Tree Management Statement

Prepared 7th April 2017

Site Location

128 &130-150 Bunnerong Road
Pagewood, NSW 2035

Client

Meriton Group

Contents

TREE & LANDSCAPE CONSULTANTS

Site Analysis, Arboricultural Assessments

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7th April, 2017

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Pagewood, NSW 2035

1. METHODOLOGY

This statement has been prepared by Tree & Landscape Consultants for Meriton Group. The author has inspected the site on the 11 & 12th December 2016 to gather general information for the direction as to the management of trees potentially impacted by the proposed rezoning and concept plan.

A comprehensive assessment of each individual tree was not conducted, rather a "walk-by" approach in which observations of readily identifiable structural and health indicators in the trees were made without further investigations being conducted. The intent was to develop an overview of the current age class and condition of trees and to provide an understanding of the constraints and opportunities associated with them that would support the overall proposal.

2. OVERVIEW

Area 1 See Attachment 1

The subject area adjoining buildings J & K supports plantings located around its perimeters predominately adjacent to and within four metres from boundary lines with individual larger specimens being present within existing open space area, and a row of Lemon Scented Gums being present adjoining the existing shared roadway. The trees within this area are mostly planted specimens with the exception of suckering She Oaks which have most probably self-seeded. This species type is predominately represented within this area (See Table Below).

Area 1-*Bunnerong Road Frontage (Adjoining Buildings J, K & L)*

Species Represented Within Area	***Numbers Present***
Eucalyptus botryoides (Swamp Mahogany)	11
Eucalyptus microcorys (Tallowwood)	14
Araucaria heterophylla (Norfolk Island Pine)	2
Casuarina glauca (Swamp Oak)	55
Brachychiton acerifolium (Illawarra Flame Tree)	3
Eucalyptus saligna (Sydney Blue Gum)	1
Ficus microcarpa var.'Hillii' (Hills Weeping Fig)	2
Corymbia citriordora (Lemon Scented Gum)	25
Podocarpus elatus (Plum Pine)	3
Banksia integrifolia (Coast Banksia)	5
Acacia binervia (Coast Myall)	5
Callistemon salignus (White Bottlebrush)	8
Ficus benjamina (Weeping Fig)	1
Podocarpus falcatus (Yellowwood)	3- Within Street Reserve
Melaleuca armillaris (Bracelet Honey Myrtle)	3- Within Street Reserve
Lophostemon confertus (Brush Box)	6- Within Street Reserve
Cupaniopsis anacardioides (Tuckeroo)	7- Within Street Reserve

Photo of area

Area 2- See Attachment 1

The subject area adjoining buildings A, D & G supports plantings located around its perimeters predominately adjacent to and within four metres from boundary lines with some individual larger specimens being present within existing open space area internal to the site adjoining buildings and a large water tank. The trees within area 2 are mostly planted specimens with the exception of suckering She Oaks which have most probably self-seeded being the species type predominately represented within this area.

Area 2-*Heffron Road Frontage (Adjoining Buildings A,D & E)*

Species Represented Within Area	***Numbers Present***
Eucalyptus botryoides (Swamp Mahogony)	8
Eucalyptus microcorys (Tallowwood)	17
Eucalyptus saligna (Sydney Blue Gum)	1
Casuarina glauca (Swamp Oak)	45
Ficus microcarpa var.'Hillii' (Hills Weeping Fig)	1
Corymbia citriordora (Lemon Scented Gum)	19
Banksia integrifolia (Coast Banksia)	14
Acacia binervia (Coast Myall)	4
Callistemon salignus (White Bottlebrush)	8
Lophostemon confertus (Brush Box)	3
Melaleuca quinquenervia (Paperbark)	3
Callistemon salignus (White Bottlebrush)	30- Within Street Reserve

Photo of Area

Area 3 See Attachment 1

The subject area adjoining buildings A, B & C supports plantings adjacent to the perimeters predominately to and within four metres from boundary lines. The trees within this area are mostly planted specimens with the exception of suckering She - Oaks which have most probably self-seeded, being the species type predominately represented within this area.

Area 3- *Banks Avenue Frontage (Adjoining Buildings A,B & C)*

Species Represented Within Area	***Numbers Present***
Eucalyptus microcorys (Tallowwood)	10
Casuarina glauca (Swamp Oak)	33
Corymbia citriordora (Lemon Scented Gum)	5
Banksia integrifolia (Coast Banksia)	8
Acacia binervia (Coast Myall)	6
Melaleuca quinquenervia (Paperbark)	1
Melaleuca armillaris (Bracelet Honey Myrtle)	4
Callistemon viminalis (Bottlebrush)	25- Within Street Reserve

The Age of the trees is broadly classed as being in mid to late maturity or upwards be predominately 60-80% of their expected life expectancy with varying condition ratings of poor to good. It is noted that apart from the self -seeded She-Oaks that there is a lack of age class gradation which would be required to ensure long term amenity and elements of continuous landscape to benefit the area into the foreseeable future in areas 2 & 3 with area 1 supporting a more diverse age class gradation.

No signs of problems related to pests and diseases were noted and deaths of trees surrounding the site is sporadic appearing to be more age related.

3. MANAGEMENT OF TREES AND FUTURE DEVELOPMENT

The retention of any trees will need to be assessed utilising the Australian Standard AS 4970-2009 “Protection of trees on development sites, as a point of reference and guide for the recommended minimum clearances from the centre of tree trunks to development works. This system is to be applied as a generalised benchmark with distances being increased or decreased as a result of other factors providing mitigating circumstances or constraints as indicated by but not restricted to the following:

- *Tolerance of individual species to disturbance,*
- *Geology e.g. physical barriers in soil, floaters, bedrock to surface*
- *Topography e.g. slope, drainage,*
- *Soil e.g. depth, drainage, fertility, structure,*
- *Microclimate e.g. due to landform, exposure to dominant wind,*
- *Engineering e.g. techniques to ameliorate impact on trees such as structural soil, lateral boring,*
- *Construction e.g. techniques to ameliorate impact on trees such as pier and beam, bridge footings, suspended slabs*
- *Arboriculture e.g. exploration trenches to map location of roots,*
- *Physical limitations - existing modifications to the environment and any impact to tree/s by development e.g. property boundaries, road reserves, previous impact by excavation in other directions, soil level changes by cutting or filling, existing landscaping works within close proximity, modified drainage patterns.*

Trees surrounding the site have varying trunk diameters, which will be utilised to determine setbacks to trees from site works such as basement cuttings and construction works with an emphasis to be made for the retention and protection of trees adjoining boundaries. This is important as they provide screening, filtering of noise and pollution, shelter and shade, filtering of carbon monoxide, shelter and home for native fauna and landscape amenity.

Whilst the trees at present do provide screening they also obstruct visual access to the land. It is considered that the benefits the trees provide can be continued through the retention of smaller groups or stands of trees to be complimented with the replanting of new trees, shrubs and ground covers as part of final landscape works for each staged development. This course of action will ensure the continued function that trees provide.

4. RECOMMENDATIONS

- The public domain design is considered acceptable to accommodate appropriate retention of substantial size trees on the site and that emphasis be given where practical towards the retention of stands or groups of existing trees as opposed to the retention of individual or isolated specimens.

- All trees to be considered for retention are to be assessed utilising the Australian Standard AS 4970-2009 “Protection of trees on development sites” as a guide.

- That preference be given towards the replanting of locally indigenous species as the prominent canopy tree planting.

- That preference be given towards the removal of She Oaks due to their aggressive nature and conflict with surrounding infrastructure and due their ability to self-seed and produce progeny.

- That preference be given towards the retention of the larger trees capable of continued long term growth.

- All dead, weed species and declining trees should be removed,

- All tree removal works be undertaken by a qualified Arborist with appropriate competencies recognised within the Australian Qualification Framework, with a minimum of 5 years of continual experience within the industry of operational amenity arboriculture, and covered by appropriate and current types of insurance to undertake such works and in accordance with Work Cover NSW 2007, Code of Practice Tree.

- That a detailed Tree Impact Assessment be undertaken for each stage encompassing the above recommendations.

Attachment 1

Indicative Layout

04 Master Plan
Site Plan

2068 dwellings

210,837sqm² GFA

FSR 2.35:1

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Attachment 2
References

REFERENCES

1. Draper BD and Richards PA 2009, *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

2. Work Cover NSW 2007, *Code of Practice Tree Work*, New South Wales Government, Australia.

3. Brooker, M.I.H., and Kleinig, D.A., 1999, Field Guide to Eucalypts. South-eastern Australia. Volume 1 (2nd Edition). Bloomings Books. Hawthorn, VIC.