M	D	Sym	A	2D	Low	2.77	1.79
<b>Assessment</b> This is two trees side by side sharing a common root mass, and has been repeatedly pruned (hedged) to conform to its surrounds, however ongoing conflicts are evident.											<b>Development Impact</b> See Section 7.1.1	
5	<i>Triadica sebifera</i> Chinese Tallow	5	0.30	4 x 4	M	D	Sym	A	3A	Low	2.77	1.79
<b>Assessment</b> Street trees form part of inconsistent street planting of the species. This tree has succumbed to repeated lopping for powerline clearance and has reflected on the SULE rating.											<b>Development Impact</b> See Section 7.1.1	

## 7.0 Site Assessment

The area of assessment comprises the eastern side of Macquarie Fields Station that skirts Railway Parade. Railway Parade has an inconsistent linear planting of Chinese Tallowwoods (*Triadica sebifera*) extending along the verge, for which all have succumbed to routine topping for powerline clearance, therefore limiting the tree height. One of these trees (labeled 'A') adjacent to tree No. 3 has been included on the drawing, although it does not cater to the definition of a defined tree and is excluded from Table 1, Section 5.0. Trees No. 1-4 are located in an elevated garden bed supported by a masonry retaining wall behind pedestrian shelters and footpaths. This is a highly modified area where landscaping and large retaining walls have allowed the installation of these intentional plantings. The trees conflict with their surroundings (limited volume for root growth and contact with the awning), and all trees except tree No. 4 appear to be poorly suited to the location based on the maturing size.

A large grove of mature trees (however, primarily weed species; *Olea europaea* subsp. *cuspidata*.) are located to the southwest of tree No. 4 and are outside the scope of work; therefore, they have not been included. A further large *Olea europaea* subsp. *cuspidata*<sup>8</sup> is located between trees No. 1 and 2 (labelled as 'A' within Plan 2) and, listed on the Campbelltown City Council Exempt Species list, therefore, can be removed without a permit. This tree has been excluded from this report nor included in the drawings (Section 4.4). This tree, along with trees No. 1 and 2, form a screen based on the joined crown mass, see Photo 1, Appendix B. As such, it would be included in the tree replacement calculations for the Proposal as per the *Transport Tree and hollow replacement guidelines* (Transport, 2023).

Trees less than 3m in height and weed species located within the area of assessment have not been included. Two trees indicated on the drawings supplied, are labeled as 'A' within Plan 2, Section 5.1. One of these trees is less than 3m in height and therefore does not constitute a 'defined tree', see Section 4.3.3.

## 7.1 Proposed development

The proposed development consists of the upgrading of the station infrastructure to meet requirements of the *Disability Discrimination Act 1992*. Key features of the Proposal would include

- Construction of a new pedestrian footbridge with stairs and weather protection to provide access to the station platforms and subsequent

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<sup>8</sup> Diameter at breast height; Approximately 0.25m, Height: 7m

removal of the existing footbridge (following completion of the new footbridge)

- Installation of a three-stop lift connecting Railway Parade, Platform 2 and the new pedestrian footbridge, and installation of a two-stop lift connecting Platform 1 and the new pedestrian footbridge
- Upgrade of the station access from Railway Parade, including a new compliant accessible ramp and stairs, and a new second set of stairs near the new footbridge to Platform 2
- Upgrade to the station forecourt to include:
  - six accessible parking spaces (including one longer accessible parking space to accommodate accessible community transport vehicles)
  - two accessible kiss and ride spaces
  - a new pedestrian crossing across Railway Parade to the station entrance
  - bus stop relocation on Railway Parade
  - additional bicycle parking
  - associated footpath and kerb ramp upgrades and new lighting
- Modifications to the existing station building on Platform 2 to provide a new unisex ambulant toilet, a family accessible toilet, an electrical services enclosure and station storage facilities
- Upgrade of the existing platform surfaces (through platform regrading and localised platform widening), new boarding assistance zone on Platform 1 and relocation of the boarding assistance zone on Platform 2, installation of tactile ground surface indicators (TGSIs) and provision of new canopies over the platforms near the new footbridge and boarding assistance zones
- Provision of an accessible water refill station adjacent to the new family-accessible toilet
- Relocation of the memorial plaque adjacent to the main entrance stairs, subject to further stakeholder consultation during detailed design.
- Upgrades of other facilities and station services to make them accessible including wayfinding signage, hearing augmentation, Opal card readers, help point and public phone as well as improvement to landscaping, lighting and CCTV.

The calculations included in the following discussion have not considered;

- subsurface utilities that have not been included in the design,
- work methods related to subsurface utilities, for example, concrete encasing or replacement of existing lines, or
- work methods related to construction (stockpiling, site sheds, scaffolding) unless otherwise specified.

These may also increase the encroachment and tree impact and, therefore, the opportunity for tree retention.

This report discusses the impact of the proposed design on the trees. Five (5) trees have been listed within this report based upon the vicinity of the proposed work. This has included trees where any part of the zones of protection; Tree Protection Zone (TPZ), and Structural Root Zone (SRZ) to encroach into the area proposed for work and areas nominated for inclusion. Recommendations based on the tree significance and condition, together with the impact on these trees, regarding the development, follow.

#### **7.1.1 Trees directly conflicting with the design**

##### Trees No. 1-5

These trees are located in the footprint of the proposed design and would require removal based on this premise alone. The conflict is the footprint of the proposed works/ demolition area.

Trees No. 1-3 and 5 provide poor form and all trees present insufficient significance to retain and amend the design to allow for retention.

Tree No. 5 is a street tree planting and property of Campbelltown City Council and will require consent from the owner for removal.

### **7.3 Protection measures**

Based on the removal of these trees for design, no protection measures are considered to be warranted.

## **8.0 Protection Specification**

The retention and protection of any tree not included in this report requires the Tree Protection Zone (TPZ) not subject to encroachment to conform to the conditions outlined below. These conditions provide the limitations of work permitted within the area of the Tree Protection Zone (TPZ) and must be adhered to unless otherwise stated.

1. Foundation/footing types should not be strip type, but utilise footing types that are sympathetic towards retaining root system that is, screw, pier, etc. Slab on the ground can be accommodated in some circumstances and will be nominated by the project arborist. The extent of encroachment will be dependent upon the tree species, soil type (texture and profile) and gradients.
2. Subsurface utilities can extend through the TPZ and Structural Root Zone (SRZ), however, are limited to the method of installation. That is under boring is permitted, however trenching is limited and depends on the proposed route within the TPZ. No trenching is permitted within the area of the TPZ unless stipulated by the project arborist.

3. Soil levels within the TPZ must remain the same. Any excavation within the TPZ must have been previously specified and allowed for by the project arborist:
  - a) So it does not alter the drainage to the tree.
  - b) Under specified circumstances,
    - Added fill soil does not exceed 100mm in depth over the natural grade. Construction methodologies exist that can allow grade increases in excess of 100mm, via the use of an impervious cover, an approved permeable material or permanent aeration system or other approved methods.
    - Excavation cannot exceed a depth of more than 50mm within the area of the TPZ, not including the SRZ. The grade within the SRZ cannot be reduced without the consent from a project arborist.
4. No form of material or structure, solid or liquid, is to be stored or disposed of within the TPZ.
5. No lighting of fires is permitted within the TPZ.
6. All drainage runoff, sediment, concrete, mortar slurry, paints, washings, toilet effluent, petroleum products, and any other toxic wastes must be prevented from entering the TPZ.
7. No activity that will cause excessive soil compaction is permitted within the TPZ. That is, machinery, excavators, etc. must refrain from entering the area of the TPZ unless measures have been taken, in consultation with the project arborist.
8. No site sheds, amenities or similar site structures are permitted to be located or extend into the area of the TPZ unless the project arborist provides prior consent.
9. No form of construction work or related activity such as the mixing of concrete, cutting, grinding, generator storage or cleaning of tools is permitted within the TPZ.
10. No part of any tree may be used as an anchorage point, nor should any noticeboard, telephone cable, rope, guy, framework, etc. be attached to any part of a tree.
11. (a) All excavation work within the TPZ will utilise methods to preserve root systems intact and undamaged. Examples of methods permitted are by hand tools, hydraulic, or pneumatic air excavation technology.

- (b) Any root unearthed which is less than 50mm in diameter must be cleanly cut and dusted with a fungicide, and not allowed to dry out, with minimum exposure to the air as possible.
- (c) Any root unearthed which is greater than 50mm in diameter must be located regarding their directional spread and potential impact. A project arborist will be required to assess the situation and determine future action regarding retaining the tree in a healthy state.



## 9.0 Summary of tree impact by design

Based on the design supplied, the following summary provides the impacts imposed on the trees included in this report.

These trees, No. 1-5 are located in the footprint of the proposed design and would require removal based on this premise alone. The trees are not considered to present sufficient significance to warrant retention and management of the design. Tree No. 5 is a street tree planting and property of Campbelltown City Council and will require consent from the owner for removal.

**The opinions expressed in this report by the author have been provided within the capacity of a Consulting Arborist. Any further explanation or details can be provided by contacting the author.**

Assessed and Prepared by Geoff Beisler

Consulting Arborist

Level 5 Arborist

ISA Tree Risk Assessment Qualification

Prepared and checked by Warwick Varley

Consulting Arborist; Principal

Level 5 and 8; Arborist

ISA Tree Risk Assessment Qualification

IACA and ISA Member



## Appendix A- Terminology Defined

### Height

Is a measure of the vertical distance from the average ground level around the root crown to the top surface of the crown, and on palms - to the apical growth point.

### DBH

Diameter at Breast Height – being the stem diameter in meters, measured at 1.4m from ground level, including the thickness of the bark.; Mult. refers to multiple stems, that is in excess of 4 stems.

### Crown Spread

A two-dimension linear measurement (in metres) of the crown plan. The first figure is the north-south span, the second being the east-west measurement.

### Age

Is the estimate of the specimen's age based upon the expected lifespan of the species. This is divided into three stages.

Young (Y)	Trees less than 20% of life expectancy.
Mature (M)	Trees aged between 20% to 80% life expectancy.
Over-mature (O)	Trees aged over 80% of life expectancy with probable symptoms of senescence.

### Crown Aspect

In relation to the root crown, this refers to the aspect the majority of the crown resides in. This will be either termed Symmetrical (Sym.) where the centre of the crown resides over the root crown or the cardinal direction the centre of the crown is biased towards, being either North (N), South (S), East (E) or West (W).

### Vitality Rating

Is a rating of the health of the tree, irrespective and independent of the structural integrity, and defined by the 'ability for a tree to sustain its life processes' ((Draper, Richards, 2009). This is divided between three variables, and based on the assessment of symptoms including, but not limited to; leaf size, colour, crown density, woundwood development, adaptive growth formation, and epicormic growth.

**A:** Normal vitality, typical for the species

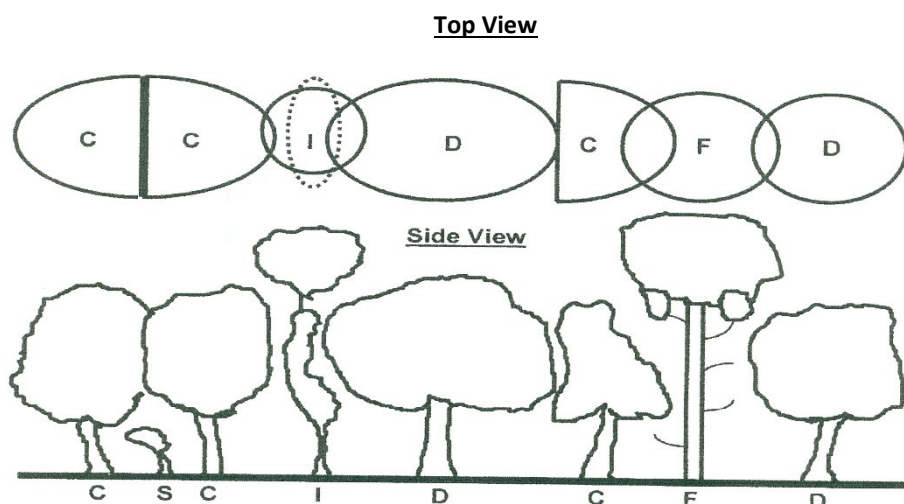
**B:** Below average vitality, possibly temporary loss of health, partial symptoms.

**C:** Poor vitality; obvious decline, potentially irreversible

### Crown Class

Is the differing crown habits as influenced by the external variables within the surrounding environment. They are:

<b>D</b>	– <i>Dominant</i>	Crown is receiving uninterrupted light from above and sides, also known as emergent.
<b>C</b>	– <i>Codominant</i>	Crown is receiving light from above and one side of the crown.
<b>I</b>	– <i>Intermediate</i>	Crown is receiving light from above but not the sides of the crown.
<b>S</b>	– <i>Suppressed</i>	Crown has been shadowed by the surrounding elements and receives no light from above or sides.
<b>F</b>	– <i>Forest</i>	Characterised by an erect, straight stem (usually excurrent) with little stem taper and virtually no branching over the majority of the stem except for the top of the tree which has a small concentrated branch structure making up the crown.



D C, I & S, and side view, after (Matheny, N. & Clark, J. R. 1998, Trees Development, Published by International Society of Arboriculture, P.O. Box 3129, Champaign IL 61826-3129 USA, p.20, adapted from the Hazard Tree Assessment Program, Recreation and Park Department, City of San Francisco, California).

### Superscripts, Table 1

- <sup>A</sup>. Incomplete identification of species due to insufficiently available plant material
- <sup>B</sup>. Diameter taken below 1.4m due to low stem bifurcation
- <sup>C</sup>. Estimate due to the overgrown area and/or limited access
- <sup>D</sup>. Deciduous species, void of foliage at the time of assessment
- <sup>E</sup>. Level 3 assessment required to determine the accurate rating.

### TPZ; Tree Protection Zone

Is an area of protection required for maintaining the trees vitality and long-term viability. Measured in meters as a radius from the trees centre. The requirements of this zone are outlined within the Protection Specification, Section 8.0, and are to be adhered to unless otherwise stated.

The size of the Tree Protection Zone (TPZ) has been calculated from the *Australian Standard, 4970; 2009* – Protection of Trees on Development Sites

The TPZ does not provide the limit of root extension, however, offers an area of the root zone that requires predominate protection from development works. The allocated TPZ can be modified by some circumstances; however will require compensation equivalent to the area loss, elsewhere and adjacent to the TPZ.

### SRZ; Structural Root Zone

Is the area around the tree containing the woody roots necessary for stability. Measured in meters as a radius from the trees centre. The requirements of this zone are outlined within the Protection Specification, Section 8.0, and are to be adhered to unless otherwise stated.

### Protection Measures

These are required for the protection of trees during demolition/construction activities.

Protective barriers are required to be installed before the initiation of demolition and/or construction and are to be maintained up to the time of landscaping. Samples of the recommended protection measures are illustrated in Appendix C.

### All other definitions are referenced from;

Draper D.B., Richards P.A., 2009, Dictionary for Managing Trees in Urban Environments  
CSIRO Pub., Australia

**Significance Rating**, Significance of a Tree Assessment Rating System (S.T.A.R.S), IACA, 2010<sup>9</sup>

### Tree Significance – Assessment Criteria

#### 1. High Significance in landscape

- The tree is in good condition and good vitality;
- 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 vitality;
- 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 vitality;
- 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,

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<sup>9</sup> IACA, 2010, IACA Significance of a Tree, Assessment Rating System (STARS), Institute of Australian Consulting Arboriculturists, Australia, [www.iaca.org.au](http://www.iaca.org.au)

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.

**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 for individual trees only, however, can be applied to a monocultural stand in its entirety e.g.

**Table 3; Tree Retention Value – Priority Matrix.**

		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					
Legend for Matrix Assessment						
		<b>Priority for Retention (High)</b> - 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.				
		<b>Consider for Retention (Medium)</b> - 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.				
		<b>Consider for Removal (Low)</b> - These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.				
		<b>Priority for Removal</b> - These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.				

**Safe Useful Life Expectancy – S.U.L.E (Barell 1995)**

	<b>1. Long</b>	<b>2. Medium</b>	<b>3. Short</b>	<b>4. Removal</b>	<b>5. Moved or Replaced</b>
	Trees that appeared to be retainable at the time of assessment for more than 40 years with an acceptable level of risk.	Trees that appeared to be retainable at the time of assessment for 15 – 40 years with an acceptable level of risk.	Trees that appeared to be retainable at the time of assessment for 5 – 15 years with an acceptable level of risk.	Trees that should be removed within the next 5 years.	Trees which can be reliably moved or replaced.
<b>A</b>	Structurally sound trees located in positions that can accommodate future growth.	Trees that may only live between 15 and 40 years.	Trees that may only live between 5 and 15 more years.	Dead, dying, suppressed or declining trees through disease or inhospitable conditions.	Small trees less than 5m in height.
<b>B</b>	Trees that could be made suitable for retention in the long term by remedial tree care.	Trees that may live for more than 40 years but would be removed for safety or nuisance reasons.	Trees that may live for more than 15 years but would be removed for safety or nuisance reasons.	Dangerous trees through instability on recent loss of adjacent trees.	Young trees less than 15 years old but over 5m in heights
<b>C</b>	Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long term retention.	Trees that may live for more than 40 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting.	Trees that may live for more than 15 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Damaged trees through structural defects including cavities, decay, included bark, wounds or poor form.	Trees that have been pruned to artificially control growth.
<b>D</b>		Trees that could be made suitable for retention in the medium term by remedial tree care.	Trees that require substantial remedial tree care and are only suitable for retention in the short term.	Damaged trees that are clearly not safe to retain.	
<b>E</b>				Trees that may live for more than 5 years but should be removed to prevent interference with more suitable individuals or to provide space for new plantings.	
<b>F</b>				Trees that are damaging or may cause damage to existing structures within 5 years.	
<b>G</b>				Trees that will become dangerous after removal of other trees for reasons given in (A) to (F).	



## Appendix B- Photos



Photo 1, Trees No. 1-4, facing north.





Photo 2, Trees No. 1-3, facing north.



Photo 3, Tree 5, facing south. (Google Earth, 2024)