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Underwriting)

Professional Indemnity Insurance \$30,000,000 total \$5,000,000 any one claim

(Vero Insurance)

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1. Overview

The City of Unley Significant Tree list (Table Un/9), contained in the Development Plan (Unley), has recently transitioned into the draft Planning and Design Code - Part 10 - Significant Trees list. Oxigen Pty Ltd and arborist Dr Dean Nicolle were engaged by the City of Unley to provide an audit of existing listings, update relevant tree details (criteria, status, condition, location) and assess additional tree nominations as the basis for a Stage 2 Planning and Design Code Amendment process to follow in 2021/22.

The original Significant Tree survey was undertaken in the 1990's, while recording the whole of the City's street trees. This survey was updated by a Significant Tree study in 2000 that led to the Significant Tree Management Planning Amendment Report in 2002 and the initial establishment of the Significant Tree list contained in the Development Plan Table Un/9; approximately 330 trees and 250 properties. The Significant Tree list identifies those special, notable, unique examples, irrespective of trunk circumference, in addition to the generic trunk circumference control (3.0 metres at 1.0 metre above ground level) that captures all/any other such trees.

The Significant Tree list has not been reviewed since its initial establishment. Since that time, there have been a range of trees damaged and removed, legitimately and not, and queries over the location and details of some trees. Further, over time there has been identification by community groups, the public and Council staff of potential additional candidates as Significant Trees. The Planning Development and Infrastructure Act 2016 ("PDI Act") has supported their designation and status through transition of their listing into Part 10 – Significant Trees list - Planning and Design Code.

2. Process

Trees indicated on the City of Unley Significant Tree list, together with additional resident nominated trees were inspected on site. Prior to the inspections, an information sheet was developed with the City of Unley for each of the nominated trees, or groups of trees, and includes the following items:

- Tree Address
- Geo-Coordinate (utilising the ArcGIS Map app)
- Scientific Name & Common Name
- Individual or Group
- Tree Height
- · Average Canopy Width
- Status (Dead, Absent, Healthy, Unhealthy)
- Origin (Remnant, Semi-remnant, Planted, Self-seeded Weed)
- Date Assessed
- Photograph of Tree

The information sheet also provides assessment in relation to the following PDI Act criteria as follows:

The Planning, Development and Infrastructure Act 2016 Section 68 (1 and 2) enables a tree, or group of trees, to be declared significant if:

- i. it makes a significant contribution to the character or visual amenity of the local area; or
- ii. it is indigenous to the local area; it is a rare or endangered species; or it forms part of a remnant area of native vegetation; or
- iii. it is an important habitat for native fauna

At the base of the information sheet is a declaration that states whether the tree, or group of trees, 'meets/does not meet' criteria under Section 68, with space for any additional comments.

Important to note that the original criteria pursuant to the Development Act 1993 were subsequently revised and became more limited than at the time of the original listing in 2002. This current set of criteria has been transitioned to the new Planning Development and Infrastructure Act.

3. Methodology

Each of the trees was inspected visually on site, with many of the inspection items simply being statements related to the tree, its identification, location and condition as observed. Assessment of other criteria can be considered more subjective and this principally relates to whether a tree 'makes a significant contribution to the character or visual amenity of the local area', 'forms part of a remnant area of native vegetation' or is considered remnant or semi-remnant.

The determination of whether a tree 'makes a significant contribution to the character or visual amenity of the local area' is based on the criteria under the PDI Act and the associated assessment of the tree against this criteria by landscape architects Oxigen Pty Ltd with botanist, arborist and ecologist Dr Dean Nicolle, utilising their knowledge and experience (refer Appendix 1). The height, width, prominence and visibility of the tree within its locality are defining factors, as is the viewshed of the tree; the degree of visibility of the tree within the local area. Trees that are only visible within the rear garden of a property have a diminished prominence.

Specific tree species also add to the character of a local area. Examples of this can be seen in parks, reserves and water courses where remnant/semi remnant local species trees are present, or in older established suburbs and properties where larger or more unique tree species have been planted. This 'mix' of tree species can help define the 'local' character of an area based on the characteristics of the trees.

Determining whether a tree 'forms part of a remnant area of native vegetation' is again based on the knowledge and experience of the botanist/arborist/ecologist and landscape architects. Remnant areas of native vegetation within metropolitan Adelaide are typically found in water courses, parks/reserves and on larger private properties where there has been less opportunity or need for land clearing. Remnant trees in these situations are often long-lived species such as River Red Gums. Assessment of whether a tree is remnant or semi-remnant is typically based on the species, canopy height and spread, trunk girth, bark characteristics and evidence of hollows or fire scarring. Hollows typically appear on trees after at least 100 years of growth and create habitat for small animals and birds with bark providing habitat for insects.

4. Inspection Results

Inspection of the trees included both the original Significant Tree list and the recently compiled Nominated Tree list with the results as follows:

City of Unley Significant Tree List	No. of Trees	% of Trees on List
Trees that meet the criteria	214	60%
Trees that do not meet the criteria	40	11.5%
Trees that are absent or removed	90	25.5%
Trees removed through Development Approval	11	3%
	355	100%

The total number of trees/groups of trees on the Significant Tree List is 355. A total of 40 trees from the City of Unley Significant Tree List now do not meet the criteria for significance. For the majority of trees this is due to the more limited criteria of the PDI Act.

City of Unley Nominated Tree List	No. of Trees	% of Trees on List
Trees that meet the criteria	33	85%
Trees that do not meet the criteria	6	15%
	39	100%

The total number of trees/groups of trees on the Nominated Tree List is 39. No trees are absent or removed.

5. Assumptions & Observations

The original Significant Tree list includes many trees that are classified as 'regulated' or 'significant' trees due to their circumference when measured at 1.0m above natural ground level. It also includes smaller trees and palms, large shrubs and hedging species. The criteria for some of these species is not confirmed but has been assumed to be due to the perceived rarity, heritage value or attractive aesthetic of a given species. Examples of this are *Taxus baccata* (Yew) and *Feijoa sellowiana* (Feijoa) that do not meet the PDI Act criteria.

The most common tree species on the list are *Platanus* sp. (Plane Tree) and *Eucalyptus* camaldulensis (River Red Gum), although the number of Plane Trees is skewed due to inclusion of the Victoria Avenue and Commercial Road street trees. Other common species include *Araucaria heterophylla* (Norfolk Island Pine), *Corymbia citriodora* (Lemon-scented Gum) and *Ficus macrophylla* (Moreton Bay Fig).

There are a selection of palms on the list, varying from the more common *Washingtonia sp.* (Fan Palm) and *Phoenix canariensis* (Canary Island Date Palm) to rarer species such as *Chamerops humilis* (European Fan Palm). Many palm species can be transplanted should development warrant their relocation.

A number of trees on the list were only considered to provide a 'moderate' rather than a 'significant' contribution to the local area and therefore did not meet the criteria. This was based on the height, width, prominence and visibility of the tree within its locality and the viewshed of the tree within the local area. The original listing of some trees, such as *Magnolia* sp., may have been due to their perceived rarity at the time, however they have now become more commonplace in local gardens.

Corymbia citriodora (Lemon-scented Gum) trees are common in Adelaide and the size of mature specimens often meets the criteria for listing. For the review, they have also been considered to meet the criteria as they are important for local habitat, despite being a non-indigenous species.

Areas of remnant vegetation throughout the City of Unley vary in size. Where semi-remnant local tree species are in close proximity to remnant trees, they are considered to 'form part of an area of remnant vegetation'.

The location of trees on the original list was defined by measurements from the right hand boundary and the street kerb. Often these measurements were incorrect so the use of the ArcGIS Map app greatly improved the locating mechanism for the updated tree information sheets.

Nominated trees were provided by residents within the City of Unley. The reasoning for listing trees varied, with some nominations being for trees on owner-occupied properties and others for trees on neighbouring private or Council managed land.

6. Summary

Reviewing the original Significant Tree list against the relevant PDI Act criteria provides a more prescriptive method of assessing each tree, or group of trees. It was noted that while the Significant Tree list picked up many of the trees that met the criteria, there were still others in both private and Council managed land that could also be included on the list. Examples of this are the remnant and semi-remnant River Red Gums in Ridge Park on Glen Osmond Road.

It was also apparent that there was a level of variation in the criteria between the original Development Act criteria and revised criteria that transitioned into the Planning Development and Infrastructure Act, with some subjectivity in the original study and tree survey regarding selection of species presenting issues for the re-assessment and declaration of significant trees. Assessing a significant tree in accordance with the PDI Act criteria (i - iii) decreases the subjectivity of the decision-making process and leads to a more robust document.

It is recommended that a further more strategic audit of trees (eg. LiDAR tree canopy mapping and analysis) within the City of Unley is carried out to ensure all trees of significance (to discriminate from significant trees as defined in the DPI Act) are captured and protected.

Appendix 1

OXIGEN PTY LTD

James Hayter

Bachelor of Architecture, University of Adelaide
Master of Arts (Landscape Design), University of Sheffield
Master of Landscape Architecture in Urban Design, Harvard University
Fellow Australian Institute of Landscape Architects
Australian Institute of Architects
Registered Architect, South Australia
Registered Landscape Architect in Australia
Professor, University of Adelaide
Member ICOMOS

Relevant Experience: 40 Years

David Sadler

Bachelor of Landscape Architecture, University of Adelaide Graduate Diploma of Design Studies (Landscape), University of Adelaide Advanced Certificate of Urban Horticulture, Brookway Park T.A.F.E. Bachelor of Education, University of Adelaide Registered Landscape Architect in Australia (AILA)

Relevant Experience: 28 Years

Dr. Dean Nicolle OAM

Bachelor of Science (Botany) (Hons), PhD
Bachelor of Applied Science (Natural Resource Management)

Relevant Experience: 20 Years

