

**Arboricultural Impact Assessment**  
**On:Tree Specimens**  
**Location: 9 to 11 Fig tree Ave,**  
**TelopeaNSW2117**

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For: 888 Pty Ltd.  
On. 24/7/2016

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## **DISCLAIMER**

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Whilst every attempt is made to be accurate and factual with regard to references used in this document no liability is assumed for the work done by others.

Please note that trees are living organisms which are subject to natural growth, change and also to 'Acts of God' such as storms and lightning strikes. This report contains empirical data gathered on the day for the purpose of tree assessment in terms of their health and long term viability. Given the transitory nature of living things such data only gives a 'snapshot' of the organism on the day and cannot be applied to future events, 'Acts of God', mechanical, pathogen attack or chemical damage to the organism after that time.

The information supplied herein is given in good faith and to the best available scientific and industry standards which apply to the Author's level of education and experience.

# 1 INTRODUCTION

- 1.1** The property at 9 to 11 Fig Tree Ave. Telopea, henceforth referred to as the Site, is being proposed for development by 888 Pty Ltd who are intending to demolish the existing houses on the land and build an apartment complex with childcare centre on the properties comprising of 17 units.
- 1.2** The property is within the jurisdiction of Parramatta City Council (PCC) which has in place a Tree Protection Order<sup>1</sup> (TPO) which prohibits the pruning, removal, ringbarking, topping, lopping, injury or wilful destruction of trees over 5m without Council's written consent. For the removal or major pruning of trees covered by the TPO, PCC requires an arborist report whose purpose is to examine and appraise them prior to, and post any development of the site. Consequently 888 Pty Ltd has engaged Mr. Stephen McLoughlin of Treehaven Environments, to visit the site and examine 24 tree specimens growing on or near the Site, which have a potential to be affected by the development, and prepare this report.
- 1.3** This report contains empirical data collected regarding the tree specimens supported by digital photos, a Discussion regarding the relevance of the specimens and presents Conclusions and Recommendations as to the future treatment of the trees. Tables and plans relating to this report are included as Appendix 1 & 2 at the end of the document. This document pays heed to PCC's TPO and utilizes the Australian Standards 4790-2009 *Trees on development sites* and 4373-2007 *Pruning of Amenity Trees* as a set of guiding principles.

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<sup>1</sup> Parramatta City Council DCP 2011 Part 5.4 Preservation of Trees or Vegetation  
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## 2. SITE DESCRIPTION

**2.1** All the trees are sited on a North Easterly facing slope with a medium gradient and is in the Ponds creek catchment.

**2.2** There are two single story houses on the properties with outbuildings to the rear, that is the Northern portion of the Site.

**2.3** Tree specimens designated **T2** to **T22** are all growing on the Site whilst tree **T1** is a Council asset located on the nature strip to the East of the properties and Trees **T23 & T24** are on neighbouring land to the Northwest of the Site (See Fig 1).



Fig1. Aerial photo of the site from Six Maps showing position of the trees (in red Circles).

### **3. METHODOLOGY.**

**3.1** The tree specimens were visually assessed using non-destructive means by employing the Visual Tree Assessment (VTA) as developed by Matteck and Broeler (2006).

The information gathered was used to

- i) Calculate Tree protection Zones (TPZ) and Structural Root Zones (SRZ) with reference to the Australian Standard (AS) 4970-2009 and
- ii) Provide a qualitative assessment of the tree utilizing Jeremy Barrell's Safe Usable Life Expectancy (SULE) of which a table outlining the different categories appears in Appendix 3 of this document.

**3.2** No invasive procedures, such as coring or drilling, were used in the examination of the specimen.

**3.3** Structural Root Zone (SRZ) calculations provided in section **3.3.5** of Australian Standard 4970 -2010 are given as

$$SRZ = (D \times 50)^{0.42} \times 0.64$$

Where D is the diameter of the tree as measured just above the root buttress and the result is the radius of a circle enclosing the tree. This is referred to as the tree's Diameter at Ground Level (DGH) in the table in Appendix 1.

Also section **3.2** Tree Protection Zones (TPZ) is given as,

$$TPZ = DBH \times 12$$

Where DBH is the diameter of the trunk of the trunk measured at 1.4m from the ground.

In the case of trees T2 and T4, both of which have multiple stems at 1.4m from the ground, DBH was determined by using the following formula as advised in AS4970-2009

$$\text{Total DBH} = \sqrt{(DBH1)^2 + (DBH2)^2 + (DBH3)^2}$$

**3.4** The position of the trees has been determined by survey plans as forwarded from Idraft plans.

**3.5** Australian Standard 4970-2009 advises that a Major Encroachment is greater than 10% of the TPZ and a Minor Encroachment is less than 10% of the TPZ.

#### 4. DESCRIPTION OF THE TREES(See Appendix 1).

**4.1** Tree **T1** is a *Callistemon viminalis* 'Weeping Bottlebrush' which is growing on the nature strip to the Southeast of the Site and is a Council Asset (See Fig. 2). The tree is in poor condition at the time of inspection having been cut back heavily and is now reshooting. The specimen would be suffer a Major Encroachment into its TPZ by the excavation and construction of a concrete footpath crossover to access the Site (See Appendix 2).

**4.2** Trees**T2, T3, T4 & T6** are *Agonis flexuosa* or 'Willow Myrtle' which is a native species endemic to Southwest Western Australia that have been planted in front of the property to the Southeast of the Site (See Figs 3, 4, 5 & 7).All of these specimens have been subjected to indiscriminate pruning in that they have been lopped at approx. 1.8m from the ground and their canopies comprising of the resulting regrowth. Tree **T3** in particular has around 30% deadwood in the canopy and is in poor condition.

These trees would experience a Major Encroachment into their respective TPZ'sfrom deep excavation for the new driveway ramp and Onsite Stormwater Detention (OSD) pits to be constructed along the frontage of the Site(See Appendix. 2).

**4.3** Trees**T5** and **T15** are both *Pittosporum undulatum* or 'Native Daphne' (See Figs. 6 & 15). The species is endemic to the area but noted to have 'Weedy' properties and "the species has also proven to be very invasive" (Australian Native Plant Society). Of these specimens **T5** is noted to be in very poor condition whilst **T15**is stunted and appears to have been suppressed by overhanging vegetation.

These treeswill have Major Encroachments into their TPZs and would need to be removed for the development to proceed as planned (See Appendix 2).

**4.4** Tree **T7** is a *Cupressus sempervirens* 'Mediterranean cypress' which is growing in the property near the Western border (See Fig. 8). The tree is multi stemmed though a significant portion have been removed as evidenced by old pruning points.

The tree will be entirely engulfed by the proposed ramp for access to the below ground car park and will need to be removed for the development to proceed as planned(See Appendix. 2).

**4.5** Tree **T8** is a *Murraya paniculata* also known simply as 'Murraya'. The tree is less than 4m in height and forms a shrublike habit. The tree is not protected by the TPO and will be entirely engulfed by the proposed building footprint(See Appendix. 2).

**4.6** Trees **T9, T10, T11 & T20** are all *Callistemon viminalis* or 'Weeping Bottlebrush' (See Figs. 10, 11 & 18). Of these specimens tree **T9, T10 & T11** have been planted in a row along the existing driveway and are relatively small with etiolated habits and not significant in the

landscape. All three trees are centrally placed on the Site and will be entirely engulfed by the new building footprint. By contrast tree **T20** is reasonably large and wide spreading. The specimen has 4 main stems and is good health and condition. The tree will be subject to a Major Encroachment into its TPZ by the building footprint and would need to be removed for the development to proceed as planned (See Appendix. 2).

- 4.7** Tree **T12** is a *Thuja occidentalis* or 'White Cedar' which is located centrally on the Site (See Fig. 12). The specimen has 4 main stems which adjoin in a 'V' at the base and was in good health and vigour at the time of inspection. The tree will be entirely engulfed by the new building footprint (See Appendix. 2).
- 4.8** Trees **T13 & T14** are both *Archontophoenix cunninghamiana* or 'Bangalow Palms' which are a native species which have been planted either side of the existing driveway (See Figs. 13 & 14). Both specimen have twin trunks issuing from a common root ball and were on good health and condition at the time of inspection. These trees will be entirely engulfed by the new building footprint (See Appendix. 2). Alternatively they could be transplanted
- 4.9** Trees **T16 & T17** are both *Syagrus roman zoffianum* or 'Cocos Palms' which have been planted in the Northwest portion of the Site (See Fig. 16). These are listed as exempt species in the TPO and can be removed without approval. Both trees will be engulfed by the new building footprint (See Appendix 2).
- 4.10** Trees **T18 & T19** are both *Wodyetia bifurcata* or 'Foxtail Palms' which have been planted in the rear of the existing house toward the Northern portion of the Site and were in good health and vigour (See Fig. 17). Both specimens will be engulfed by the new building footprint and would need to be removed for the building to proceed as planned (See Appendix 2). Alternatively they could be transplanted.
- 4.11** Tree **T21** is a fairly large *Pinus patula* or 'Mexican Weeping Pine' and is the largest specimen on the Site. The tree has been planted in the Northwest corner of the Site and was in poor condition at the time of inspection (See Fig. 19). There is a strong bias in the canopy to the North and many dead branches on the tree's Southern side. Upon review of the aerial footage of the Site it is noted that there was a large tree, possibly a Eucalyptus since removed (See Fig 1), which would have been suppressing growth in this specimen's Southern portion. The tree won't be directly affected by the new building footprint but is in poor health and condition.
- 4.12** Tree **T22** is a small *Ficus microcarpa* or 'Hills Fig' which is at present under 5m in height and not protected under the TPO (See Fig. 20). The species has the potential to attain a height of 35m and a width of 35 to 40m (Ref. <https://selectree.calpoly.edu/tree-detail/609>).

Therefore the species is not recommended for a small contained area beside a fence line.

**4.13** Tree **T23** is a *Ligustrum sinensis* or 'Small Leaved Privet' growing in the neighbouring land to the North of the Site. The species is a weed species listed in Table 5.4.3.1 of the DCP as an exempt species. The tree will be affected by stormwater swale to be implemented to its South and will need to be removed.

**4.14** Tree **T24** is an exotic deciduous tree growing in the neighbouring land to the East of the Site (see Fig. 21). The specimen is well away from the building footprint and associated construction works and will not be encroached by Site works (See Appendix 2).

## 5. DISCUSSION

**5.1** There are no heritage listed trees on the Site and of the two endemic specimens, **T5** and **T15**, both have 'weedy' properties and one is in poor health and condition.

**5.2** Tree **T1** is a Council asset which conflicts with the proposed concrete footpath crossover but has been indiscriminately cut back to the point where its canopy is virtually nonexistent.

**5.3** Trees **T2, T3, T4, T8, T10, T11** and **T22** are all small trees under 5m in height and not protected by the TPO. Of note is that tree **T22** has the potential to grow into a very large specimen and is considered an inappropriate planting for a small back yard adjacent to a fenced border.

**5.3** Trees **T16 & T17** are both exempt species. While trees **T13, T14, T18** and **T19** are all native palms which could be transplanted.

**5.4** Trees **T6, T7, T9, T12, T20** are small to medium trees which are not significant in the landscape.

**5.5** Tree **21** is a large tree in poor condition. It is considered that it should be removed due to poor health and condition rather than impact from the development.

**5.6** Tree **23** is a weed growing on the neighbour's land and that property owner will need to be contacted regarding its removal.

**5.7** Tree **24** is a medium sized deciduous tree which is greater than 5m from the construction site and will not be affected by the development.



## **6.CONCLUSIONS & RECOMENDATIONS**

- 6.1.** Remove Trees **T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T15, T16, T17, T20, T21 & T22.**
- 6.2** Apply to Council to remove and replace **T1.**
- 6.3** Transplant if possible the four native palm trees **T13, T14, T18 & T19**
- 6.4** Approach the property owner to the North of the Site in regard to the removal of significant weed **T23.**
- 6.5** **T24** is well outside the development area and so no treatment is required regarding its protection.
- 6.6** There is an opportunity to plant new trees in the nature strip to the South of the Site. It is advised that tree specimens be chosen from PCC's list of preferred species.
- 6.7** Removal of trees constitutes a lack of amenity for the area and it is recommended that trees scheduled for removal be replaced in accordance with PCC's list of preferred species.

## **7. THE AUTHOR'S QUALIFICATIONS AND EXPERIENCE.**

Stephen McLoughlin obtained a Horticultural Certificate (1982) with Arboriculture as the third year elective whilst an employee of 10 years service with Baulkham Hills Shire Council (BHSC) now The Hills Council. Most of this time employed in the Council's Parks and Gardens and street tree plantings and, later, managing the Council's Nursery. This was augmented with a Bush Regeneration Certificate (1987) where he studied native plant communities, the means necessary to protect and restore them and the identification and eradication of weed species. Additional to this he obtained a Bachelor of Environmental Science Degree (1997) involving the study of natural environments, Ecology, data collection, analysis and documentation, report writing as well studies in relevant Common Law, current Environmental and Heritage Legislation. Since obtaining his degree Stephen writes reports on a regular basis covering Environmental, Heritage and Horticultural / Arboricultural subjects.

Further to this he upgraded his qualifications to that of Arborist Qualification 5 (AQF5) having completed the Associate Diploma of Horticulture / Arboriculture, a standard of qualification which is currently expected by many Local Government and statutory bodies.

Stephen also has a current NSW Structural Landscaper's Licence and has been involved in regular landscape construction works as both Principle and Sub Contractor on many Public, Private and Commercial ventures since commencing his contracting business in 1989. He has many garden and estate maintenance contracts, and Bush Regeneration projects involving large scale properties with many trees under his care, including the providing of advice and practical solutions to the issues of Bush Fire Asset Protection Zones.

Consequently Stephen has well grounded experience in both Public and Private tree plantings, the care and maintenance of them as well as hands on experience of what occurs on construction sites and the results of mechanical disturbance to trees on such sites.

The Author is also an accredited Root Barrier Australia ® installer and has been involved with many excavations involving tree roots.

In 2014 Stephen completed his Diploma of Environmental Management at the Ryde campus of North Sydney TAFE involving studies with regard to Bushfire Management, Global Information Systems (GIS), Mapping, Managing Native Fauna (for which he obtained a distinction) and River Restorations.

Also he has recently completed the Quantified Tree Risk Assessment Course (QTRA)

Yours sincerely

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## **REFERENCES**

Australian Standard 4373 1996 *Pruning of amenity trees*.

Australian Standard 4790 2009 *Trees on development sites*.

Barrell, J. 1996. '*Predevelopment tree assessment*'

Six Maps. Aerial view of site (fig 1).

Matteck C and Breloer H. 2006 'The Body Language of Trees'

Parramatta City Council 2011DCP 2011 Part 5.4 Preservation of Trees or Vegetation *Tree Protection Order*

### **Websites visited.**

Australian Native Plant Society  
<http://anpsa.org.au/p-und.html>

**APPENDIX 1a.** Schedule of trees identified on the site listing condition and physical dimensions of trees on the Site.

Specimen name	Est. Height	Diameter DBH* DGH**	Crown	Comments	SUL E***	TPZ	SRZ
T1 <i>Callistemon viminalis</i> Common name 'Weeping Bottlebrush' Age class 40 years See Fig. 2.	2m	1 x 9cm 1 x 10cm 1 x 12cm 28cm at the base	N 0m E 1m S 0m W 0m	Anative tree common to East coast NSW. The tree is growing on nature strip to the to the East of the Site and is a Council asset. At the time of inspection the tree was in good health and vigour with no significant pathogens. The tree has been cut back heavily and the only foliage is a small amount from some epicormics growth re shooting from pruning points.	A5	2.16m	1.94m
T2 <i>Agonis flexuosa</i> Common name 'Willow Myrtle' Age class 40 years See Fig. 3.	5m	1 x 8cm 1 x 10cm 2 x 15cm 1 x 20cm 1 x 21cm 58cm at the base	N 2m E 2m S 2m W 2m	A native tree common to South west Western Australia. The tree is growing on neighbouring land to the to the West of the Site. At the time of inspection the tree had been cut back heavily with many old pruning points and the resulting regrowth forming a new canopy. the tree consist of 6 main stems meeting in a 'V' shaped junction at ground level.	A5	4.57m	2.63m
T3 <i>Agonis flexuosa</i> Common name 'Willow Myrtle' Age class 40 years See Fig. 4.	4m	4 x 4cm 1 x 5cm 1 x 8cm 2 x 8cm 1 x 12cm 39cm at the base	N 3m E 2m S 3m W 3m	A native tree common to South west Western Australia. The tree is growing on the property frontage to the to the East of the Site. At the time of inspection the tree had been cut back heavily at 1.8m with many old pruning points and the resulting regrowth forming a new canopy. the tree consist of 6 main stems meeting in a 'V' shaped junction at ground level. The tree had approx. 30% deadwood in the canopy and is under 5m in height.	A4	N/A	N/A
T4 <i>Agonis flexuosa</i> Common name 'Willow Myrtle' Age class 40 years See Fig. 5.	5m	2 x 4cm 1 x 6cm 1 x 7cm 1 x 9cm 2 x 14cm 50cm at the base	N 3m E 2m S 3m W 3m	A native tree common to South west Western Australia. The tree is growing on the property frontage to the to the East of the Site. At the time of inspection the tree had been cut back heavily at 1.8m with many old pruning points and the resulting regrowth forming a new canopy. the tree consist of 5 main stems meeting in a 'V' shaped junction at ground level.	A5	2.9m	2.4m

T5 <i>Pittosporum undulatum</i> Common name 'Native Daphne' Age class 40 years See Fig. 6.	6m	1 x 10cm 1 x 12cm 1 x 14cm 1 x 15cm 1 x 19cm 36cm at the base	N 4m E 5m S 2m W 3m	An endemic tree common to the Parramatta LGA. The tree is growing on the property frontage to the to the East of the Site. At the time of inspection the tree was in poor health and vigour with approx. 30% dead and sparse foliage in the canopy.	A4	3.84m	2.15m
T6. <i>Agonis flexuosa</i> Common name 'Willow Myrtle' Age class 40 years See Fig. 7.	6m	1 x 8cm 1 x 9cm 1 x 12cm 1 x 20cm 36cm at the base	N 3m E 2m S 3m W 3m	A native tree common to South west Western Australia. The tree is growing on the property frontage to the to the East of the Site. At the time of inspection the tree had 5 main stems meeting in a 'V' shaped junction at ground level. There were no significant pathogens nor signs of mechanical damage.	A1	2.58m	2.15m
T7 <i>Cupressus sempevir</i> Common name 'Italian cypress' Age class 40 years See Fig. 8.	6m	Multistemmed some have been removed 46cm at the base	N 3m E 2m S 3m W 3m	An exotic conifer endemic to the Mediterranean. The tree is growing on the border to the to the South of the Site. At the time of inspection the tree was in poor condition and had been cut back heavily at 0.5m from the ground with many old pruning points which have not re shot. The tree has multiple stems meeting in a 'V' shaped junction at ground level.	A4	5.52m	2.39m
T8 <i>Murrayapaniculata</i> Common name 'Murraya' Age class 40 years See Fig. 9.	4m	Multi stemmed 39cm at the base	N 2m E 2m S 3m W 0m	An exotic tree common to South east Asia. The tree is growing to the front of the existing house and assumes a shrublike habit. The tree has been pruned regularly is under 5m in height.	A5	N/A	N/A
T9 <i>Callistemon viminalis</i> Common name 'Weeping Bottlebrush' Age class 30 years	6m	15cm 25cm at the base	N 2m E 2m S 2m W 2m	A native tree common to creeks and damp areas on the NSW coast. The tree is growing centrally on the Site. At the time of inspection the tree had an etiolated habit and is not significant in the streetscape.	A3	1.8m	1.85

See Fig. 10.							
T10 <i>Callistemon viminalis</i> Common name 'Weeping Bottlebrush' Age class 30 years See Fig. 10.	5m	8cm 15cm at the base	N 1m E 1m S 1m W 1m	A native tree common to creeks and damp areas on the NSW coast. The tree is growing centrally on the Site. At the time of inspection the tree had an etiolated habit and is not significant in the streetscape.	A3	1.5m Min TPZ	1.5m Min SRZ
T11 <i>Callistemon viminalis</i> Common name 'Weeping Bottlebrush' Age class 30 years See Fig. 11.	4m	7cm 12cm at the base	N 1m E 1m S 1m W 0m	A native tree common to creeks and damp areas on the NSW coast. The tree is growing centrally on the Site. At the time of inspection the tree had an etiolated habit and is not significant in the streetscape. The specimen is under 5m in height and not protected under the TPO.	A3	1.5m Min TPZ	1.5m Min SRZ
T12 <i>Thuja occidentalis</i> Common name 'Italian cypress' Age class 50 years See Fig. 12.	8m	1 x 10cm 1 x 12cm 1 x 15cm 1 x 18cm 40cm at the base	N 1m E 1m S 1m W 1m	An exotic conifer endemic to North America. The tree is located centrally on the Site. At the time of inspection the tree was in reasonable condition 4 main stems and no apparent pathogens. The stems meet in a 'V' at the base.	A2	3.38m	2.25m
T13 <i>Archontophoenix cunninghamiana</i> Common name 'Bangalow Palm' Age class 40 years See Fig. 13.	1 x 6m 1 x 8m	1 x 12cm 1 x 15cm 20cm at the base	N 1m E 1m S 1m W 1m	A native palm tree common to littoral rainforest areas on the NSW coast. The tree is growing centrally on the Site to the northern side of the existing driveway. At the time of inspection the tree was in good health and condition and comprised of twostems arising from a common root cluster at ground level. There were no significant pathogens nor signs of mechanical damage.	A2	2.3m	1.5m Min SRZ

T14 <i>Archontophoenix cunninghamiana</i> Common name 'Bangalow Palm' Age class 40 years See Fig. 14.	1 x 6m 1 x 8m	1 x 12cm 1 x 20cm 25cm at the base	N 1m E 1m S 1m W 1m	A native palm tree common to littoral rainforest areas on the NSW coast. The tree is growing centrally on the Site to the Southern side of the existing driveway. At the time of inspection the tree was in good health and condition and comprised of two stems arising from a common root cluster at ground level. There were no significant pathogens nor signs of mechanical damage.	A2	2.8m	1.5m Min SRZ
T15 <i>Pittosporum undulatum</i> Common name 'Native Daphne' Age class 40 years See Fig. 15.	5m	10cm 15cm at the base	N 3m E 2m S 1m W 3m	An endemic tree common to the Parramatta LGA. The tree is growing on the Southern side of the Site near the border. At the time of inspection the tree was in good health and vigour with approx. 30% dead and sparse foliage in the canopy. The species is known to have 'weedy' properties.	A4	1.5m Min TPZ	1.5m Min SRZ
T16 <i>Syagrus romanzoffianum</i> Common name 'Cocos Palm' Age class 40 years See Fig. 16.	6m	N/A	N 1m E 1m S 1m W 1m	An exotic palm tree endemic to South America. The tree is growing to the Southern end the Site. At the time of inspection the tree was in good health and condition however the species is listed in part C of the TPO as exempt from protection in the Parramatta LGA.	B2	N/A	N/A
T17 <i>Syagrus romanzoffianum</i> Common name 'Cocos Palm' Age class 40 years See Fig. 16.	7m	N/A	N 1m E 1m S 1m W 1m	An exotic palm tree endemic to South America. The tree is growing to the Southern end the Site. At the time of inspection the tree was in good health and condition however the species is listed in part C of the TPO as exempt from protection in the Parramatta LGA.	B2	N/A	N/A
T18 <i>Wodyetia bifurcata</i> Common name 'Foxtail Palm' Age class 40 years See Fig. 17.	8m	18cm 24cm at the base	N 1m E 1m S 1m W 1m	Anative palm tree endemic to Nth Eastern Queensland. The tree is growing centrally on the Site. At the time of inspection the tree was in good health and condition with no significant pathogens nor signs of mechanical damage.	A2	2.16m	1.8m

T19 <i>Wodyetia bifurcata</i> Common name 'Foxtail Palm' Age class 40 years See Fig. 17.	8m	20cm 25cm at the base	N 1m E 1m S 1m W 1m	A native palm tree endemic to Nth Eastern Queensland. The tree is growing centrally on the Site. At the time of inspection the tree was in good health and condition with no significant pathogens nor signs of mechanical damage.	A2	2.4m	1.85m
T20 <i>Callistemon viminalis</i> Common name 'Weeping Bottlebrush' Age class 40 years See Fig. 18.	7m	1 x 20cm 1 x 22cm 1 x 23cm 1 x 25cm 49cm at the base	N 2m E 3m S 3m W 5m	A native tree common to East coast NSW. The tree has been planted centrally on the site . At the time of inspection the tree was in good health and vigour with no significant pathogens. The specimen comprises of 4 main stems meeting in a 'V' shape junction at approx. 40cm from the ground.	A2	5.4m	2.45m
T21 <i>Pinus patula</i> Common name 'Mexican Weeping Pine' Age class 50 years See Fig. 19.	18m	48cm 60cm at the base	N 7m E 4m S 2m W 3m	An exotic pine tree common to Central America. The tree is growing in the rear of the property to the to the West of the Site. At the time of inspection the tree was in poor health and vigour with significant dieback on the Southeastern side possibly due to hail damage. There were no significant pathogens or defects noted.	A4	5.76m	2.67m
T22 <i>Ficus microcarpa</i> Common name 'Hills Fig' Age class 20 years See Fig. 20.	4m	10cm 15cm at the base	N 3m E 3m S 2m W 0m	A fig tree endemic to Northerntropical Australia and Asia. The tree is less than 5m in height and not protected under the TPO	A2	N/A	N/A
T23 <i>Ligustrum sinense</i> Common name 'Small leaved privet' Age class 30 years No Fig available.	5m	N/A	N/A	The tree is a declared noxious weed in the Parramatta LGA	A2	N/A	N/A



T24 <i>Deciduous</i> Age class 50 years See Fig. 21.	8m	1 x 30cm 1 x 33cm 51cm at the base	N 4m E 4m S 4m W 4m	An exotic deciduous specimen growing in the neighbouring land to the North that is obviously well away from the building Site. the tree has co dominant stems meeting in a 'V' shaped stem junction at 0.4m from the ground. At the time of inspection there were no significant pathogens or signs of mechanical damage.	A1	5.35m	2.49m
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**Table describing trees growing on the development site. Tree numbers correspond with numbers on site plan appendix. 2.**

**\*DBH Diameter at Breast Height. \*\*DGH Diameter at Ground Height. \*\*\*SULE ratings are included as Appendix 3 of this report.**

**APPENDIX 1b.** Figures 2 to 21 Photos of trees on the Site and neighbouring properties.



Fig 2. Photo of T1 a *Callistemon viminalis*



Fig 3. Photo of T2 *Agonis flexuosa*



Fig 4. Photo of T3 *Agonis flexuosa*





Fig 5. Photo of T4 *Agonis flexuosa*



Fig 6. Photo of T5 a *Pittosprum undulatum*

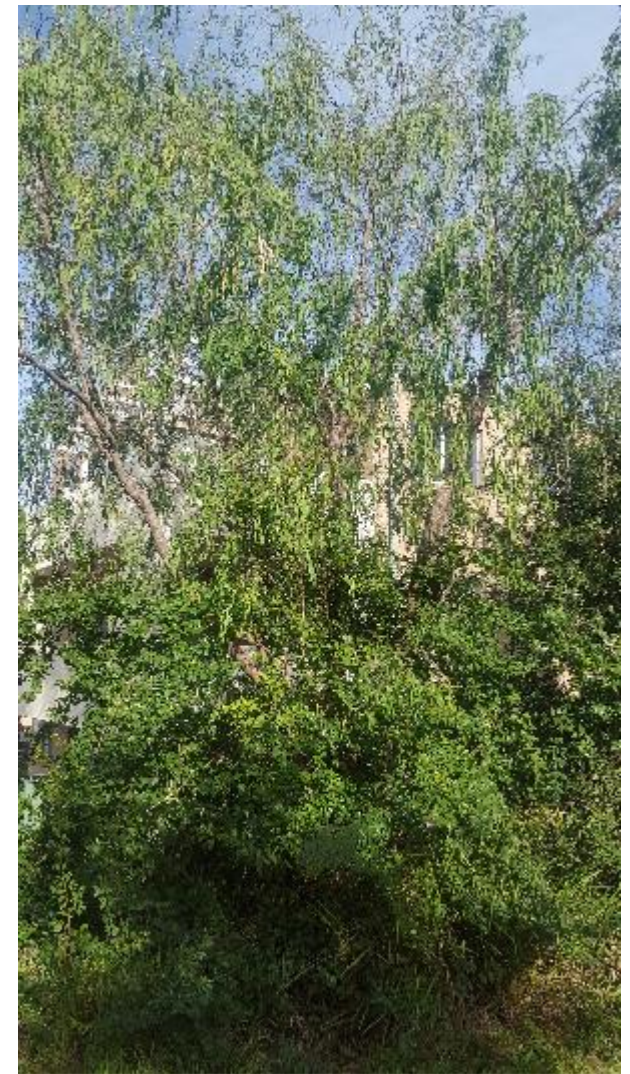


Fig 7. Photo of T6 *Agonis flexuosa*





Fig. 8. Photo of T7 a *Cupressus macrocarpa*



Fig. 9. Photo of T8 a *Murraya paniculata*



Fig. 10. T9 & T10 both *Callistemon viminalis*





Fig 11 Photo of T11 a *Callistemon viminalis*



Fig 12. Photo of T12 a *Thuja occidentalis*



Fig 13. T13 an *Archontophoenix cunninghamiana*





Fig 14. T14 an *Archontophoenix cunninghamiana*



Fig 15. Photo of T15 a *Pittosporum undulatum*



Fig 16. T16 & T17 *Archontophoenix cunninghamiana*





Fig 17. T18 & T19 both *Wodyetia bifurcata*



Fig 18. Photo of T20 a *Callistemon viminalis*



Fig 19. Photo of T21 a *Pinus patula*





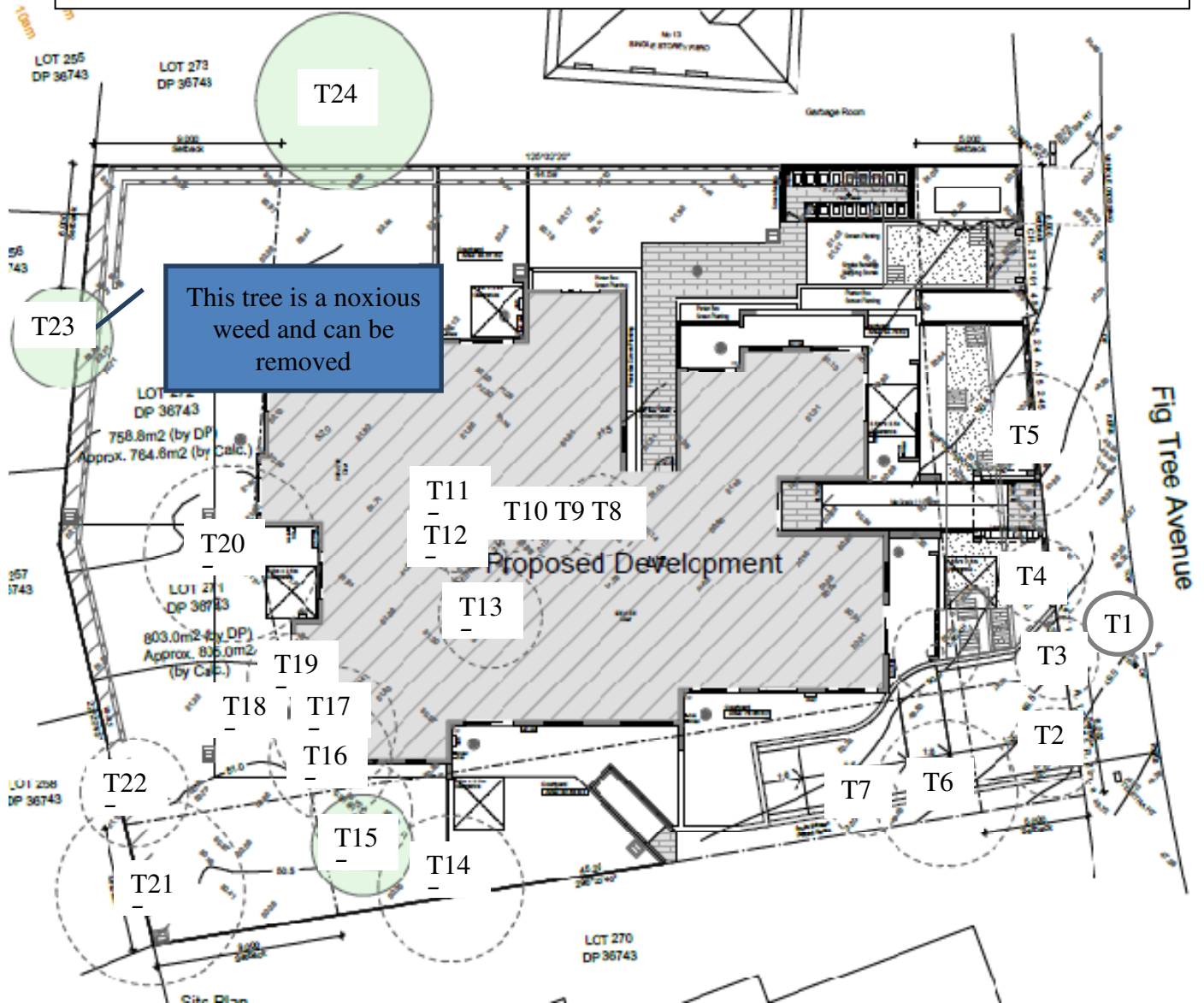
Fig 20. Photo of T22 a *Ficus macrocarpa*

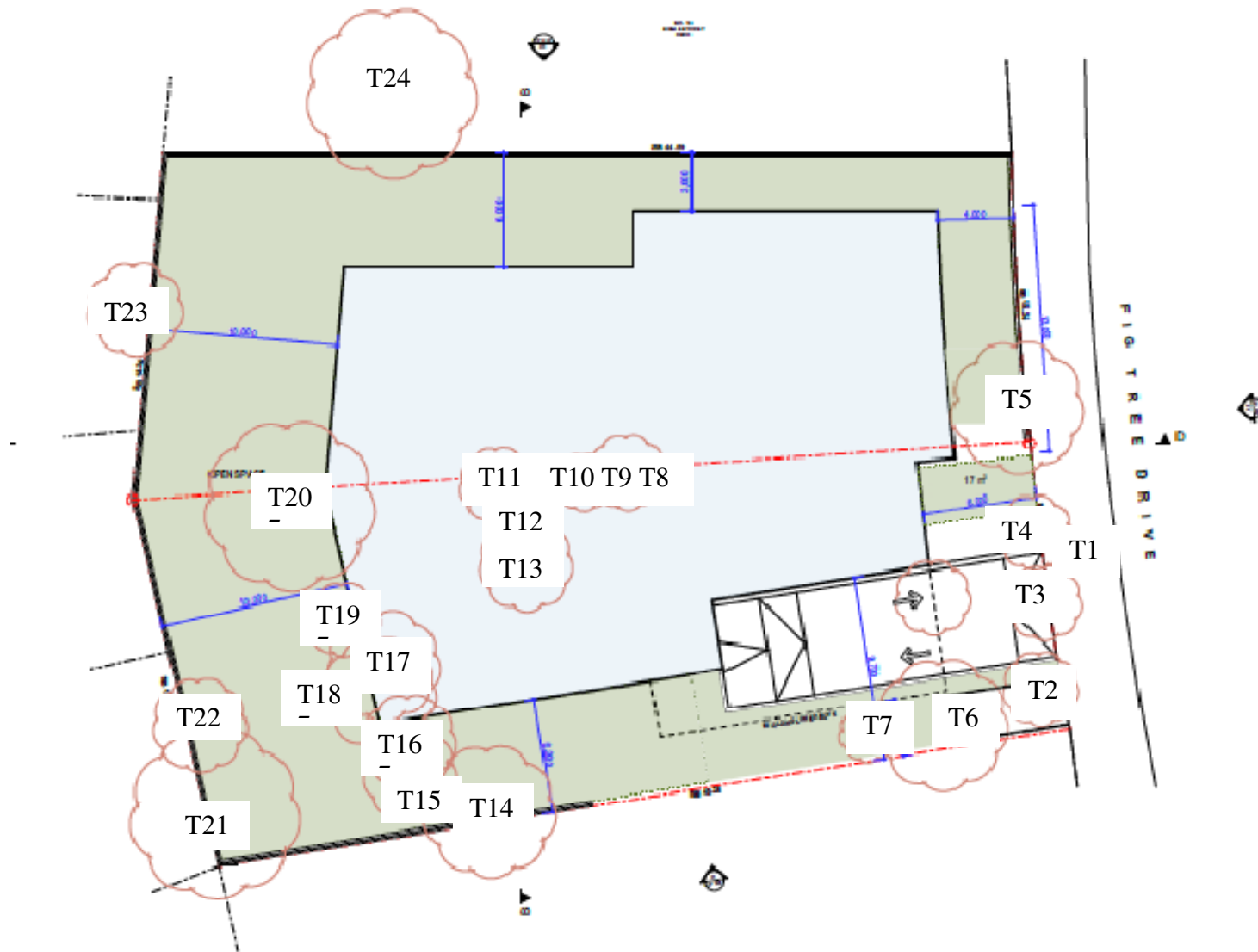


Fig 21. Photo of T24 a deciduous tree well away from the Site



APPENDIX 2 Excerpt from site plan showing trees in relation to the proposed building works.





### APPENDIX3. TABLE 2. SULE CATAGORIES AND SUB-CATEGORIES.

	1	2	3	4	5
	Long SULE: Appeared to be retainable at the time of assessment for over 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Medium SULE: Appeared to be retainable at the time of assessment for 15 to 40 years with and acceptable degree of risk assuming reasonable maintenance.	Short SULE: Appeared to be retainable at the time of assessment for 5 to 15 years with and acceptable degree of risk assuming reasonable maintenance.	Remove: Trees which should be removed within the next 5 years.	Small young or regularly clipped: Trees that can be reliably transplanted or replaced.
<b>A</b>	Structurally sound trees located in positions that can accommodate future growth	Trees that may only live for 15 and 40 more years.	Trees that may only live for between 5 and 15 more years	Dead, Dying suppressed or declining trees through disease or inhospitable conditions.	Small trees less than 5 m in height.
<b>B</b>	Trees that could be made suitable for retention in the long term by remedial care.	Trees that may live for than 40 years, but would need to be removed for safety or nuisance reasons	Trees that may live for than 15 years, but would need to be removed for safety or nuisance reasons	Dangerous trees through instability or recent loss of adjacent trees.	Young trees less than 15 years old but over 5m in height.
<b>C</b>	Trees of special significance for historical, commemorative or rarity reasons that would warrant	Trees that may live for more than 40 years but should be removed to prevent interference with more suitable	Trees that may live for more than 15years but should be removed to prevent interference with more suitable	Dangerous trees through structural defects including cavities, decay, included bark, wounds or poor form.	Trees that have been regularly pruned to artificially control their growth

	extraordinary efforts to secure their long term retention.	individuals or to provide space for new plantings	individuals or to provide space for new plantings		
<b>D</b>		Trees that could be made suitable for retention in the medium term by remedial care	Trees that require substantial remedial 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 may cause damage to existing structures within 5 years.	
<b>G</b>				Trees that will become dangerous after removal of other surrounding trees	

Table 2 Ref Barrell, Jeremy (1996). Predevelopment tree assessment. Proceedings of the International Conference on Trees and Building Sites (Chicago)