



Tree Consultants & Contractors

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Spire Group
Suite 01, Level 11, 360-374 Collins Street Melbourne Vic 3000

Dear Sir,

re: 10 Alvina Street, Oakleigh South

Introduction

A residential construction project is proposed for the above site. Galbraith and Associates originally provided a report on the trees in November 2014. At the request of the Spire Group, we re-visited the site in March of this year and re-assessed the trees, updating our 2014 report.

Each tree is numbered and located on the accompanying existing site conditions survey of the site on page 3. Each tree is numbered and described in the excel spreadsheet. Subsequent to this Rothelowman Architects have further refined the plans for the site. I have been requested by Minter Ellison Lawyers to examine the plans and comment as to the impact of the proposal on the trees.

The design drawings upon which I now base my assumptions are the Masterplan, drawing No. TP1.10 P14 and the proposed site plan, TP1.11 P17, by Rothelowman Architects

Comments

Nothing has changed greatly since our 2014 assessment except for the increased sizes and hence tree protection zones of a number of the trees. The worthiness of retention values (WOR) of a few lower worth trees have gone up a point or less. A few condition ratings have been changed similarly, eg. F to F-G or vice-versa.

The Trees – General

Of the approximately 100 trees on the site, only one is possibly a remnant self-sown individual. This is the Drooping Sheoke (*Allocasuarina verticillata*) (tree 4), a small to medium old tree which is highly likely to have been well established before the Oakleigh South Primary School was constructed. It is however getting close to the

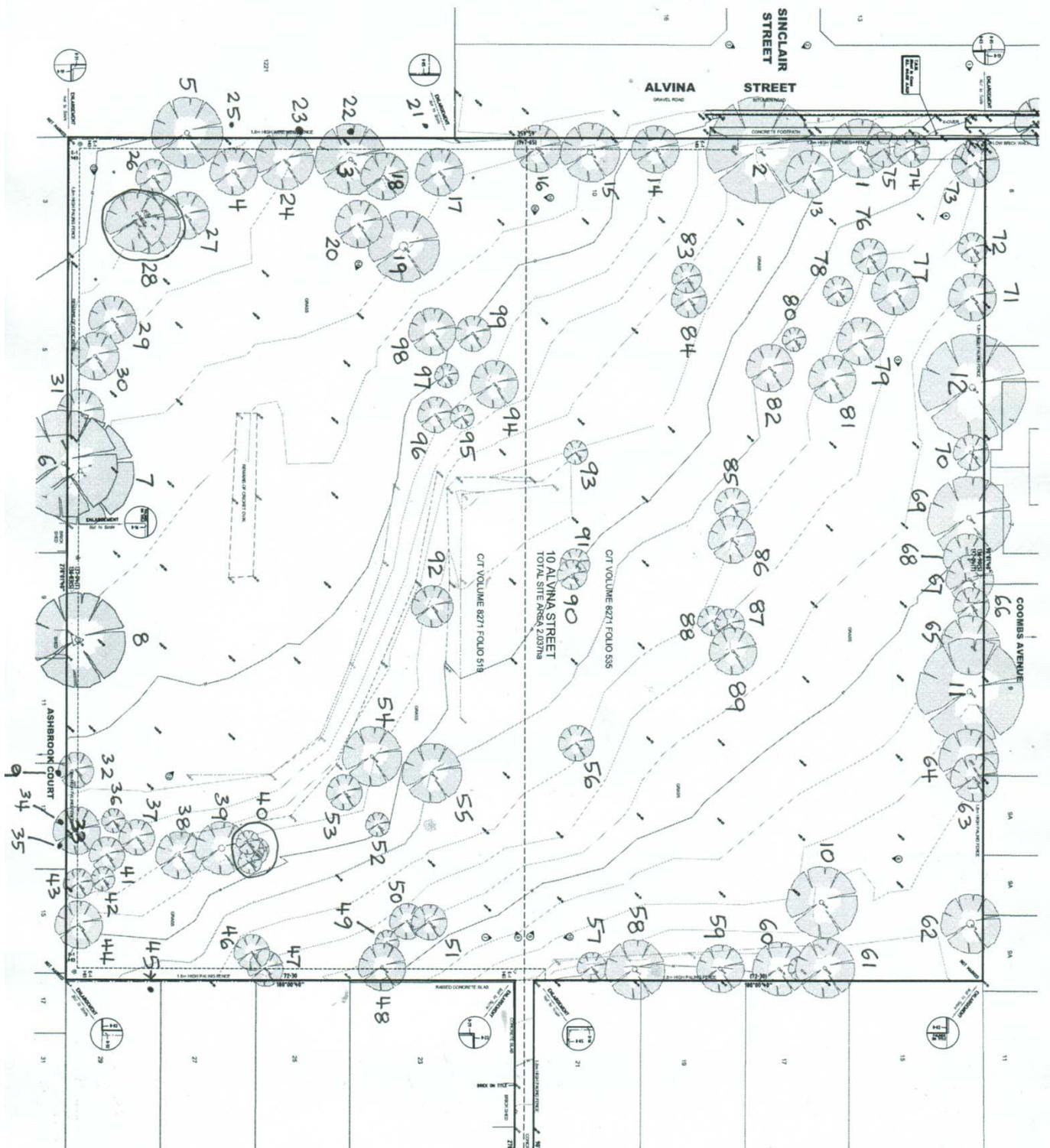
end of its safe useful life expectancy with considerable decay in its trunk. A small Coastal Tea-tree, tree 36, is present which is probably self-sown however it is difficult to say whether this species would have occurred naturally in the area prior to European occupation or if it has only invaded recently, perhaps due to lack of fire.

The age of the trees mostly varies between about 25 years and 50 years. Mature, attractive large specimens of English Oak (*Quercus robur*), Lemon-scented Gum (*Corymbia citriodora*), Brush Cherry (*Syzygium paniculatum*), Red Iron bark (*Eucalyptus sideroxylon*) and Smooth barked Apple (*Angophora costata*), all Australian natives except the oak, are present.

Other Australian natives include more than 20 trees of Queensland Brush Box (*Lophostemon confertus*), some of which have moderate retention value. Of lower significance due to their small size and/or poorer condition are, for example, Willow Peppermints (*Eucalyptus nicholii*), Bushy Sugar Gums (*Eucalyptus cladocalyx* 'Nana'), Red-flowering Gums (*Corymbia ficifolia*), a Wallangarra White Gum (*Eucalyptus scoparia*), several melaleucas and most of the nine Willow Myrtles (*Agonis flexuosa*).

Trees of Victorian origin on the site are numerically dominated by the two weed species Sweet Pittosporum (*Pittosporum undulatum*) and Sallow Wattle (*Acacia longifolia*). One individual of Red Ironbark (*Eucalyptus sideroxylon*) is healthy but will need works if retained, whilst those of Lilly Pilly (*Syzygium smithii*), Yellow Gum (*Eucalyptus leucoxydon*) and Bracelet Honey-myrtle (*Melaleuca armillaris*) are over-mature and/or structurally poor.

Apart from the afore-mentioned oak, the various non-Australian species on the site are diminutive and/or in poor health. The largest, a Weeping Willow (*Salix babylonica* or hybrid thereof) on the western boundary, is in decline, evidenced both by dieback of branches and decay in the main stems.



Legend

1. Proposed Footpath

2. Proposed Concrete Footpath

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SCOTSBURN AVENUE

Impact of the Proposal

Site Trees It is proposed to retain tree numbers 1, 2, 8, 11 and 71 within the site. The first four of these trees are the highest worth for retention trees on the property. Each is large with a long safe useful life expectancy. Tree 71 is a smaller tree but still has a long safe useful life expectancy and can be expected to grow larger. Adequate space has been provided around all the trees in order to be confident of their successful long term retention. Appropriate protection procedures will have to be drawn up and put into place before, during and after the construction period. These will include protective fencing, mulching and irrigation and the prevention of any excavation works within the TPZs or between the buildings and trees. Some pruning will be required but the amount necessary to be pruned off will have no impact on the long term safe useful life expectancies.

Neighbouring Trees None of the neighbouring trees are likely to be affected, particularly if protection procedures as previously described are put into place, with the exception of tree 5. I am informed however that the owner of the land on which this dangerous old over mature eucalypt is growing has no objection to its removal. I strongly recommend this tree be removed before construction begins.

Explanations

In order to understand the column headings of the table of data, I have provided the following explanations:

DBH diameter of trunk over bark at breast height. In a number of cases where the tree has forked into multiple trunks below breast height (1.3-1.5m) the diameter is measured below the fork and an estimate is made for the single trunk equivalent at breast height, or else figures for each of the individual stems can be given.

HxS This is the estimated height (H) of the tree and its average crown spread (S).

SULE Safe useful life expectancy in years. Taken in the context that the area is to be developed for urban development, and that sensible distances are maintained between the buildings and the trees, this is the estimate of time that the tree will continue to provide useful amenity without imposing an onerous financial burden in order to maintain relative safety, and avoid excessive nuisance.

Condition This descriptor can be encapsulated by three terms, namely **Health (H), Structure (S) and Form (F)**.

Health is largely governed by the ease in which the metabolic functions are occurring throughout the tree. Symptoms of health include the amount, distribution, density, size and colour of the foliage.

Structure refers to the structural stability of the tree and its branches. A well structured tree is not likely to shed branches or stems, or snap in the trunk or blow over, whereas a poorly structured tree is more likely to.

Form basically refers to the symmetry of the tree. A tree with a straight trunk and symmetrical crown and evenly distributed branches is referred to as having good form, whilst a lopsided leaning tree may have fair – poor form.

Worthiness of Retention (WOR):

The worth for retention of a tree is based on the assumption that the site is to be re-developed, and that there is the opportunity for new tree planting. It is based on a number of factors. These factors are:

1. structure, health, form and safe useful life expectancy,
2. size, prominence in the landscape,
3. species rarity,
4. whether indigenous,
5. whether an environmental weed.
6. importance for habitat of native wildlife
7. whether of historical or cultural interest

Any tree with a WOR rating of 3 or less should be seriously considered for removal before development begins because it is dead, nearly dead or dangerous, a weed, is causing or is likely to cause a severe nuisance in the near future, or just of very little significance and readily replaceable with new plantings. Trees rated 4-6 are of some significance. Some of these trees may respond to treatments such as formative pruning, removal of dead wood, weight reduction pruning etc. Trees rated 7 or higher are of high significance (the higher the ranking the more so), primarily because of their good health, structure, form, prominence in the landscape and SULE, although they still may need substantial works done on them as already detailed, if they are to be retained.

Tree Protection Zone (TPZ) According to the Australian Standard AS 4970-2009 'Protection of Trees on Building Sites', the TPZ is the principal means of protecting trees on development sites. It is a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable.' The radius of the TPZ is calculated by multiplying the DBH by 12. The radius is measured from the centre of the stem at ground level. An area of 10% of the TPZ is deemed acceptable to violate if 10% of the area of the TPZ is made up in

other directions. *Thus if encroachment is from one side only, encroachment to as close as approximately 8 times the DBH (2/3 the listed TPZ radius) is permissible according to the Standard.*

The TPZs as calculated according to the AS 4970-2009 should only be construed as a rough guide. They are only used in this statement because various local authorities now demand it in their assessments of development applications. Many factors such as the type of encroachment on the TPZ, species tolerance, age, presence of spiral grain, soil type, soil depth, tree lean, the existence of onsite structures or root directional impediments, level of wind exposure, irrigation and ongoing tree care and maintenance are each highly influential on the size and success of the TPZ estimation, therefore the figures derived from the Standard and provided in this report must be treated as rough guides only.

Tree Origin Categories

Each tree has been classified as to whether it is indigenous (**I**), native to Victoria (**V**), native to Australia (**A**), exotic (**E**) or an environmental weed (**W**).

An indigenous species (**I**) is one that is known to grow naturally in the local area, even if the individual tree has been planted and is from a seed source or provenance foreign to the area.

A species classified **V** is one which has a part or all, even if very small, of its natural range within Victoria, although it may occur outside the state as well. It does not however occur naturally in the local area.

A species classified **A** is native elsewhere in Australia than Victoria. It does not occur naturally in the local area.

A species classified **E** has its natural range occurring outside Australia.

A species classified **W** is a seriously invasive environmental weed.

GALBRAITH & ASSOCIATES

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