

SOCIAL HOUSING RENEWAL  
STANDING ADVISORY COMMITTEE

*STATEMENT OF EVIDENCE*  
ON ARBORICULTURAL ISSUES

COMMISSIONED BY

Department of Health  
and Human Services

*in relation to*

BellBardia Estate  
Heidelberg West

ROB GALBRAITH – GALBRAITH & ASSOCIATES



**Tree Consultants & Contractors**  
Tel (03) 9888 5214

25/Sep/17

**re: Bell Bardia Estate, Heidelberg West**

**Introduction**

The aged buildings at the Bell Bardia Estate, located between Bell and Bardia Streets, are proposed to be re-built for the purposes of increasing the number of social housing dwellings in the estate, replacing the aging high maintenance dwellings and infrastructure and to provide more accessible, fit for purpose homes for people with mobility issues. The site will also be re-developed with new private dwellings. Many trees exist on the property which are important to the amenity of the people living within the estate as well to those who live and travel near it. A number of trees are proposed to be removed in order to achieve the increased building density and housing yield. The bulk of the trees' roots spread laterally near the surface of the soil, so adequate and relatively undisturbed space has to be provided around both the trunks and canopies for trees to be successfully retained. Some tree replacement planting is also proposed.

The Department of Health and Human Services (DHHS) is seeking to introduce Amendment C118 to the Banyule Planning Scheme to amend the planning controls which apply to the estate to facilitate the re-development and improvement of social and private housing, and the sale of parts of the land within the sites.

Galbraith and Associates has been retained by the DHHS to:

- Review the Planning Report, Draft Controls, the existing Arborist Reports by Landscapes By Design dated 28/Mar/17 and Treelogic dated 15/May/17 and the Flora and Fauna Assessment Report by Morphium dated 22/12/16
- Consider the location of the proposed new built form and the existing towers to provide advice on how trees that have been identified for retention can be protected and remain viable during development and on an ongoing basis
- Provide high level advice on what suitable landscape response would be for replacement planting, having regard to the Landscape Response in the Design Framework and the requirements under the DPO (noting the detailed landscape response will not be required until the development stage);
- Prepare an expert witness report and appear at the Advisory Committee hearing to give evidence.

**VPO** The site is subject to Schedule 5 of the Vegetation Protection Overlay (VPO5), which aims to retain, protect and promote further planting of trees. A permit is required to: remove, destroy or lop trees which meet either of the following:

- Has a height of 12m or more, or
- Has a trunk or stems that collectively are more than 400mm diameter, measured at 1400mm above the base of the tree.

A permit is not required if the tree is dead or listed as a weed in the 2006 Banyule Weed Management Strategy

### **The Trees GENERAL**

Overall, I am in broad agreement with the assessments of the trees as detailed in the Landscapes By Design report dated the 28/Mar/17 and the 15/May/17 Treelogic report. The By Design report deals with the trees within and close to the estate dominated by the multi dwelling buildings whilst the Treelogic report deals with the trees within and close to the single storey occupancies at 154 and 156 Liberty Parade to the west and 322-328 Bell and 11, 15, 17 and 19 Bardia Streets to the east. Therefore in this statement I refer to the same numbering system of the trees and the plans in those reports, bearing in mind that there is an overlapping of trees described, namely: Trees 25-32, 35, 39 and 40 of the Treelogic report correspond to trees 13, 14, 16, 19, 20, 21, 26, 27, 28, 32 and 38 of the Landscape By Design report. Thus with respect to the Landscape By Design trees, I give them the same tree number. With respect to the trees described by Treelogic, I refer to them with the prefix Tl. Where there has been an overlap of description, I refer to both numbering systems for the same tree.

Apart from weed trees such as Sweet Pittosporum (*Pittosporum undulatum*), Desert Ash (*Fraxinus angustifolia*) and Cherry plum (*Prunus cerasifera*), it is likely that all the trees present on the site have been planted.

***Australian Natives*** The great bulk of the plantings consists mainly of Australian natives. The time of plantings is likely to have been the mid to late 1970s although there has obviously been some more recent planting, perhaps after natural attrition, since then. In terms of canopy cover and size, the eucalypts are dominant. They are heavily represented by the Rosea type Yellow Gums (*Eucalyptus leucoxylon* Rosea type), however there are a number of Red Iron barks (*Eucalyptus sideroxylon*), along with a few River Red Gums (*Eucalyptus camaldulensis*), Brush Boxes (*Lophostemon conferta*), Smooth bark Apples (*Angophora costata*), Spotted Gums (*Corymbia maculata*), Flowering Gums (*Corymbia ficifolia*) and individuals of Manna Gum (*Eucalyptus viminalis*, tree 70), Candle bark (*Eucalyptus rubida*, tree 95), Maiden's Gum (*Eucalyptus maidenii*, tree 14, Tl 26), Tasmanian Blue Gum (*Eucalyptus globulus*, tree 98) and Tuart (*Eucalyptus gomphocephala*) tree 132).

Of the eucalypts found on the site, the only indigenous species is likely to be the River Red Gum. There are three prominent examples, namely trees 72, Tl 46 and Tl 50. The three are large, in good condition with long safe useful life expectancies (SULEs). They have not been identified as scattered trees in the Flora and Fauna report, presumably because of the belief they have been planted.

Other eucalypts on the site which are of high worth for retention include tree numbers 70 (Manna Gum) and 38 (Smooth bark Apple). Eucalypts of moderate to high worth

include trees 64, 76, 95, 109, row 113 – 116, 171 and 179. The remaining eucalypts are of lower worth, due to issues such as one or more of the following: reduced SULE, lack of size and prominence in the landscape, poorer health, form or structure.

With respect to the remaining native trees, Sheoaks (*Casuarinas*), Paper barks (*Melaleucas*), Wattles (*Acacia*), Queensland Silky Oak (*Grevillea robusta*) and Bottle brushes (*Callistemons*) form the great bulk. With the exception of the odd Sheoak, they are substantially smaller than the eucalypts, hence readily replaceable. The only example of a large prominent tree from this group is tree T1 45, a large River Sheoak (*Casuarina cunninghamiana*) of approximately 14m in height and spread. Although in good condition, the tree has a limb shed history which is going to become more serious over time, hence its worth for retention in any re-development of the site is constrained.

**Exotics** A few of the trees on the site are exotics in that their natural habitats are outside of Australia. Examples present include the Desert Ashes (*Fraxinus angustifolia* - listed as weed in the Banyule Weed Management Strategy), Claret Ash (*Fraxinus* 'Raywood'), Photinia (*Photinia glabra*), Monterey Cypress (*Hesperocyparis macrocarpa*), Leyland Cypress (*Cuprocyparis leylandii*), Elm (*Ulmus* sp), Pinoak (*Quercus palustris*), Bhutan Cypress (*Cupressus torulosa*) and fruit trees. Most are likely to be 1950s plantings. It is probable that several of the serious weed Sweet Pittosporum (*Pittosporum undulatum*) and Cow Itch or Norfolk Island Hibiscus (*Lagunaria patersonia*), each of which is native to Australia, were also planted then.

The only outstanding individual among the exotic trees in terms of its size, health, structure, form, safe useful life expectancy (SULE) and impact on the streetscape is tree 127, a mature elm measuring approximately 20m in height and spread. Given its still dormant leafless state, I was unable to ascertain its species. If it is an English Elm then it does not need a permit to remove under the VPO5 as this type is listed as a weed. A Monterey Pine (tree 181) is prominent on the Bardia Street frontage. Furthermore the tree quite possibly pre-dates the buildings on the site. However it is of fair-poor form and is regarded as a weed in Banyule, hence does not require a permit to remove. Tree 49, a Bhutan Cypress of some 12m in height, has a long SULE and has moderate to high streetscape significance.

The Claret Ashes are approaching the ends of the SULEs and the Desert Ashes, Sweet Pittosporums and Cherry plums are serious weeds. The cypresses are relatively small with little prominence to the streetscape (with the exception of tree 49). The Cow Itch are hardy but of little size significance and have issues in relation to the myriads of minute irritating silica spicules on their seeds.

### **Impact of the Proposal**

According to the Response Landscape Design Framework plan by Hayball dated July 2017, the following trees are proposed to be retained: 15, 17, 18, 21 (Tl 28), 22, 23, 24, 26 (Tl 29), 28 (Tl 30), 29, 30, 31, 32 (Tl 31), 33, 34, 35, 36, 38 (Tl 32), Tl 33, 40, 42, 43, 44, 45, 47, 48, 49, 50, 70, 71, 72, 76, 78, 80, 81, 82, 85, 92, 93, 94, 95, 109, 110, 113, 114, 115, 116, 119, 121, 122, 126, 127, 128, 156, 157, 158, 159, 161, 163, 167, 168, 169, 171, 179, 180, Tl 13, Tl 19, Tl 44, Tl 45 and Tl 46.

Of these trees I would suggest that it is highly unlikely that trees Tl 44, Tl 45, Tl 46 and Tl 50 can be successfully retained, given the close proximity of proposed buildings. Of these I would suggest Tl 44 is of low worth, Tl 45 is of moderate to high worth and Tl 46 and Tl 50 are of high worth.

Other trees which will be difficult to retain are trees 78, 95 and 127. Of these, not much in the way of a re-design will be required to successfully retain trees 95 and 127, whilst tree 78 is of relatively low worth for retention and not worth retaining.

Thus of the trees of high worth for retention, namely trees 38, 70, 72, 127, Tl 46 and Tl 50, trees 38, 70 and 72 can be successfully retained. A bit of tweaking would enable tree 127 to be retained, although a significant re-design would be required for trees Tl 46 and Tl 50.

Of the trees of moderate to high worth for retention, namely trees 49, 64, 76, 95, 109, row 113 – 116, 171, 179 and Tl 45, trees 49, 76, 95 (assuming tweaking), 109, row 113-116, 171 and 179 can be successfully retained under the current proposal. The trees which cannot be retained are numbers 64 (a 10m high Smooth Bark Apple) and Tl 45 (a large River Sheoak).

A number of other trees can be retained under this proposal, however it would be seriously worth considering removing and replacing such trees, given their poor health, ongoing liability or weed status. These include numbers 71 (a mature Monterey Cypress), Tl 33, 80, 156, Tl 19 and Tl 44.

None of the neighbouring trees appear to be at risk from the proposal, however the civil works design including drainage locations will need to be mindful of them, including street trees.

### **Re-Planting**

The Flora and Fauna report by Morphium recommends the following re-vegetating with the following indigenous species: *Eucalyptus camaldulensis*, *Eucalyptus melliodora*, *Eucalyptus leucoxylon*, *Banksia marginata*, *Bursaria spinosa*, *Allocasuarina verticillata*, *Acacia mearnsii* and *Acacia melanoxylon*, all of local provenance. I agree that such trees could be established successfully on the site, noting how large they can get and their safe useful life expectancies. In addition however there is scope for long lasting hardy exotics such as Turkey Oak (*Quercus cerris*), Holm Oak (*Quercus ilex*) and Chinese Elm (*Ulmus parvifolia* 'Todd'). Along narrow spaces, serious consideration should be given to fastigiated forms of English Oak and ornamental pears.

**General Tree Protection Recommendations**

During demolition, care must be taken to avoid any excavation, level changes or severe soil compaction, within the TPZs of the trees to be retained. The removal of old drains and services within the TPZs must be avoided, unless it can be effectively shown by the project arborist that this will not cause significant root loss.

Before construction commences, sturdy high visibility tree protection fences at least 1.8m tall must be constructed around the trees to be retained. The fences must be constructed to as large an area as possible, yet which still allow construction to proceed in a safe and efficient manner whilst protecting the trees. The fences must not be moved during the construction period unless after discussion with the project arborist.

Any necessary pruning ought be undertaken some time before construction commences. The pruning must be undertaken according to the relevant Australian Pruning Standard by experienced qualified arborists under the supervision of the project arborist.

During construction, no fill nor rubbish can enter the fences, nor excavation for any purpose within them (unless under arboricultural supervision and signed off by the project arborist as not being harmful to the SULE of the tree or trees). Examples are avoiding any excavation for drains and services within more than 10% of the TPZ area, unless by non-root destructive means such as horizontal boring at greater than 800mm depth or by pneumatic or hydraulic means under arboricultural supervision.

The trees must be regularly irrigated over the late spring, summer and early autumn periods of construction.

A tree management plan needs to be a condition on any permit issued to provide for ongoing protection and management of the retained trees.

**Conclusion**

The indicative re-development can be undertaken in a manner which protects the majority of the higher worth for retention trees, subject to relatively minor changes. Of the six high worth trees, only two, namely the River Red Gums T1 46 and T1 50, would need a significant re-design in order to be retained, whilst a relatively minor change would be required for tree 127. Of the twelve moderate to high worth trees, two would need a significant re-design to retain them whilst one only (tree 95) needs a minor change in the design. There is ample scope for new tree planting. I recommend that the finalization of the plans before presentation for approval are undertaken in consultation with an experienced qualified arborist to ensure that the trees proposed to be retained, can indeed be successfully retained. Furthermore the preparation of a tree management plan, detailing the methodology for protecting the trees earmarked for retention, should be integral with any permit condition

**Declaration:**

I hereby declare that I have made all the enquiries that I believe are desirable and appropriate, and no matters of significance which I regard as relevant have to my knowledge been withheld from the respected Tribunal.

GALBRAITH & ASSOCIATES



Rob Galbraith

**1. Name and Professional Address of Expert**

Robert Cameron Galbraith  
 Arboriculturist  
 40 Glyndon Road  
 Camberwell Vic 3124  
 Tel: 9888 5214 Fax: 9888 5063

**2. Qualifications and Experience**

1977 Attained Degree in Forest Science from Melbourne University

1978-81 Forest inventory work and road locating in Gippsland, Tasmania and Northern Territory

1982 Foreman of a contract re-vegetation crew at various MMBW parks

1982-83 Attained the National Certificate of Horticulture in Arboriculture at Merrist Wood College, England, with Distinctions

1983-85 Foreman of a large Melbourne tree surgery company

1986-88 Tree surgery sub-contractor

1988-90 Manager of the Arboricultural Services Division of Rivett Enterprises.  
 Arboricultural Consultant for Rivett Enterprises.

1991- Principal, Galbraith & Associates - Arboricultural Consultants and Contractors.

Consultants to Royal Botanic Gardens Sydney, Major Projects Victoria, St Kilda Botanic Gardens, Melbourne Parks & Waterways, Vic Urban, Office of Housing Department of Human Services, legal firms, insurance companies, developers, town planning consultants, architects, landscape architects, local government (Cities of Albury, Bayside, Boroondara, Manningham, Moreland, Stonnington, Whitehorse). Contracting in arboricultural services for private, government and commercial clients.

**VOLUNTARY ARBORICULTURAL INDUSTRY WORKS**

Arboricultural Association of Australia (President, 1994, 95, 96)  
 Major contributor to the Australian Standard AS4373-1996 Pruning of Amenity Trees.

**3. Area of Expertise**

My area of expertise is in amenity tree management.



**4. Expertise to Prepare this Report**

My expertise is based on substantial experience in forestry and arboriculture, with many years directly working with thousands of different trees in differing situations. The tasks of climbing, dismantling, pruning and excavating near trees, particularly in Melbourne, is or has been, virtually a daily routine over many years. I keep well abreast of important and relevant research in arboriculture, reading widely and conferring regularly with colleagues in the arboricultural field.

**5. Instructions Received in Relation to this Matter**

I have received instructions from Norton Rose Fulbright Lawyers Pty. Ltd. The instructions have been to review the Application for Review and in particular:

- Review the Planning Report, Draft Controls, the existing Arborist Report by Landscapes By Design dated 16/Jan/17 and the Flora and Fauna Assessment Report by Morphium dated the 21/12/16
- Consider the location of the proposed new built form and the existing towers to provide advice on how trees that have been identified for retention can be protected and remain viable during development and on an ongoing basis
- Provide high level advice on what suitable landscape response would be for replacement planting, having regard to the Landscape Response in the Design Framework and the requirements under the DPO (noting the detailed landscape response will not be required until the development stage;
- Prepare an expert witness report and appear at the Advisory Committee hearing to give evidence.

**6. Facts/Matters/Assumptions/Reference Documents used to prepare this Report**

The design drawings upon which I base my assumptions are the

- Design Framework plans by Hayball dated July 2017
- By Landscapes By Design Arborist Report dated 16/Jan/17
- the Flora and Fauna Assessment Report by Morphium dated the 21/12/16
- The Australian Standard 4970:2009 'Protection of trees on development sites'

**7. Other Persons Relied Upon**

Nil

**8. Relationship with Permit Applicant**

I have no relationship with the permit applicant other than a financial agreement to prepare this evidence statement

