ARBORICULTURAL IMPACT ASSESSMENT

RELATING TO THE PROPOSED INCLINATOR AT

11 PORTIONS LOVETT BAY NSW 2105

Prepared for Phillip Pryke 31 March 2021

Revision B

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1. INTRODUCTION

- 1.1 This report was commissioned by Phillip Pryke, the owner of 11 Portions, Lovett Bay to provide an Arboricultural Impact Assessment report relating to the proposed incline passenger lift and the existing trees located within close proximity to the proposed works. The report shall form part of the documentation for submission to Northern Beaches Council for a development application to install an inclinator track from the lower portion of the site up to the existing timber deck of the residence.
- 1.2 A total of six (6) trees are included in this assessment that are located on the site and within close proximity to the proposed works. Generally, a tree is protected in accordance with Council's *Local Environment Plan Clause 5.9 Trees and Vegetation* if it is over five (5) metres high. According to the Pittwater Local Environmental Plan 2014 the site is zoned as E3 Environmental Management, being land identified as holding biodiversity and ecological significance with a strong objective to ensure the protection and continued viability of the local vegetation on the site.
- 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 and assess suitability for retention, determine the impact of the proposed works on the trees and provide tree protection measures for those trees to be retained.
- 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 with 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	Job No.	Date
Topographical Survey Plan	Hammond Smeallie & Co Pty Ltd	11457	11.12.20
Proposed Incline Passenger Lift architectural drawing 00-02	Peter Downes Designs	2124	18.1.20

- 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.

Health and Condition Assessment 2.1

A site inspection was undertaken on the 4 March 2021 at around 4.30pm to visually assess the trees in view from the ground. 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. This report includes the following data collection:

- Tree Species (botanical and common name).
- Tree height (measured using a Nikon Rangefinder Pro laser device or estimated if a clear view • was not possible).
- Canopy spread and age of tree was estimated.
- Diameter at Breast Height (DBH) and Diameter at Ground Level (DGL) was measured using a forestry diameter tape or estimated if base of tree was not accessible.
- Health and vigour, including foliage size, colour, extension growth, presence of disease or pest • infestation, canopy density, presence of deadwood, dieback, epicormic growth as indicators.
- Condition, using visible evidence of structural defects, instability, evidence of previous pruning and physical damage as indicators.
- Suitability of the tree to the site and its existing location. •
- The photographs included in this report were taken at the time of inspection.
- 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 each tree.

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

		0	0		
1.	Significant			5.	Low

	0	
2.	Verv Hiah	6.

- Very Low З. High 7. Insignificant
- 4. Moderate

2.3 **Tree Retention Value**

The retention value shown in the Tree Assessment Schedule in Figure 3 have been determined on the basis of the estimated longevity of the tree and its landscape significance rating, in accordance with Table 1 below.

	Landscape Sigr	ificance Rating	ę.				
Estimated Life Expectancy	1	2	3	4	5	6	7
Long (>40 yrs)	Hig	gh Retention Va	lue				
Medium (15-40 yrs)			Moderate Rete	ntion Value			
Short (5-15 yrs)				Low Rete	ntion Value		
Transient (<5 vrs)					Very Low Re	tention Value	
Dead or poses an unacceptable risk to life							

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

Located in Ku-ring-gai National Park, the property has a southerly aspect overlooking the foreshore of Lovett Bay, Pittwater. The site is formally identified as Lot 2 in Deposited Plan 610479. Irregular in shape, the property has a total site area of 896.5 square metres. On the site is a two storey weatherboard residence positioned close to the rear boundary. The east and western boundary lines adjoin residential properties, the northern rear boundary adjoins a lane, and the lower southern boundary line is defined as the Mean High Water Mark that adjoins Lovett Bay foreshore. A boat shed is positioned to the southwestern corner of the property. Extending beyond the southern boundary is a timber boat ramp and jetty which is utilised by the owner. Refer to aerial images in **Figure 1 and 2.**

The land slopes steeply down from the residence to the foreshore area. The dwelling is accessed from the jetty via a series of landscaped steps, a steel spiral staircase and sloping pathways. The property is heavily treed, with a range of native tree and shrub species of varying sizes growing across the site. A very large and conspicuous sandstone rock overhang sits beneath the dwelling and extends across much of the width of the site. A steel rail extends from the boat shed to bottom of the spiral staircase, with a boom winch overhead at dwelling level to assist with the transport of materials up to the residence.



Figure 1: An aerial image showing an overview of the area with with the site indicated by a red arrow (aerial image accessed from http://maps.six.nsw.gov.au/ on 11/3/21).



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NORTH

Figure 2: An aerial image of the site with the site boundaries outlined in red. The approximate location of the proposed inclinator track is indicated as a double blue line (aerial image accessed from http://maps. six.nsw.gov.au/ on 11/3/21).

3.2 The Trees

Whilst the site contains numerous trees, this assessment is limited to six (6) trees which are located within close proximity to the incline passenger lift works. The information and characteristics of the trees are set out in the Tree Assessment Schedule in **Figure 3**. Each tree has been provided with an identification number for reference purposes which is noted on the Tree Location Plan (**Figure 4**) and correlate with the Tree Assessment Schedule. The Tree Location Plan has utilised the Site Plan prepared by Peter Downes Designs. The architectural section drawing is provided in **Figure 5**. Site photos can be found in **Figure 6-13**.

Tree No	Plant Name (Species/Common Name)	Age	Tree Height (m)	Average Canopy spread (m)	(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 Soot Zone (SRZ) radius in metres	Remove or retain?	Impact / Incursion
-	Elaeocarpus reticulatus (Bluebenry Ash)	mature	0.6	5.0	0.16	0.25	co-dominant	normal	fair	medium (15-40yrs)	high (ecological significance)	moderate	Locally occurring species - high ecological significance. Upright specimen with narrow and limited crown volume.	2.0	1.8	retain	Upper timber landing immediately adjacent to tree. Encroachment in TP2 and SR2 for upper pire nacement. Possible canopy pruning - minor.
5	Syzygium oleosum (Tucker Bush)	mature	10.0	6.0	0.25	0.55	co-dominant	normal	poor	short (5-15yrs)	high (ecological significance)	wol	significance. Major decay evident at lower portion of trunk and root butress. Upper canopy failures/tears.	3.0	2.6	remove	Significant canopy pruning required which may be excessive and render the tree unviable.
ю	Eupomatia laurina (Bolwarra)	mature	0.7	រ ប	0.20	0.25	supressed	normal	fair	short (5-15yrs)	high (ecological significance)	šo	Locally occurring species - high ecological significance. Past co-dominant main limb has failed and/or been punned.	2 4.	ر ۵	remove	Line of inclinator rail and cart will necessitate removal of tree fem.
4	Cyathea cooperi (Australian Tree Fern)	mature	5.0	0	0.23	n/a	dominant	normal	000 00	medium (15-40yrs)	high (ecological significance)	×o	Typical representation for the species.	2.0	n/a	remove	Line of inclinator rail and cart will necessitate removal of tree fem.
2	Ficus rubiginosa (Port Jackson Fig)	mature	11.0	12.0 (can opy bias to south and east)	0.70	1.20	dominant	normal	fair	long (40yrs+)	high (ecological significance)	high	Locally occurring species - high ecological significance. Leaning trunk. Major decay evident at base.	8.4	3.6	retain	Lower landing area located in TPZ of tree representing approx. 5% encroachment
و	Glochidion ferdinandi (Chesse Tree)	mature	6.0	6.0 (canopy bias to south)	0.40	0.70	supressed	low	poor	short (5-15yrs)	high (ecological significan ce)	No	Locally occurring species - high ecological significanos. Leaning trunk. Major decay evident at base.	4.8	2.8	retain	Lower landing area located in TPZ of tree representing approx. 3% encroachment

Figure 3: Tree Assessment Schedule



Arboricultural Impact Assessment - Proposed Inclinator (Rev B) 11 Portions, Lovett Bay NSW 2105 Prepared by Joanne Willis (AQF Level 5 Arborist) on 31 March 2021

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Figure 5: Section architectural drawing prepared by Peter Downes Designs illustrating position of inclinator rail and pier locations. Note, drawings are not to scale.



Figure 6: Photograph viewing north at the property with the boat shed to the lower left hand side and the residence visible to the upper portion of the site (Photo: J Willis)



Figure 7: Photograph viewing north from the boat shed level. The trunk of Tree No. 5 (Port Jackson Fig) is visible to the right hand side (Photo: J Willis)



Figure 8: Photograph viewing the upper canopy of Tree No. 1 (Blueberry Ash) which is positioned adjacent to the upper landing (Photo: J Willis)



Figure 10: Photograph viewing the the trunk of Tree No. 2 (Tucker Bush) located adjacent to the spiral staircase - see red arrow (Photo: J Willis)



Figure 9: Photograph viewing the lower trunk of Tree No. 1 (Blueberry Ash) - see red arrow. (Photo: J Willis)



Figure 11: Photograph viewing the base of Tree No. 2 (Tucker Bush). (Photo: J Willis)



Tree No. 3 (Bolwarra)

Tree No. 4 (Tree Fern)

Figure 12: Photograph viewing north at the existing rail with Tree No. 4 (Tree Fern) visible in the foreground and the trunk of No. 3 (Bolwarra) visible in the background - see red arrows. (Photo: J Willis)



Figure 13: Photograph viewing west at the existing rail with Tree No. 4 (Tree Fern) visible to the left hand side and the trunk of No. 3 (Bolwarra) visible to the right hand side - see red arrows. (Photo: J Willis)

4. IMPACT ASSESSMENT

- 4.1 The intention of this assessment is to determine the incursions to the root zones and canopies created by the proposed incline passenger lift and associated works and evaluate the likely impact of the proposed works on the trees. The Tree Location Plan (**Figure 4**) shows the tree locations and the positioning of the proposed rail, upper and lower landings. The following criteria have been examined as part of this assessment:-
 - Existing Relative Levels (RL)
 - Tree Protection Zone (TPZ)
 - Structural Root Zone (SRZ)
 - Location of the inclinator track and positioning of foundations/ support piers;
 - Incursions to the TPZ & SRZ, including excavation, filling, and potential above ground impacts to tree canopy; and
 - Assessment of the likely impact of the works on the existing trees.
- 4.2 The lower landing area is located within the TPZ of Tree No. 5 (Port Jackson Fig) and No. 6 (Cheese Tree) representing an encroachment of approximately 5% and 3% respectively. Overall the extent of encroachment is considered to be minor and within acceptable limits. As such, the proposed works should not result in any adverse impact upon the trees.
- 4.3 The inclinator rail and clearance for the cart will necessitate the removal of Tree No. 3 (Bolwarra) and No. 4 (Australian Tree Fern). Whilst both tree and fern are locally indigenous species and therefore hold a high ecological significance, they represent a small portion of the canopy cover and biodiversity to the site. Overall, Tree No. 3 and 4 are not considered worthy of posing a constraint to the proposed inclinator.
- 4.4 It is estimated a significant amount of canopy pruning will be required to Tree No. 2 (Tucker Bush) to provide adequate clearance for the inclinator rail and cart as it extends up past the sandstone overhang. Due to the steep topography of the site and obstruction of views, it is was difficult for the author to provide an accurate estimation of the canopy loss due to future pruning works while on site. However it is estimated at least 40% of the tree's canopy would be removed which would likely render the tree unviable. The tree is a locally occurring species and therefore holds high ecological significance. However the tree does exhibit major decay on the lower trunk where a co-dominant limb has previously failed. Overall, with consideration to the existing population of the species on the site and its propensity to self-seed, if excessive canopy pruning is required its removal would be considered acceptable.
- 4.5 The inclinator rail, upper landing and pier is located in or close to the TPZ of Tree No. 1 (Blueberry Ash). The encroachment is considered acceptable providing the pier (and any additional post footings) are excavated by hand and the cutting of any large structural woody roots greater than 30mm diameter is avoided. Very minor canopy pruning may be required. The extent is estimated to be less than 10% and should not result in any adverse impact upon the tree.

5. CONCLUSION | RECOMMENDATIONS

- 5.1 It is proposed to install an incline passenger lift from the boat shed to the timber deck of the residence. The line of the incline rail will result in the removal of two (2) trees of low retention value, being Tree No. 2 (Bolwarra) and No. 3 (Australian Tree Fern). The trees do hold ecological significance as they are locally occurring species however they are relatively small specimens with a limited crown volume. It is the author's opinion the removal of these trees is acceptable providing that replacement planting is undertaken on the site to ensure the continued viability of the ecological community is not diminished in any way.
- 5.2 The proposed works will likely result in significant canopy pruning to Tree No. 2 (Tucker Bush) which is positioned adjacent to the spiral staircase. The extent of canopy pruning is estimated to be greater than 40% of the tree's live crown. If this estimation is correct, and the excessive canopy

pruning renders the tree unviable it is recommended the tree is removed and replacement planting is undertaken on the site with the same species.

- 5.3 The proposed works represent a minor encroachment in the TPZ of Tree No. 5 (Port Jackson Fig) and No. 6 (Cheese Tree) of less than 5%. The incursion is within the acceptable 10% threshold and therefore should not result in any adverse impact upon the trees.
- 5.4 The positioning of the upper pier to support the inclinator rail is located in the TPZ of Tree No.1 (Blueberry Ash). All excavation for piers must be by hand (ie. non-mechanical methods). Final positioning of piers must ensure there is no cutting of any structural woody roots greater than 30mm diameter. Where woody roots greater than 30mm diameter are encountered and the pier cannot be relocated, further advice must be sought from a qualified Arborist prior to root severance. Any roots less than 30mm in diameter shall be cut cleanly with a sharp pruning implement.
- 5.5 It is recommended trunk protection is installed around Tree No. 1 (Blueberry Ash) prior to commencement of works. 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 any site works and maintained in good condition for the duration of the construction period. Trunk protection will help to protect the tree from any inadvertent damage that may result from construction activities during the course of the inclinator works.
- 5.6 It is recommended tree protection fencing is installed between Tree No. 5 (Port Jackson Fig) and No. 6 (Cheese Tree) and the proposed works area to provide a physical barrier between the base of the trees and the works zone. Final positioning of fencing should be as directed by council or a consultant arborist. As a minimum the fence should consist of temporary chain wire panels 1.8 metres in height, supported by steel stakes as required and fastened together and supported to prevent sideways movement. The fence shall be erected prior to the commencement of any work on-site and shall be maintained in good condition for the duration of construction. Signage is to be attached to the nominated Tree Protection Zone and displayed in a prominent location and the sign repeated at 5 metre intervals or closer where the fence changes direction. The signs are to be a minimum size of 600 x 500mm. Each sign shall advise the following details:

Tree Protection Zone - access is restricted.

Name, address and contact number of the developer.

- 5.7 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 manually (by hand) 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 and difficult access it is not practical to install tree protection measures such as fencing or ground protection. However, the TPZ of all 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.
- 5.8 All tree removal works must be carried out by an experienced arborist with a minimum certification in Australian Qualification Framework Level 3 in Arboriculture.

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.

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.

- Northern Beaches Council 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) Supressed (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 (normaldense), 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