

ARBORICULTURAL IMPACT ASSESSMENT REPORT

relating to the proposed inclinor at

**106 PRINCE ALFRED PARADE
NEWPORT NSW 2106**

c/o YSCO Geomatics

22 November 2023
Revision A

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1. INTRODUCTION

- 1.1 This report was commissioned by Rod Worthington of YSCO Geomatics on behalf of the owners of 106 Prince Alfred Parade, Newport to provide an Arboricultural Impact Assessment (AIA) report relating to the proposed inclinor works on the property and the existing trees located within close proximity to the works. The report shall form part of the development application documentation for submission to Northern Beaches Council.
- 1.2 A total of seven (7) trees are included in this assessment, including five (5) trees located within the site boundaries and two (2) trees located on the adjoining land to the east of the property. Generally, a tree is protected in accordance with the Northern Beaches Council Local Environment Plan if it is a height greater than five (5) metres. In some instances a tree may meet the prescribed size, however may not be protected for other reasons such as it being a noxious weed species or a species listed by Council as exempt.
- 1.3 The purpose of this report is to undertake a visual assessment of the trees, determine the sustainability of the trees in the landscape, determine the impact of the proposed works on the trees and provide recommendations for tree protection measures to be implemented for those trees.
- 1.4 This report shall reflect the expert opinion of the Arborist. The Arborist is acting independently of and not as the advocate for the owner. The Arborist shall not receive any commission to prune or remove the tree/s which is the subject of this report.
- 1.5 This report has been prepared in accordance the Australian Standard "*Protection of Trees on Development Sites*" (AS 4970:2009).
- 1.6 Details shown on the following plans were reviewed in this assessment:

Title	Author	Dwg. No.	Date
Design of Proposed Inclinor	YSCO Geomatics	3422/1	26/10/23
Topographical survey plan	ChadwickCheng Consulting Surveyors	40157/D1-MGA	22/2/21

- 1.7 Key Definitions and Abbreviations used in this report.
- **TPZ = Tree Protection Zone.** This is the area as defined by AS 4970 – "*Protection of trees on development sites*" and means the typical minimum area above and below ground at a given distance from the trunk to provide for protection of the tree. Most importantly it represents the root zone required to be kept uninjured to maintain a healthy and viable tree. Note, roots will usually extend well beyond this zone, so this represents the minimum remaining root zone required, assuming all others are lost or damaged due to construction. It is typically calculated as a circle centred on the trunk unless existing site conditions can be assessed and indicate otherwise. According to the Australian Standard, a minor encroachment of 10% of the TPZ is allowable, provided the 10% is compensated for elsewhere and contiguous to the TPZ.
 - **SRZ = Structural Root Zone.** This is the area as defined by AS 4970 – "*Protection of trees on development sites*" and means the area immediately around the base of the tree at a given distance from the trunk. The woody roots and soil cohesion in this area are considered vital to the structural stability of the tree. Damage or removal of soil and roots from this area will typically render the tree unstable and require its removal. It is typically calculated as a circle, centred on the trunk, unless existing site conditions can be assessed and indicate otherwise.

2. METHODOLOGY

2.1 Health and Condition Assessment

A site inspection was undertaken on 9 November 2023 to visually assess the trees in view from ground level. This report is limited to the methods of assessment listed below (and outlined in **Appendix 1**), and does not include any internal probing, compaction testing, drilling, root mapping, aerial inspection or diagnostic testing.

- Tree Species (botanical and common name).
- Tree height was estimated.
- Canopy spread was estimated.
- Diameter at Breast Height (DBH) and Diameter at Ground Level (DGL) was measured or estimated if tree was inaccessible.
- Health and vigour assessed, including indicators such as foliage size, colour, extension growth, presence of disease or pest infestation, canopy density, presence of deadwood, dieback, epicormic growth.
- Condition assessed, including visible evidence of structural defects, instability, evidence of previous pruning and physical damage as indicators.
- Life expectancy of the tree was estimated, suitability of the tree to the site and its existing location.
- The photographs included in this report were taken at the time of inspection.
- Assessment was carried out visually from ground level within the property.
- The comments and recommendations in this report are based on findings from the site inspection.

2.2 Landscape Significance

The significance of a tree in the landscape is a combination of its environmental, heritage and amenity values. A criteria for the assessment of landscape significance as devised by Andrew Morton (2003) and shown in **Appendix 2** have been applied. Whilst it may be somewhat subjective to assess these values consistently, it is appropriate to assign some measure to assist in determining the overall retention value of a tree.

The rating system which has been applied to the tree and to assist in determining a priority for retention, includes the following categories:

- | | |
|----------------|------------------|
| 1. Significant | 5. Low |
| 2. Very High | 6. Very Low |
| 3. High | 7. Insignificant |
| 4. Moderate | |

2.3 Tree Retention Value

The retention value shown in the Tree Assessment Schedule in **Figure 2** has been determined on the basis of the estimated longevity of the tree and its landscape significance rating, in accordance with Table 1 below.

	Landscape Significance Rating										
Estimated Life Expectancy	1	2	3	4	5	6	7				
Long (>40 yrs)	High Retention Value			Moderate Retention Value		Low Retention Value					
Medium (15-40 yrs)	High Retention Value		Moderate Retention Value			Low Retention Value					
Short (5-15 yrs)	Moderate Retention Value		Low Retention Value			Very Low Retention Value					
Transient (<5 yrs)	Low Retention Value		Very Low Retention Value								
Dead or poses an unacceptable risk to life	Very Low Retention Value										

Table 1: Tree Retention Values - assessment methodology (Ref:- Morton, Andrew 2006 modified from Couston, Mark & Howden, Melanie (2001) Footprint Green Pty Ltd, Sydney, Australia)

3. OBSERVATIONS

3.1 The Site

The property is located to the northern side of Prince Alfred Parade and is legally identified as Lot 25 in Deposited Plan 13457. Almost rectangular in shape, the site has a total area of 581.7 square metres. Residential properties adjoin the east and western boundaries whilst the northern boundary is defined by the mean high tide water mark of Salt Pan Cove (Pittwater foreshore) - refer aerial photograph in **Figure 1**.

Currently on the site is a dwelling located towards the front of the site. An indoor swimming pool is located to the rear of the dwelling. The property slopes steeply from Prince Alfred Parade down to the foreshore area at the rear boundary. Copper log retaining walls extend across the rear yard to provide terraced garden areas. Access steps are located to either side of the dwelling and extend to the rear of the site to provide pedestrian access throughout the site. A boat shed is located to the northwestern corner of the property, which leads to a jetty and pontoon in the harbour.

According to Northern Beaches Council zoning map, the site is zoned as C4 Environmental Living, being land identified with special environmental or scenic values where residential development can be accommodated. This is reflected in the tree species found growing on and near the site, which are locally occurring species and as such hold ecological significance (in accordance with **Appendix 2**).



Figure 1: An aerial image of the site with boundary lines highlighted in red (accessed from <http://maps.six.nsw.gov.au/> on 16/11/23).

3.2 The Trees

The information and characteristics of the trees are set out in the Tree Assessment Schedule in **Figure 2**. Each tree has been provided with an identification number for reference purposes which is noted on the Tree Location Plan (in **Figure 3**) using the survey plan prepared by ChadwickCheng Consulting Surveyors as a base layer. The tree identification numbers correlate with the trees listed on the Tree Assessment Schedule. Site photos can be found in **Figure 4-9**.

Tree No.	Plant Name (Species/Common Name)	Age	Tree Height (m)	Average Canopy spread (m)	DBH (m)	DGL (m)	Crown Class	Vigour	Condition	Useful Life Expectancy	Landscape Significance	Tree Retention Value	Observations/ comments	Tree Protection Zone (TPZ) radius in metres	Structural Root Zone (SRZ) radius in metres	Remove or retain?	Impact / Incursion
1	<i>Corymbia maculata</i> (Spotted Gum)	mature	est. 15.0	17.0 (bias to E)	0.55	0.60	co-dominant/ partially suppressed	normal	good	long (40yrs+)	high	high	Locally indigenous species representative of original vegetation of the area. Slight lean in trunk due to crown suppression. Located adjacent to front boundary line.	6.6	2.7	retain	Top landing and inclinator rail located in TPZ of tree. **Other works located in TPZ and relating to driveway crossover, carport and access steps form part of a previous DA**
2	<i>Corymbia maculata</i> (Spotted Gum)	mature	est. 18.0	20.0	0.80	0.98	co-dominant	normal	good	long (40yrs+)	high	high	Locally indigenous species representative of original vegetation of the area. Located adjacent to front boundary line. Dominant specimen to Tree No. 1	9.6	3.3	retain	Top landing and inclinator rail located in TPZ of tree. **Other works located in TPZ and relating to driveway crossover, carport and access steps form part of a previous DA**
3	<i>Eucalyptus paniculata</i> * (Grey Ironbark)	mature	est. 18.0	16.0	0.50	0.65	dominant	normal	good	long (40yrs+)	high	high	Locally indigenous species representative of original vegetation of the area. Located in rear yard of adjoining site to east at No. 108 Prince Alfred Pde. Recent pruning cuts evident.	6.0	2.8	retain	Inclinator rail extends through TPZ and SRZ of tree. Proposed bottom landing and steps located in TPZ. Minor excavation at top of RW (RL 7.15) to accommodate inclinator rail, located 3.6m from base of tree.
4	<i>Corymbia maculata</i> * (Spotted Gum)	mature	est. 10.0	10.0 (bias to N)	0.38	0.55	supressed	normal	fair	long (40yrs+)	high	high	Locally indigenous species representative of original vegetation of the area. Located in rear yard of adjoining site to east at No. 108 Prince Alfred Pde. Crown suppression due to more dominant canopy of Tree No. 3 - subsequent strong canopy bias to north.	4.6	2.6	retain	Inclinator rail extends through TPZ and SRZ of tree. Proposed bottom landing and steps located in TPZ.
5	<i>Corymbia maculata</i> (Spotted Gum)	mature	est. 15.0	12.0 (bias to N)	0.64	0.85	dominant	normal	good	long (40yrs+)	high	high	Locally indigenous species representative of original vegetation of the area. Located in rear yard of site. Typical representationi for the species.	7.7	3.1	retain	Inclinator rail extends through a small portion of the TPZ of the tree.
6	<i>Corymbia maculata</i> (Spotted Gum)	mature	est. 13.0	6.0	0.29	0.33	supressed	normal	good	long (40yrs+)	high	high	Locally indigenous species representative of original vegetation of the area. Located in rear yard of site. Typical representationi for the species.	3.5	2.1	retain	No impact within TPZ of tree.
7	<i>Corymbia maculata</i> (Spotted Gum)	mature	est. 13.0	8.0	0.32	0.38	supressed	normal	good	long (40yrs+)	high	high	Locally indigenous species representative of original vegetation of the area. Located in rear yard of site. Typical representationi for the species.	3.8	2.2	retain	No impact within TPZ of tree.

* those tree located on adjoining land

Figure 3: Tree Assessment Schedule

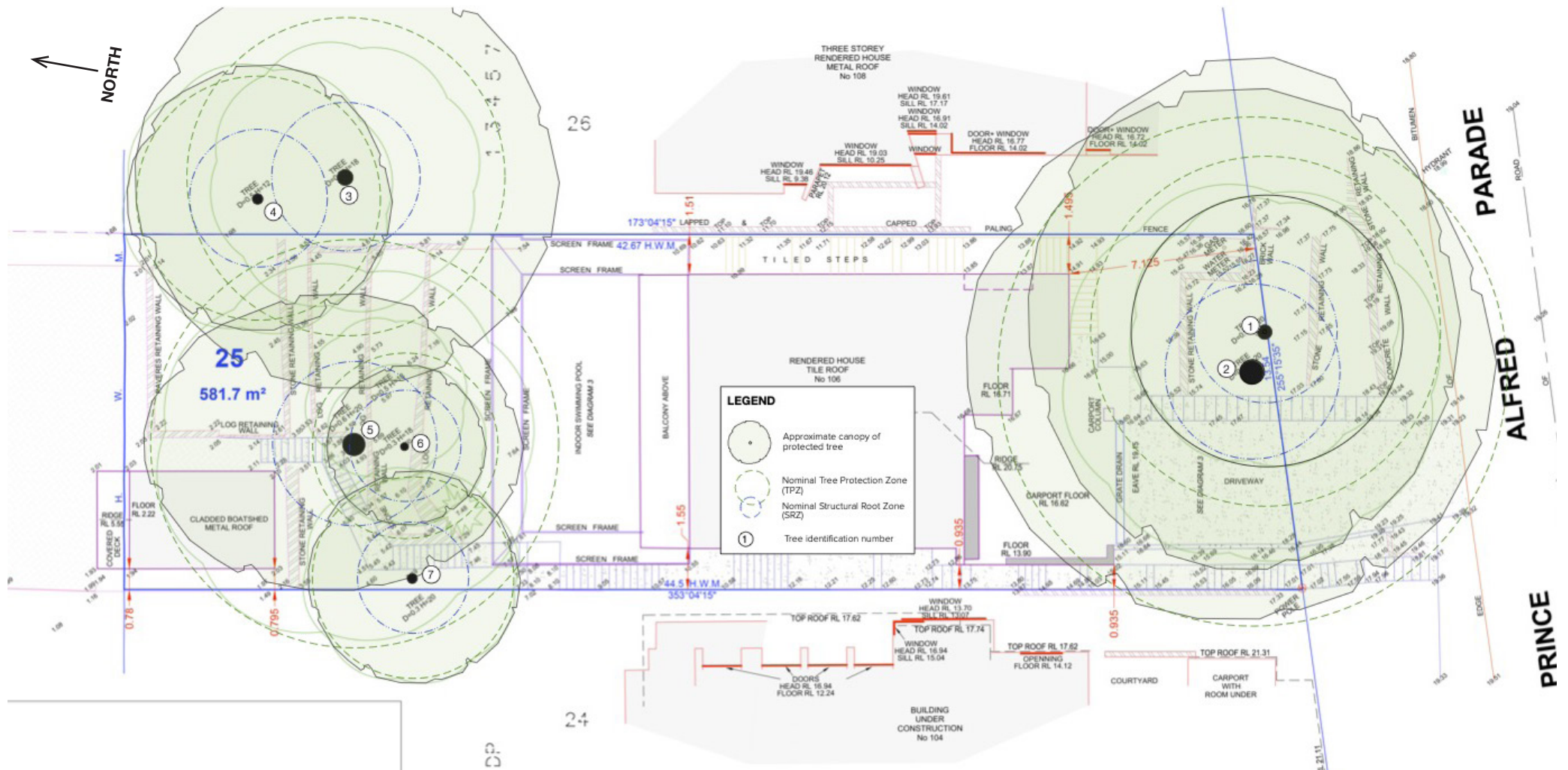


Figure 3: Tree Location Plan showing the existing trees located on the site using the survey plan as a base layer. Note, do not measure from drawings.



Figure 4 (above): Photograph viewing north to Tree No. 1 & No. 2 (Spotted Gum) from Prince Alfred Parade. (Photo: J Willis)



Figure 5 (above): Photograph viewing north along the eastern boundary from the front of the site. The neighbouring Tree No. 3 (Grey Ironbark) is visible in the background. (Photo: J Willis)

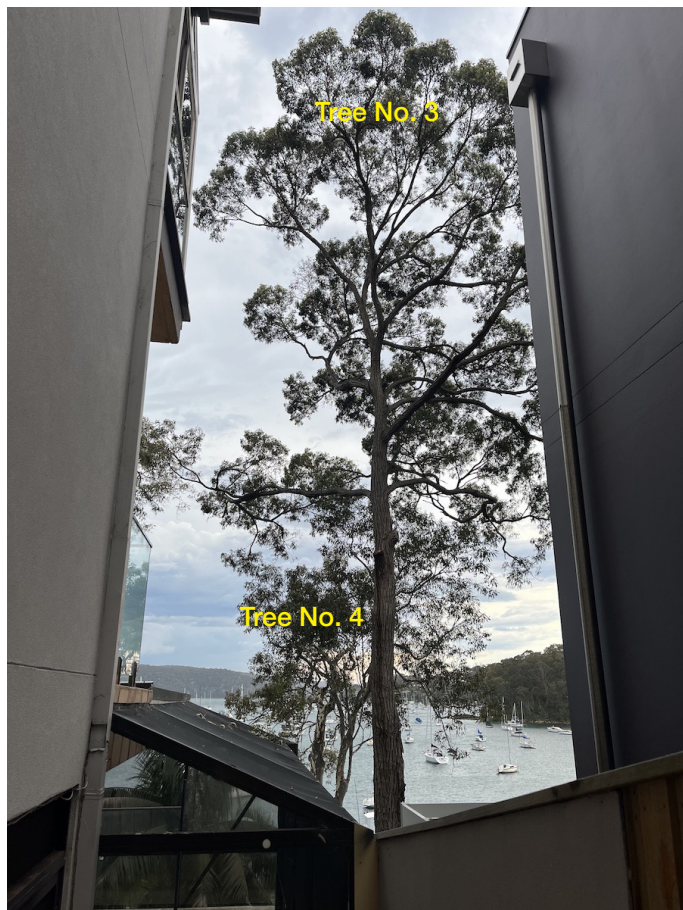


Figure 6 (left): Photograph viewing east to Tree No. 3 (Grey Ironbark) and No. 4 (Spotted Gum) located on the neighbouring site at No. 108 Prince Alfred Parade. (Photo: J Willis)



Figure 7 (left): Photograph viewing north along the eastern side boundary with the neighbouring trees visible. (Photo: J Willis)



Figure 8 (left): Photograph viewing southwest to the existing retaining walls in the rear yard. Tree No. 3 is visible in the background. (Photo: J Willis)



Figure 9 (left): Photograph viewing east to Tree No. 3 (Grey Ironbark) and No. 4 (Spotted Gum) located on the neighbouring land. (Photo: J Willis)

4. DISCUSSION | IMPACT ASSESSMENT

- 4.1 The intention of this assessment is to determine the level of incursion by the proposed works to the root zones and canopies of the trees located on the site and on adjoining land. Furthermore this assessment shall evaluate the likely impact resulting from the proposed works on the existing trees. The Tree Location Plan in **Figure 3** indicates the tree locations. The Proposed Inclinator Design in **Figure 10** provides an overview of the proposed inclinator rail including landings. The calculated Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) are indicated as dashed lines around the trees and are also listed on the tree assessment schedule in **Figure 2**. The proposed encroachment in the TPZ is shown as blue hatching. The Inclinator Longitudinal Section in **Figure 11** illustrates the position of the inclinator rail relative to existing ground levels. The following criteria have been examined as part of this assessment:-

- Existing Relative Levels (RL)
- Tree Protection Zone (TPZ)
- Structural Root Zone (SRZ)
- Footprint of the proposed development and any temporary structures (ie. scaffolding)
- Incursions to the TPZ & SRZ, including excavation, filling, and potential above ground impacts to tree canopy;
- Existing structures located in the TPZ of the retained trees; and
- Assessment of the likely impact of the works on the existing trees.

4.2 Summary of existing trees

The trees included in this assessment are indicative of the original vegetation found growing in the area and therefore hold high ecological significance. The identified species include *Corymbia maculata* (Spotted Gum) and *Eucalyptus paniculata* (Grey Ironbark). Both species are characteristic of the Endangered Ecological Community (EEC) known as the Pittwater Spotted Gum Forest in the Sydney Basin Bioregion. With consideration to the ecological significance of the trees, crown volume and estimated life expectancy, all of the seven (7) trees are considered to hold a high retention value. All trees are being retained as part of the proposed works.

4.3 Summary of proposed works

It is proposed to install an inclinator to the eastern side of the property to provide pedestrian access from the top of the site down to the lower level adjacent to the rear boundary. The rail shall extend parallel to the eastern side boundary. The proposed works shall include an upper, mid and bottom landing area with access steps where necessary.

Note: It is understood a new driveway, carport and access steps to the front of the site form part of a separate development application.

4.4 Inclinator encroachment in TPZ of Tree No. 1, 2, 3, 4 and 5 (refer to **Figure 10-11**)

- a) The inclinator rail extends over the TPZ of Tree No. 1, 2, 3, 4 and 5. The lower section of inclinator rail extends over the SRZ of one of the neighbouring Tree No. 4.
- b) The upper landing is located in the TPZ of Tree No. 1 and 2, and the bottom landing is located in the TPZ of neighbouring trees, No. 3 and 4. The landings shall be a light weight structure supported on post footings.
- c) Based on the longitudinal section drawing (refer to **Figure 11**) the inclinator rail shall be elevated above existing ground levels with exception to a small portion of the existing terraced garden area (RL 7.15) which is located in the TPZ of neighbouring Tree No. 3 (refer to **Figure 10**). The section drawing indicates minor excavation to achieve clearance between the ground level and the inclinator rail. With consideration to the existing retaining walls and associated level changes located within the TPZ of Tree No. 3, it is the author's opinion it is unlikely the root system of the tree will be impacted upon by the adjustment to the retaining wall level.

Overall, the inclinator works are considered acceptable providing the final position of all footings and piers are determined on site following preliminary hand digging. Should a woody root equal to or greater than 40mm diameter be uncovered, the footing should be relocated. All footings should be positioned outside the SRZ of the above mentioned trees. Providing no large woody roots are severed as part of the excavation works, the proposed inclinator and associated works should not result in any adverse impact upon the trees.

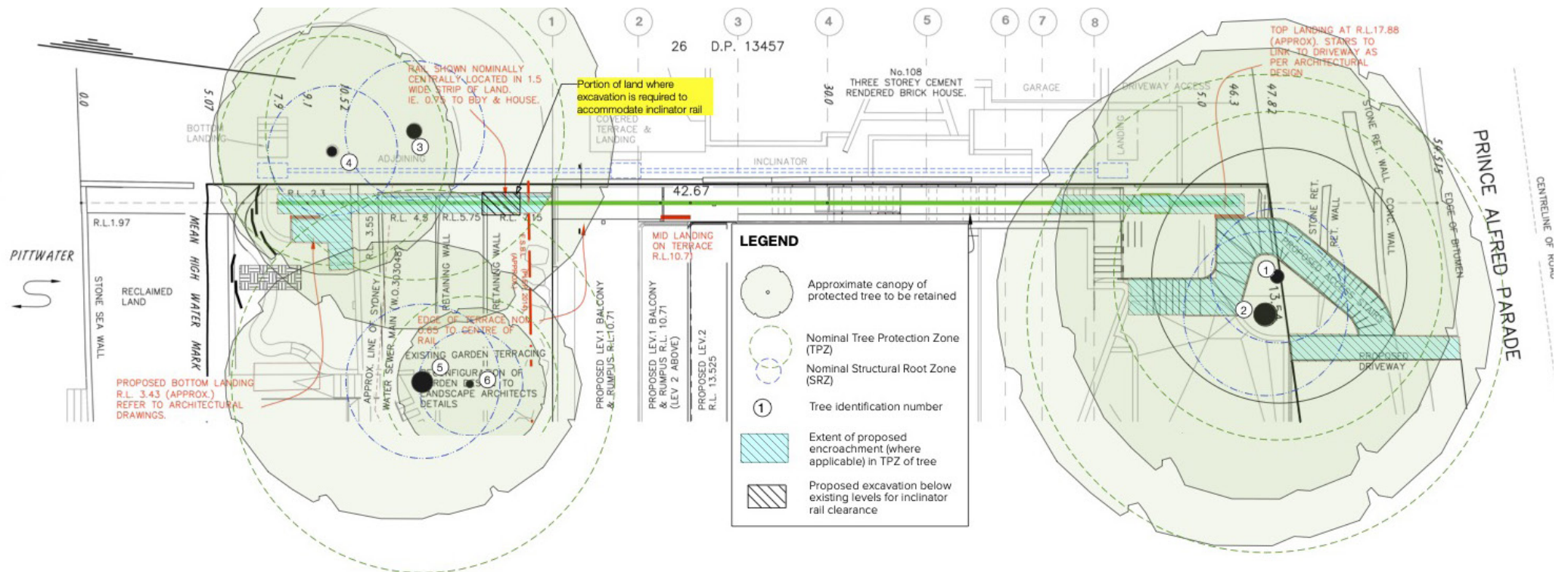
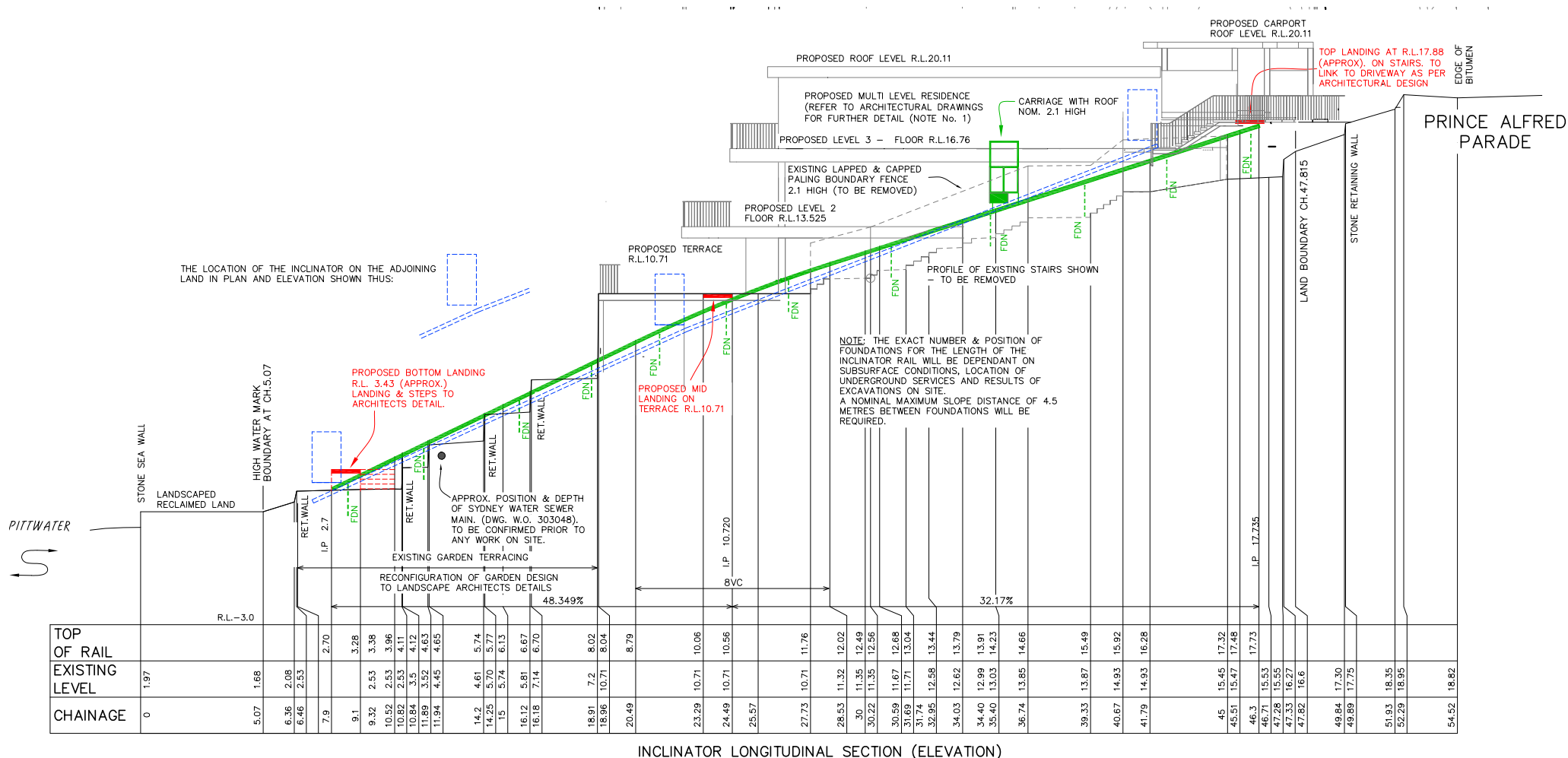


Figure 10: Proposed Inclinator Design including an overlay of the TPZ and SRZ of the trees. The extent of encroachment is indicated as blue hatching. Note, not to scale.



INCLINATOR LONGITUDINAL SECTION (ELEVATION)

Figure 11: Inclinor Longitudinal Section drawing (provided by YSCO Geomatics) indicating the proposed works in relation to the existing ground levels. Note, not to scale.

5. CONCLUSION | RECOMMENDATIONS

- 5.1 A total of seven (7) trees are included in this assessment including five (5) trees located within the site boundaries and two (2) trees located on neighbouring property to the east (108 Prince Alfred Parade). The trees are identified as ecologically significant which is consistent with Council's zoning of the site as C4 Environmental Living, being land identified as holding biodiversity and ecological significance. All trees will be retained as part of the proposal
- 5.2 The development application includes installation of an inclinator parallel to the eastern side boundary. An upper, mid and lower landing area shall be constructed to provide access between the inclinator and the various sections of the property. The proposed works are located in the TPZ of Tree No. 1, 2, 3, 4 and 5. All footings should be positioned outside the SRZ of the assessed trees as much as practicable. Excavation for piers and post footings must be undertaken by non-mechanical methods to ensure there is no severance of any large woody roots. Providing the appropriate tree protection measures are adopted during the works, it is the author's opinion the inclinator works can be undertaken in a way that does not result in any adverse impact upon the trees.
- 5.3 To ensure the long term preservation of the trees located both on the property and on adjoining land, it is recommended the following tree protection measures (as a minimum) are implemented as part of the future works:

(i) Trunk Protection (refer to Appendix 3): Prior to commencement of any works on the site, trunk protection is to be installed around the assessed trees located on the site (including Tree No. 1, 2, 5, 6) and on neighbouring sites (Tree No. 3, 4). As a minimum, the trunk protection shall consist of 1.8 metre lengths of pine board timbers (90 x 45mm) spaced at 100-150mm centres secured together with perforated metal straps. These shall be strapped around the trunk (not fixed in any way) to avoid mechanical injury or damage. Trunk protection should be installed prior to the commencement of any site works and maintained in good condition for the duration of the works. Trunk protection will help to protect the tree from any inadvertent damage that may result from activities during the course of the works.

(ii) Excavation Works: Excavation for foundations, piers and all footings must be hand dug with extreme care when located in the TPZ of the assessed trees. Additionally, adjustments to retaining wall and terraced garden level (RL 7.15) in TPZ of Tree No. 3 must be undertaken by non-mechanical methods. Under no circumstances should excavation occur via mechanical methods unless rock is encountered. The final location of all foundations, piers and footings must ensure there is no cutting of any woody roots greater than 40mm diameter. Where woody roots greater than 40mm diameter are encountered and the foundation cannot be relocated, further advice must be sought from a qualified Arborist prior to root severance. Any roots less than 40mm in diameter shall be cut cleanly with sharp pruning implement.

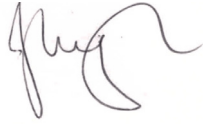
(iii) General tree protection measures: It is assumed there will be no heavy machinery accessing the TPZ areas to undertake the works, and the installation of the inclinator will be undertaken by manual methods including all excavation. Given this, the likelihood of damage occurring to the existing trees and construction related impacts upon soil (ie. compaction) is reduced. Additionally, due to the steep terrain it is not practical to install tree protection fencing or ground protection. However, the TPZ of the trees identified in this report should be recognised and the following activities be avoided within the specified radius:

- Excavations and trenching;
- Ripping or cultivation of soil;
- Modification of existing soil levels;
- Mechanical removal of vegetation;
- Soil disturbance or movement of natural rock;
- Temporary or permanent location of services, or the works required for their

installation;

- Movement and storage of plant & equipment;
- Affixing of signage or hoardings to trees;
- Storage of building materials, waste and waste receptacles;
- Disposal of waste materials and chemicals including paint, solvents, cement slurry, fuel, oil and other toxic liquids;
- Other physical damage to the trunk or root system; and
- Any other activity likely to cause damage to the tree.

If you have any questions regarding this report please do not hesitate to contact the undersigned.



Joanne Willis

Consultant Arboriculturalist (AQF 5)

Member of I.A.C.A. (Institute of Australian Consulting Arborists)

Member of I.S.A (International Society of Arboriculture)

Assumptions

Care has been taken to obtain all information from reliable sources. All data has been verified as far as possible. However Joanne Leigh – Consulting Arborist can neither guarantee nor be responsible for the accuracy of information provided by others.

Unless stated otherwise:

- Information contained in this report covers only the tree that was examined and reflects the condition of the tree at the time of inspection: and
- The inspection was limited to visual examination of the subject tree without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject tree may not arise in the future.

6. REFERENCES

- Draper, Danny B. and Richards, Peter A (2009) "Dictionary for Managing Trees in Urban Environments". CSIRO Publishing, Collingwood, VIC Australia
- Harris, R.W; Clark, J.R; & Matheny, N.P (2004) Arboriculture; Integrated Management of Landscape Trees, Shrubs & Vines 4th Edition, Prentice Hall, New Jersey.
- Mattheck, Claus (2007) "Updated Field Guide for Visual Tree Assessment". Karlsruhe Research Centre, Germany.
- Standards Australia (2009) AS2970-2009 "Protection of Trees on Development Sites", Sydney.
- Council's relevant tree planning documents.

APPENDIX 1: TREE INSPECTION INVENTORY NOTES

The values for terminology provided below are sourced from SRIV© Sustainable Retention Index Value © From Draper BD and Richards PA 2009, Dictionary for Managing Trees in Urban Environments, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

Age: Most trees have a stable biomass for the major proportion of their life. The estimation of the age of a tree is based on the knowledge of the expected lifespan of the taxa in situ divided into three distinct stages of measurable biomass, when the exact age of the tree from its date of cultivation or planting is unknown and can be categorized as Young, Mature and Over-mature.

Young - Tree aged less 20% of life expectancy, in situ.

Mature - Tree aged 20-80% of life expectancy, in situ.

Over-mature - Tree aged greater than >80% of life expectancy, in situ, or senescent with or without reduced vigour, and declining gradually or rapidly but irreversibly to death.

Height: In metres (estimated)

Spread: Average diameter of canopy in metres (estimated)

Crown class:

(D) Dominant (crown extends above general canopy; not restricted by other trees)

(C) Co-dominant (crown forms the bulk of the general canopy but crowded by other trees)

(I) Intermediate (crown extends into dominant/codominant canopy but quite crowded on all sides)

(S) Suppressed (crown development restricted from overgrowing trees)

Vigour: Ability of a tree to sustain its life processes. This is independent of the condition of a tree but may impact upon it. Vigour can appear to alter rapidly with change of seasons (seasonality) e.g. dormant, deciduous or semi-deciduous trees. Vigour can be categorized as:

Normal Vigour Ability of a tree to maintain and sustain its life processes. This may be evident by the typical growth of leaves, crown cover and crown density, branches, roots and trunk and resistance to predation. This is independent of the condition of a tree but may impact upon it, and especially the ability of a tree to sustain itself against predation.

High Vigour Accelerated growth of a tree due to incidental or deliberate artificial changes to its growing environment that are seemingly beneficial, but may result in premature aging or failure if the favourable conditions cease, or promote prolonged senescence if the favourable conditions remain, e.g. water from a leaking pipe; water and nutrients from a leaking or disrupted sewer pipe; nutrients from animal waste, a tree growing next to a chicken coop, or a stock feed lot, or a regularly used stockyard; a tree subject to a stringent watering and fertilising program; or some trees may achieve an extended lifespan from continuous pollarding practices over the life of the tree.

Low Vigour Reduced ability of a tree to sustain its life processes. This may be evident by the atypical growth of leaves, reduced crown cover and reduced crown density, branches, roots and trunk, and a deterioration of their functions with reduced resistance to predation. This is independent of the condition of a tree but may impact upon it, and especially the ability of a tree to sustain itself against predation.

Dormant Tree Vigour Determined by existing turgidity in lowest order branches in the outer extremity of the crown, with good bud set and formation, and where the last extension growth is distinct from those most recently preceding it, evident by bud scale scars. Normal vigour during dormancy is achieved when such growth is evident on a majority of branches throughout the crown.

Useful Life Expectancy: The life span of a tree in the urban environment may often be reduced by the influences of encroachment and the dynamics of the environment and can be categorized as Immediate, Short Term, Medium Term and Long Term.

Short Term - Period of time less than 15 years.

Medium Term - Period of time 15 - 40 years.

Long Term - Period of time greater than >40 years.

Condition: A tree's crown form and growth habit, as modified by its environment (aspect, suppression by other trees, soils), the stability and viability of the root plate, trunk and structural branches (first (1st) and possibly second (2nd) order branches), including structural defects such as wounds, cavities or hollows, crooked trunk or weak trunk/branch junctions and the effects of predation by pests and diseases. These may not be directly connected with vigour and it is possible for a tree to be of normal vigour but in poor condition. Condition can be categorized as:

Good Condition - Tree is of good habit, with crown form not severely restricted for space and light, physically free from the adverse effects of predation by pests and diseases, obvious instability or structural weaknesses, fungal, bacterial or insect infestation and is expected to continue to live in much the same condition as at the time of inspection provided conditions around it for its basic survival do not alter greatly. This may be independent from, or contributed to by vigour.

Fair Condition - Tree is of good habit or misshapen, a form not severely restricted for space and light, has some physical indication of decline due to the early effects of predation by pests and diseases, fungal, bacterial, or insect infestation, or has suffered physical injury to itself that may be contributing to instability or structural weaknesses, or is faltering due to the modification of the environment essential for its basic survival. Such a tree may recover with remedial works where appropriate, or without intervention may stabilise or improve over time, or in response to the implementation of beneficial changes to its local environment. This may be independent from, or contributed to by vigour.

Poor Condition - Tree is of good habit or misshapen, a form that may be severely restricted for space and light, exhibits symptoms of advanced and irreversible decline such as fungal, or bacterial infestation, major die-back in the branch and foliage crown, structural deterioration from insect damage e.g. termite infestation, or storm damage or lightning strike, ring barking from borer activity in the trunk, root damage or instability of the tree, or damage from physical wounding impacts or abrasion, or from altered local environmental conditions and has been unable to adapt to such changes and may decline further to death regardless of remedial works or other modifications to the local environment that would normally be sufficient to provide for its basic survival if in good to fair condition. Deterioration physically, often characterised by a gradual and continuous reduction in vigour but may be independent of a change in vigour, but characterised by a proportionate increase in susceptibility to, and predation by pests and diseases against which the tree cannot be sustained. Such conditions may also be evident in trees of advanced senescence due to normal phenological processes, without modifications to the growing environment or physical damage having been inflicted upon the tree. This may be independent from, or contributed to by vigour.

APPENDIX 2: CRITERIA FOR ASSESSMENT OF LANDSCAPE SIGNIFICANCE

The level of landscape significance has been determined using the following key criteria as a guide:

1. SIGNIFICANT

- The subject tree is listed as a Heritage Item under the Local Environment Plan (LEP) with a local, state or national level of significance; or
- The subject tree forms part of the curtilage of a Heritage Item (building /structure /artifact as defined under the LEP) and has a known or documented association with that item; or
- The subject tree is a Commemorative Planting having been planted by an important historical person (s) or to commemorate an important historical event;
- The subject tree is scheduled as a Threatened Species or is a key indicator species of an Endangered Ecological Community as defined under the Threatened Species Conservation Act 1995 (NSW) or the Environmental Protection and Biodiversity Conservation Act 1999; or
- The tree is a locally indigenous species, representative of the original vegetation of the area and is known as an important food, shelter or nesting tree for endangered or threatened fauna species; or
- The subject tree is a Remnant Tree, being a tree in existence prior to development of the area; or
- The subject tree has a very large live crown size exceeding 300m² with normal to dense foliage cover, is located in a visually prominent in the landscape, exhibits very good form and habit typical of the species and makes a significant contribution to the amenity and visual character of the area by creating a sense of place or creating a sense of identity; or
- The tree is visually prominent in view from surrounding areas, being a landmark or visible from a considerable distance.

2. VERY HIGH

- The tree has a strong historical association with a heritage item (building/structure/artifact/garden etc) within or adjacent the property and/or exemplifies a particular era or style of landscape design associated with the original development of the site; or
- The subject tree is listed on Council's Significant Tree Register; or
- The tree is a locally-indigenous species and representative of the original vegetation of the area and the tree is located within a defined Vegetation Link / Wildlife Corridor or has known wildlife habitat value;
- The subject tree has a very large live crown size exceeding 200m²; a crown density exceeding 70% Crown Cover (normal-dense), is a very good representative of the species in terms of its form and branching habit or is aesthetically distinctive and makes a positive contribution to the visual character and the amenity of the area.

3. HIGH

- The tree has a suspected historical association with a heritage item or landscape supported by anecdotal or visual evidence; or
- The tree is a locally-indigenous species and representative of the original vegetation of the area; or
- The subject tree has a large live crown size exceeding 100m²; and
- The tree is a good representative of the species in terms of its form and branching habit with minor deviations from normal (eg crown distortion/suppression) with a crown density of at least 70% Crown Cover (normal); and
- The subject tree is visible from the street and surrounding properties and makes a positive contribution to the visual character and the amenity of the area.

4. MODERATE

- The subject tree has a medium live crown size exceeding 40m²; and
- The tree is a fair representative of the species, exhibiting moderate deviations from typical form (distortion/suppression etc) with a crown density of more than 50% Crown Cover (thinning to normal); and
- The tree makes a fair contribution to the visual character and amenity of the area; and
- The tree is visible from surrounding properties, but is not visually prominent – view may be partially obscured by other vegetation or built forms.
- The tree has no known or suspected historical association

5. LOW

- The subject tree has a small live crown size of less than 40m² and can be replaced within the short term with new tree planting; or
- The tree is a poor representative of the species, showing significant deviations from the typical form and branching habit with a crown density of less than 50% Crown Cover (sparse); and
- The subject tree is not visible from surrounding properties (visibility obscured) and makes a negligible contribution or has a negative impact on the amenity and visual character of the area.

6. VERY LOW

- The subject tree is listed as an Environment Weed Species in the relevant Local Government Area, being invasive, or a nuisance species.
- The subject tree is scheduled as exempt (not protected) under the provisions of the local Council's Tree Preservation Order due to its species, nuisance or position relative to buildings or other structures.

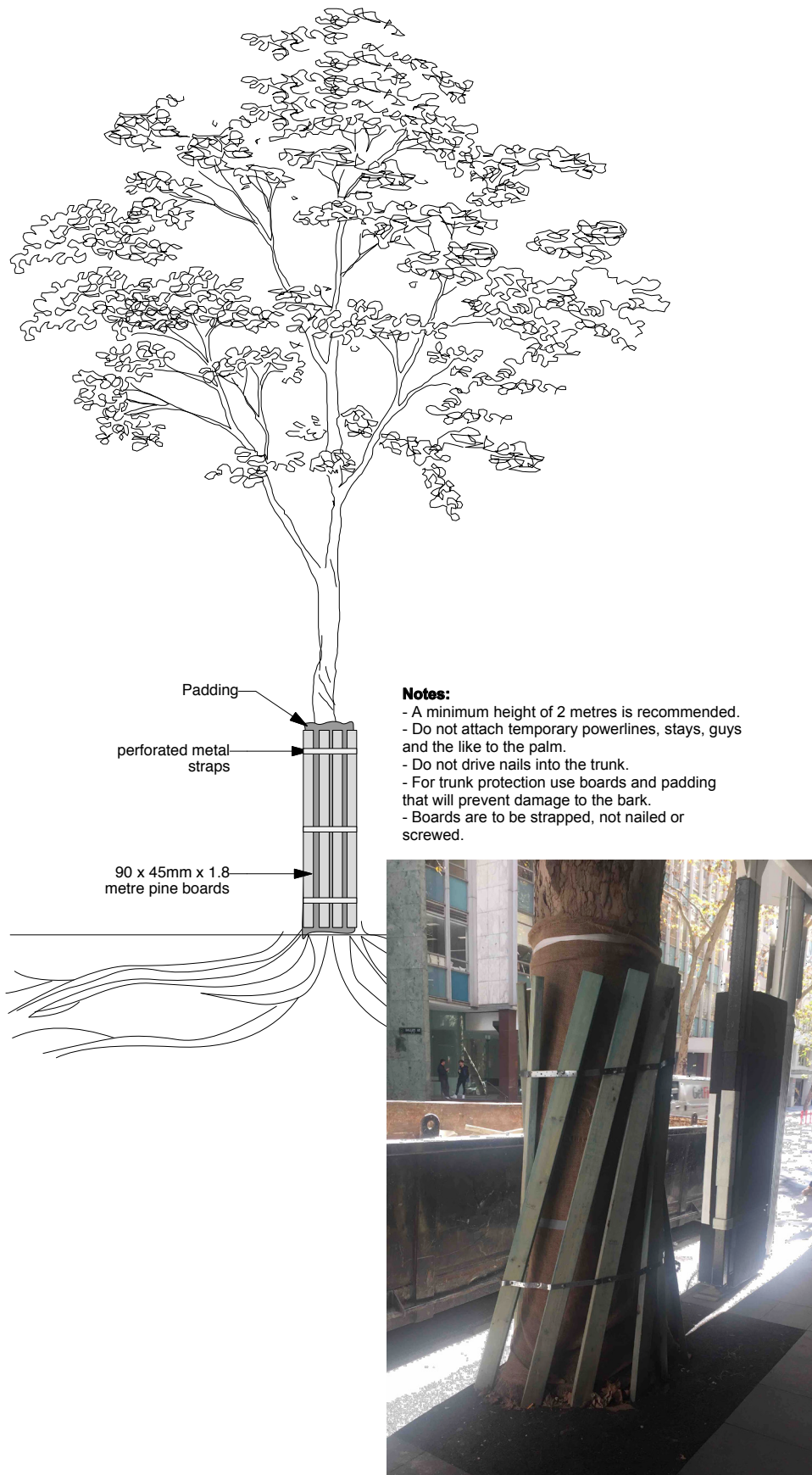
7. INSIGNIFICANT

- The tree is a declared Noxious Weed under the Noxious Weeds Act (NSW) 1993

Ref:- Morton, Andrew (2003) *Criteria for Assessment of Landscape Significance Earthscape Horticultural Services. Sydney, Australia*

APPENDIX 3: TRUNK PROTECTION

Drawing is diagrammatic only



Example of trunk protection installed around a tree