



OCTOBER 31, 2019

ARBORICULTURAL IMPACT ASSESSMENT

SECTION 34 LAND & ENVIRONMENT COURT CASE NO.
2019/0051426 46-50 MEREDITH ST BANKSTOWN

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1. Introduction

At the request of Jennifer Bautovich, Lee Hancock Consulting Arborist AQF Level 5 was commissioned to assess the subject Street trees positioned along 46- 50 Meredith Street, Bankstown to address Statement of Facts & Contentions 22 raised by Land & Environment Court of NSW.

2. Aim

The purpose of this report is to assess the subject street trees to ascertain whether the proposed stormwater pipe- line will have an adverse impact upon their viability and useful life expectancy the conclusion and recommendations of this report are based on the Australian Standards, AS4970, *Protection of Trees on Development Sites*

Table 1. Documents Provided

PLAN/DOCUMENT	PREPARED BY	DWG/REF NO	DATED
Architect	Glyde Architects	Basement Plan 110-0 Ground & level 1 Plan 1101-0, levels 1 & 2 1102-0, 1103-0 levels 4 & 5, 1104 Roof	REV Q
Stormwater Management Plan	Robert Bird Group	Issue B DA Application	June 2018

3. Site Analysis

The subject trees are located on the nature strip between single storey residences of 46-50 Meredith Street and Rickard Street, Bankstown.



4. Discussion

This discussion focuses on the retention of the 4 street trees that may be impacted upon by the proposed stormwater pipeline. The conclusion and recommendations of this report are based on the Australian Standards, AS4970, *Protection of Trees on Development Sites*

Contention 22 states:

c. The proposed storm water discharge pipe- line location along Meredith Street passes by in close proximity to healthy trees that line the street. Construction of the proposed pipe- line may cause problems to the root zones of those trees. Further information of these impacts is required to enable a proper assessment of the proposal.

An assessment of each tree was made using the Visual Tree Assessment (VTA) procedure. The prescribed trees were assessed from the ground. No aerial inspection or diagnostic testing has been undertaken as part of this assessment.

Tree 1. Positioned at 46 Meredith Street is a semi mature *Lophostemon confertus* (BrushBox) tree appears in good health and vigour, appears structurally stable with an estimated life expectancy beyond 40 years. Retention is recommended.

Tree 2. Positioned at 48 Meredith Street is a semi mature *Lophostemon confertus* (BrushBox) tree appears in good health and vigour, appears structurally stable with an estimated life expectancy beyond 40 years. Retention is recommended.

Tree 3. Large mature tree identified as *Eucalyptus microcorys* (Tallowwood) positioned 48 Meredith Street appears structurally stable, in good form and vigour, exudation of Kino evident eastern side of trunk from borer infestation, with an estimated life expectancy of more than 25 years. One lower scaffold branch will necessitate removal to minimise injury and provide clearance to plant and equipment. Rated as high landscape significance, amenity and ecological value. Retention is recommended.

Tree 4. *Eucalyptus microcorys* (Tallowwood) positioned 50 Meredith Street, semi mature specimen in good form and vigour, appears structurally stable with an estimated useful life expectancy of greater than 40 years. Rated as high landscape significance, amenity and ecological value. Retention is recommended.

The current plans as of 30 October 2019 show a 3.25m setback from the existing boundary. The trees are positioned 3 metres from the centre of their trunks to the existing boundary brick fence. The clearance from

any construction activities is a total of 6m from the subject trees. The revised plans show the proposed stormwater pipeline will run along the **inside** wall of the basement and discharge from Council's outlet in Meredith Street.

So, when determining the potential of encroachment into the TPZ the arborist should consider the following, Tree species and tolerance to root disturbance, age, vigour and size of tree, lean and stability of tree, the presence of existing or past structures or obstacles affecting root growth.

Clause 3.3.4 of the AS4970 outlines that tree species and tolerance to root disturbance should be considered when determining the potential impact of the encroachment. *Lophostemon confertus* (BrushBox) and *Eucalyptus microcorys* (Tallowwood) are a common street tree amenity asset in Sydney and can withstand alterations to site conditions, such as high levels of root disturbance/loss from footpath and kerb work.

Table 2. Tree Health and Retention Value

Tree	Genus & species	Height	DBH/ DAGL	Crown spread	Maturity	Health and vigour	Landscape significance	Useful Life expectancy	Retention value
1	<i>Lophostemon confertus</i> (BrushBox)	10m	450/490mm	25m ²	Semi mature	Good	High	Long greater than 40 years	High
2	<i>Lophostemon confertus</i> (BrushBox)	10m	370/470 mm	20m ²	Semi mature	Good	High	Long greater than 40 years	High
3	<i>Eucalyptus microcorys</i> (Tallowwood)	12m	600/720 mm	40m ²	Mature	Good	High	Medium 15-25 years	High
4	<i>Eucalyptus microcorys</i> (Tallowwood)	12m	470/520 mm	40m ²	Semi mature	Good	High	Medium 15-25 years	High

Table 3. Impact Assessment Schedule Trees

Tree	Genus /species	SRZ	TPZ	Incursion to root zone / canopy	Recommendations
1	<i>Lophostemon confertus</i> (BrushBox)	2.5mR	5.4mR	Nil impact	Trunk protection installed duration of development
2	<i>Lophostemon confertus</i> (BrushBox)	2.4mR	4.4mR	Nil impact	Trunk protection installed duration of development
3	<i>Eucalyptus microcorys</i> (Tallowwood)	2.9mR	7.2mR	Minor incursion of 10% into TPZ, acceptable incursion as stated AS 4970	Minor impact if at all. Trunk protection installed duration of development
4	<i>Eucalyptus microcorys</i> (Tallowwood)	2.5mR	5.6mR	Nil impact	Minor impact if at all. Trunk protection installed duration of development

5. Conclusion

The site analysis has collected all relevant data in assessing the condition of 4 street trees on Meredith Street, an assessment of their health and vigour, estimated life expectancy and their significance in the landscape and amenity value have been recorded.

6. Recommendation

The retention of the street trees is recommended. Street trees provide habitat, corridors for local fauna, increase shading of hard surfaces (such as parking lanes, roadways and infrastructure) and provide significant amenity and character to the local area.

6.1 The current supplied plans show 6 metre clearance from the centre of tree trunks and the existing footpath provides root protection from the proposed development. Table 3 Impact Assessment Schedule shows structural root zones will not be impacted upon, nor the tree protection zones of 3 street trees however Tree 3 has a 1.2metre incursion into the proposed 3 metres setback. This incursion is not an adverse impact upon the trees long -term viability or useful life expectancy.

6.2 It is recommended that a Project Arborist is appointed to oversee proposed works with an AQF Level 5 Diploma in Arboriculture, with experience in tree protection on construction sites should be engaged prior to the commencement of work on the site. To oversee all stages of the development in accordance with Land & Environment conditions.

6.3 The pruning of an overhanging lower scaffold branch Tree 3 on the proposed development site is recommended. As a rule, it is acceptable to remove up to 10% of the canopy volume provided the works are undertaken by a qualified AQF (Australian Qualification Framework) Level 3 Arborist and as specified in AS 4373 'Pruning of Amenity Trees'.

6.4 Trunk Protection Street Trees

Trunk Protection by way of Timber planks (50mmx 100mm or similar) with a geotextile fabric shall be placed around trees 1,2,3, and 4. The timber planks shall be spaced at 100mm intervals, and must be fixed against the trunk secured together with 2mm galvanised wire. These shall be strapped around the trunk (not fixed in anyway) 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. The hessian and timber planks must not be fixed to the tree in any instance or in any fashion.

7. Images

Tree 1. *Lophostemon confertus* (BrushBox)



Tree 2 *Lophostemon confertus* (BrushBox) (Forefront) Tree 3 and 4 *Eucalyptus microcorys* (Tallowwood) Background



8. References

AS 4373 'Pruning of Amenity Trees'.

AS 4970 *'Protection of trees on development sites.* (2009)

Harris, R.W., Clark, J.R and Matheny, N.P. (2004), *Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines.* 4th Edition, Prentice Hall, New Jersey.

Mattheck, C. & Breloer, H. (1994) *The Body Language of Trees.*

Morton, A. Earthscape Horticultural Services -Tree Retention Values

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Disclaimer

The author, Lee Hancock Consulting Arborist takes no responsibility for actions taken and their consequences, contrary to those expert and professional instructions given as recommendations pertaining to safety by way of exercising our responsibility to our client and the public as our duty of care commitment to mitigate or prevent hazards from arising, from a failure moment in full or part, from a structurally deficient or unsound tree or a tree likely to be rendered thus by its retention and subsequent modifications to its growing environment either above or below ground contrary to our advice.

This report is a recommendation only. In no way does it guarantee any actions by the determining authorities.

9. Methodologies

9.1 Visual Tree Assessment (VTA)

A technique developed by (Mattheck & Breloer) was carried out on all trees from the ground. The technique involves, identification of the Genus and Species of trees on the site. The Diameter at Breast Height (DBH) 1.4m above ground level determined from the circumference of the trunk divided by π (π).

Tree height (m) Diameter at Ground Level (DAGL), Canopy spread (m) in four cardinal points (north, south, east, west) Structural integrity, Amenity value, Indigenous/ Endemic value, Health and vigor of trees.

9.2 Useful Life Expectancy (ULE)

An assessment procedure has been developed by (Barrell, J.D.) 1993 'by which trees on a site are accurately recorded and designated according to their suitability for retention in the short, medium or long term'. This methodology is a measure of the "sustainability" of the remaining contribution in years that the tree can provide in the context of the site.

9.3 Landscape Significance

The significance of trees in the landscape is assessed in determining their retention values in 3 categories. Heritage Value reflects Historical significance, Ecological Value maintains biodiversity values and Amenity value contributes to the character of the landscape.

9.4 Tree Retention Values

A rating was given to each tree on site; the information gathered was then processed by evaluating the health and vigour, the remaining useful life expectancy (ULE), plus their significance in the landscape. A retention value for each tree was then evaluated ranging from High, Moderate, Low and Very Low.