# Special Council Assessment Panel
# **Agenda & Reports**

**15 August 2023**

## Our Vision

*A City which values its heritage, cultural diversity, sense of place and natural environment.*

*A progressive City which is prosperous, sustainable and socially cohesive, with a strong community spirit.*

City of Norwood Payneham & St Peters
175 The Parade, Norwood SA 5067

Telephone 8366 4555
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City of Norwood Payneham & St Peters

7 August 2023

## To all Members of the Council Assessment Panel:

- Mr Terry Mosel (Presiding Member)
- Mr Mark Adcock
- Cr Christel Mex
- Ms Jenny Newman
- Mr Ross Bateup

**NOTICE OF MEETING**

I wish to advise that pursuant to Clauses 1.5 and 1.14 of the Meeting Procedures, the next Special Meeting of the Norwood Payneham & St Peters Council Assessment Panel, will be held in the Torrens Room at Payneham Library, 2 Turner Street, Felixstow, on:

**Tuesday, 15 August 2023, commencing at 7.00pm.**

Please advise Kate Talbot on 8366 4562 or email ktalbot@npsp.sa.gov.au if you are unable to attend this meeting or will be late.

Yours faithfully

Geoff Parsons
**ASSESSMENT MANAGER**

City of Norwood Payneham & St Peters
175 The Parade, Norwood SA 5067

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City of Norwood Payneham & St Peters

Page No.

**VENUE** Torrens Room, Payneham Library

**HOUR**

**PRESENT**

**Panel Members**

**Staff**

**APOLOGIES**

**ABSENT**

**1. COMMENCEMENT AND WELCOME**

**2. APOLOGIES**

**3. CONFIRMATION OF THE MINUTES OF THE MEETING OF THE COUNCIL ASSESSMENT PANEL HELD ON 17 JULY 2023**

**4. DECLARATION OF INTERESTS**

**5. DEVELOPMENT APPLICATIONS – PDI ACT**

**6. DEVELOPMENT APPLICATIONS – DEVELOPMENT ACT**

## 7. REVIEW OF ASSESSMENT MANAGER DECISIONS

### 7.1 REVIEW OF ASSESSMENT MANAGER'S DECISION – DEVELOPMENT NUMBER 23010962 – DITARA PTY LTD – 1 KENSINGTON ROAD, NORWOOD & 37-39 CLARKE ST, NORWOOD

| | |
|---|---|
| **DEVELOPMENT NO.:** | 23010962 |
| **APPLICANT:** | Ditara Pty Ltd |
| **ADDRESS:** | 1 Kensington Road, NORWOOD SA 5067<br>37-39 Clarke Street, NORWOOD SA 5067 |
| **NATURE OF DEVELOPMENT:** | Removal of a significant River Red Gum tree |
| **ZONING INFORMATION:** | **Zones:**<br>- Suburban Business<br>**Overlays:**<br>- Prescribed Wells Area<br>- Regulated and Significant Tree<br>- Traffic Generating Development<br>- Airport Building Heights (Regulated)<br>- Future Road Widening<br>- Hazards (Flooding - General)<br>- Major Urban Transport Routes<br>- State Heritage Place<br>- Heritage Adjacency<br>**Technical Numeric Variations (TNVs):**<br>- Maximum Building Height (Levels) (Maximum building height is 2 levels) |
| **LODGEMENT DATE:** | 21 April 2023 |
| **RELEVANT AUTHORITY:** | Assessment panel / Assessment manager at City of Norwood, Payneham and St. Peters |
| **PLANNING & DESIGN CODE VERSION:** | 21 April 2023 |
| **CATEGORY OF DEVELOPMENT:** | Code Assessed - Performance Assessed |
| **NOTIFICATION:** | No |
| **RECOMMENDING OFFICER:** | Geoff Parsons<br>Manager Development Assessment / Assessment Manager |
| **REFERRALS STATUTORY:** | None applicable |
| **REFERRALS NON-STATUTORY:** | Matt Cole<br>City Arborist |

## CONTENTS:



## INTRODUCTION

Section 202(1)(b)(I)(A) of the *Planning, Development and Infrastructure Act 2016* provides an applicant with a right to apply to the Council Assessment Panel for a review of the Assessment Manager's decision relating to a prescribed matter.

A prescribed matter is defined as follows:

***Prescribed matter,*** *in relation to an application for a development authorisation, means -*

*(a) any assessment, request, decision, direction or act of a relevant authority under this Act that is relevant to any aspect of the determination of the application; or*

*(b) A decision to refuse to grant the authorisation; or*

*(c) The imposition of conditions in relation to the authorisation; or*

*(d) Subject to any exclusion prescribed by the regulations, any other assessment, request, decision, direction or act of a relevant authority under this Act in relation to the authorisation.*

To assist with undertaking a review under Sections 201-203 of the *Planning, Development & Infrastructure Act 2016*, the Council Assessment Panel adopted a procedure to guide the consideration of an application for such at its meeting held on 10 February 2021. A copy of that Policy is provided in **Attachment 1.**

It is noted that the attached Policy was due for review in February 2023. A review of the Council Assessment Panel Terms of Reference and Meeting Procedures has been completed. The review of the attached Policy will commence shortly.

The Panel should also be aware that the South Australian Government made changes to the *Planning, Development & Infrastructure (General) Regulations 2017* on 25 May 2023. An amended regulation was introduced which states:

*(2) An applicant to an assessment panel for a review of a prescribed matter must be given an opportunity to provide the assessment panel with the applicant's submissions in relation to the review (and, if the assessment panel determines to hold a hearing, must be given written notice of the date of the hearing and an opportunity to appear and make submissions at the hearing in person)*

Council (together with the rest of the local government sector) has received advice in relation to the new regulation and such advice confirms that an Applicant should be provided with the right to make submissions (both written and verbal). Accordingly, the Applicant's written submission has been provided in **Attachment 2** (together with the request for the review) and the Presiding Member and Assessment Manager have agreed it is reasonable for both the Applicant and Assessment Manager to address the Panel verbally for five (5) minutes each, as per the Panel's normal processes for a hearing of representations.

## PROPOSAL

The Application to which the review relates is Development Application 23010962. This Application sought Planning Consent to remove a significant tree. Specifically, the nature of development was described as:

*Removal of a significant River Reg Gum tree*

Development Application 23010962 was refused Planning Consent under delegation from the Assessment Manager. It is that determination that is the subject of this review.

Clause 6 in the *Council Assessment Panel Review of Decisions of the Assessment Manager Policy* stipulates that the Panel may:

- Affirm the Assessment Manager's decision on the Prescribed Matter;
- Vary the Assessment Manager's decision on the Prescribed Matter; or
- Set aside the Assessment Manager's decision on the Prescribed Matter and substitute its own decision.

In addition, the Council Assessment Panel may defer its decision in accordance with clauses 5.6 and 5.7 of the *Council Assessment Panel Review of the Assessment Manager Policy*.

Draft resolutions for each option have been included at the appropriate point within this report.

Panel Members should familiarise themselves with Clause 5 in the *Council Assessment Panel Review of Decisions of the Assessment Manager Policy* which provides guidance on how the review hearing should be conducted, in particular clause 5.1 which states:

> *5.1 On review, the CAP will consider the Prescribed Matter afresh*.

## BACKGROUND

The matter has an extensive history, and has been the subject of previous Applications and Environment Resources and Development Court decisions.

Prior to this current Application (i.e. DA 23010962) being lodged and determined, the most recent prior Application was that described as Development Application 21037327 which similarly sought Development Approval for the removal of the subject tree. That Application was refused on 22 December 2021. The reason for refusal was described as:

> *The tree displays attributes worthy of retention against Performance Outcome 1.2, and does not present a level of risk which satisfies Performance Outcome 1.3 (a) (ii) or (b) of the Regulated and Significant Tree Overlay to warrant its removal.*

That decision was appealed to the Environment Resources and Development Court. On 21 December 2022 the Court delivered its judgement finding in favour of the Assessment Manager of the City of Norwood Payneham and St Peters. The key findings of the Court were:

> ***Findings***
> *56 We find:*
>
> *• the tree is a significant tree that warrants protection as that it makes an important contribution to the character and amenity of the local area and forms a notable visual element to the landscape of the local area;*
>
> *• the tree poses an unacceptable risk to public and private safety due to limb drop;*
>
> *• pruning is a reasonable remedial treatment, and the appellant has not demonstrated that would be ineffective; and*
>
> *• the tree does not warrant removal in the first instance.*

Following the judgement, the Applicant advised they would carry out the pruning works as outlined in the evidence given by Mr Selway (the Council's Consultant Arborist) during the appeal.

The pruning works were carried out 2 February 2023 under the supervision of Mr Selway.

Following the works, on 18 February 2023, a limb / branch fell from the tree, narrowly missing a car and driver. This additional limb drop has resulted in the applicant wishing to revisit the previous decisions, and again seek approval for removal of the tree. Accordingly, DA 23010962 was lodged.

## DOCUMENTS FOR REVIEW

In accordance with clause 4 of the *Council Assessment Panel Review of Decisions of the Assessment Manager* a number of different materials have been included as attachments to this agenda, as follows:

- Attachment 1 – Council Assessment Panel Review of Decisions of the Assessment Manager Policy
- Attachment 2 – Application to Assessment Panel and accompanying correspondence
- Attachment 3 – Decision Notification Form – DA 23010962
- Attachment 4 – Delegated Assessment Report – DA 23010962
- Attachment 5 – Application Documentation – DA 23010962
- Attachment 6 – Environment Resources and Development Court Judgement
- Attachment 7 – PD Code Rules Applicable at Lodgement

While it could be argued that the Environment Resources and Development Judgement is not relevant to the matter before the Panel it is respectfully submitted that it provides useful background information for the Panel about the history of the matter and the arguments both for and against the proposed development.

However, the Panel is not constrained by, and should not be influenced by, that judgement. The Panel must consider this matter afresh having regard to the information presented and the submissions that have / will be made.

## REVIEW OF ASSESSMET MANAGER DECISION

The applicant, via the correspondence provided for in **Attachment 2**, has provided a valid and clear argument as to why the decision of the Assessment Manager (namely, the refusal of DA 23010962) should be set aside.

To assist the Panel in their consideration of this matter, and in accordance with clause 4.1.3 of the *Council Assessment Panel Review of Decisions of the Assessment Manager Policy* I have set out the rationale for the Assessment Manager's decision below.

Development Application 23010962 sought the removal of a significant tree – specifically a River Reg Gum. As per the earlier sections of this report, the same tree has previously been the subject of requests for its removal and an Environment Resources and Development Court appeal on the matter.

The Application was supported by a report by an Arborist - Dr Nicolle, and the Application was reviewed by Council's Consultant Arborist Mr Selway. Both reports form part of **Attachment 5** and both Arborists were also involved as Expert Witnesses in the recent decision of the Environment Resources and Development Court on this matter.

It is submitted that any request for the removal of a regulated or significant tree must essentially pass two (2) tests, as follows:

- First, whether the significant tree displays attributes that warrant its retention, as outlined in Performance Outcome 1.2 of the Regulated and Significant Tree Overlay:

  *PO 1.2*

  *Significant trees are retained where they:*

  *(a) Make an important contribution to the character or amenity of the local area*
  *(b) Are indigenous to the local area and are listed under the National Parks and Wildlife Act 1972 as a rare or endangered native species*
  *(c) Represent an important habitat for native fauna*
  *(d) Are part of a wildlife corridor or a remnant area of native vegetation*
  *(e) Are important to the maintenance of biodiversity on the local environment*
  *And / or*
  *(f) Form a notable visual element to the landscape of the local area.*

- Second, whether the rationale for the removal is anticipated and reasonable and essentially, unavoidable given the circumstances, in accordance with Performance Outcome 1.3 of the Regulated and Significant Tree Overlay:

  *PO 1.3*

  *A tree damaging activity not in connection with other development satisfies (a) and (b):*

  *(a) tree damaging activity is only undertaken to:*
  *(i) remove a diseased tree where its life expectancy is short*
  *(ii) mitigate an unacceptable risk to public or private safety due to limb drop or the like*
  *(iii) rectify or prevent extensive damage to a building of value as comprising any of the following:*

*A. a Local Heritage Place*
*B. a State Heritage Place*
*C. a substantial building of value*

*and there is no reasonable alternative to rectify or prevent such damage other than to undertake a tree damaging activity*

*(iv) reduce an unacceptable hazard associated with a tree within 20m of an existing residential, tourist accommodation or other habitable building from bushfire*
*(v) treat disease or otherwise in the general interests of the health of the tree and / or*
*(vi) maintain the aesthetic appearance and structural integrity of the tree*

*(b) in relation to a significant tree, tree-damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective.*

With respect to the first test, it was determined that the significant tree should be retained due primarily to its compliance with part (a), (c), (e) and (f) of Performance Outcome 1.2.

The tree is of substantial size and scale, with a trunk circumference of approximately 3.7 metres (measured at one (1) metre above the ground), a total height of approximately 24 metres and a significant canopy spread of approximately 21 metres (as noted in the Arborist Report from Dr Nicolle).

The tree is visible from all neighbouring allotments, and allotments / land further away. The tree is also visible from the surrounding public road network and is a notable figure in the landscape.

The height and width of the canopy and the overall health of the tree (which provides for extensive foliage) are important in the urban context, where built form is dominant. The presence of the tree on private land is also important, as a majority of the trees in the locality are located in the public realm, or in the parklands, a relatively short distance to the south west of the site.

In addition, both Arborists agreed that the tree formed an important habitat for local fauna, containing various hollows and sections which would support birdlife in particular.

These factors combine and lead to a conclusion that the tree does provide an important contribution to the character and amenity of the area. It is a notable visual element and its impact from a visual perspective is both impressive and important.

I note that Dr Nicolle (a qualified and highly experienced Arborist) on behalf of the applicant has suggested that tree has a *very high* biodiversity value and a *high* landscape value. These views are not disputed by Mr Selway (Council's Consultant Arborist).

Accordingly, I am satisfied that the Planning and Design Code anticipates and encourages the retention of the tree consistent with the decision previously made by the Assessment Manager.

With respect to the second test, differing professional views have been submitted by the respective Arborists (together a view from the Council's internal Arborist). The internal delegated assessment report (provided at **Attachment 4**) notes these differences *(note: the wording is that of Council's administration in a summary format – the words of the Arborists have been paraphrased):*

| **Policy** | **Dr Nicolle's view** | **Mr Selway's view** | **City Arborist's view** |
|---|---|---|---|
| **(a) tree-damaging activity is only undertaken to:** | | | |
| ***(i) remove a diseased tree where its life expectancy is short*** | The tree is diseased by borer activity.<br>The tree has exceeded its useful life expectancy due to an unacceptable and unmanageable risk | The tree is not diseased and has a useful life expectancy of 10-20 years | Did not comment on this aspect |

| Policy | | Dr Nicolle's view | Mr Selway's view | City Arborist's view |
|---|---|---|---|---|
| | | | Observed borer activity in the primary and secondary structure. Noted that the hollows created by the borers were not large enough, relative to the diameter of the branch, to be considered a structural concern for the tree (pp 19-20). | |
| | ***(ii) mitigate an unacceptable risk to public or private safety due to limb drop or the like*** | The tree *does* represent a moderate and marginally unacceptable, and increasing, risk to safety. This arises from the continuously increasing likelihood of branch failure events associated with over-extended and end-weighted branches, as well as structural defects within the tree. | The tree *does not* represent an unacceptable risk. Instead, Shane's assessment using the VALID tree risk-benefit system indicates an acceptable risk rating. | The tree *does not* present an unacceptable risk. |
| | ***(iii) rectify or prevent extensive damage to a building of value as comprising any of the following:***<br>***A. a Local Heritage Place***<br>***B. a State Heritage Place***<br>***C. a substantial building of value*** | N/A<br>Although Dr Nicolle did note the damage to the carpark but did not consider this as justification alone for removal of the tree | N/A | Did not comment on this aspect. |
| | ***(iv) reduce an unacceptable hazard associated with a tree within 20m of an existing residential, tourist accommodation or other habitable building from bushfire*** | N/A | N/A | N/A |
| | ***(v) treat disease or otherwise in the general interests of the health of the tree*** | N/A | N/A | N/A |
| | ***(vi) maintain the aesthetic appearance and structural integrity of the tree*** | N/A | N/A | N/A |
| **In relation to a significant tree, tree-damaging activity is avoided unless all reasonable remedial** | | *It is worth prefacing this part by stating that it was agreed as part of the ERD Court appeal that the following remedial options would be ineffective and/or unreasonable: an exclusion zone around the tree; an under-canopy structure; and branch cabling. Nobody's position in this respect has changed since.* | | |

| Policy | Dr Nicolle's view | Mr Selway's view | City Arborist's view |
|---|---|---|---|
| **treatments and measures have been determined to be ineffective.** | *Accordingly, the only remedial measure to be considered is pruning of the tree.* | | |
| | The pruning that took place on 2 February 2023 has not significantly reduced the likelihood of branch failure to the extent that would alter Dr Nicolle's risk rating of 'moderate and marginally unacceptable'.<br>Pruning is not a viable method to reduce and maintain the risk because of:<br>• Structurally defective branches within the canopy;<br>• Over-extended and end-weighted branches;<br>• Absence of internal pruning points to maintain a viable canopy; and<br>• The extent of pruning required to acceptably mitigate the risk would result in the tree no longer being worthy of retention per PO 1.2, and therefore justify its removal anyway. | The pruning that took place on 2 February 2023 *has been effective* in mitigating any risk to public or private safety. The risk rating attributed to the tree remains as acceptable, and no further remedial work is required. | The pruning that has taken place will inevitably result in the tree taking some time to adjust to its altered form and therefore altered wind dynamics and loads. Is confident that, given time, the tree will make this adjustment and the recent small branch failure is not evidence alone that the pruning is ineffective and does not condemn the tree. |

The key point of argument between the parties is noted in paragraph 18 of the correspondence from Mr Hilditch (forming part of **Attachment 2**) where it is noted *"Pruning has been demonstrated to be ineffective".*

This conclusion, it is presumed, is based upon the fact that two limbs have dropped from the tree since the decision of the Environment Resources and Development Court with respect to the previous Application (DA 21037327) as follows:

- A 300mm diameter branch failure on 27 January 2023 (prior to the subsequent pruning);
- A 90mm branch failure on 18 February 2023 (post the subsequent pruning).

The Applicant and their Arborist assert:

- That the branch failures demonstrate that pruning has not been effective;
- The level of risk is at the moderate to marginally unacceptable range;
- The tree is diseased, showing substantial borer activity;
- The *useful* life expectancy of the tree is short (noting the *actual* life expectancy could be 30+ years);
- All reasonable remedial treatments have been determined to be ineffective.

The Council's Consultant Arborist and Internal Arborist suggest that:

- The level of risk is acceptable;
- The tree is not diseased (borer activity was observed but not to such an extent that it would render the structure of the tree unsafe);
- The tree has a *useful* life expectancy of 10-20 years;

- The pruning works have been effective and a 'minor' limb drop since the pruning works were carried out is to be expected given that pruning alters the wind loading experienced by the tree and the tree will need some time to adjust;
- A regular inspection and pruning regime will limit the risk.

Copies of the reports from the respective Arborists are attached and should be read in their entirety to understand the points of difference.

It is worth noting the Environment Resources and Development Court, in their judgement, did find that tree posed a moderate to unacceptable risk, but they noted that all remedial options have not been suitably explored and hence they found in favour of the Assessment Manager of the City of Norwood Payneham and St Peters.

On the presumption that the tree does pose an unacceptable risk (which as noted above is disputed) the question becomes whether all reasonable remedial treatments have been determined to be ineffective.

In consideration of all of the evidence before the Assessment Manager, it was determined that the failure of one (1) branch (measuring 90mm in diameter) since the pruning work was carried out is not sufficient to justify that the reasonable remedial measures have been ineffective. Such failures can be reasonably anticipated following pruning activities.

The differing views from the Arborists with respect to the level of disease experienced by the tree and the expected life expectancy essentially remain unchanged since the Environment Resources and Development Court appeal.

It was therefore considered that the Application had not sufficiently justified that removal is the only viable option, in accordance with Performance Outcome 1.3 of the Regulated and Significant Tree Overlay.

As the Council Assessment Panel now has before it the rationale for the review as provided by the Applicant, and justification for the decision as provided by the Assessment Manager, the Panel must now consider this matter afresh taking into consideration all relevant factors.

**CONCLUSION**

This report outlines the rationale for the decision of the Assessment Manager, as required by clause 4.1.3 of the *Council Assessment Panel Review of Decisions of the Assessment Manager Policy.* The attachments provide all of the other relevant information and details as required by clause 4.1.

The Council Assessment Panel must determine whether to affirm the decision of the Assessment Manager, vary it, set it aside and substitute its own decision or defer consideration of the matter for more information.

Relevant options for the consideration of the Panel are outlined below.

## RESOLUTION OPTIONS

Resolution to affirm the decision of the Assessment Manager
*The Council Assessment Panel resolves to affirm the decision of the Assessment Manager that Development Application 23010962 is not seriously at variance with the Planning and Design Code, but that it does not warrant Planning Consent for the following reasons:*

1. *The tree displays attributes worthy of its retention in accordance with Performance Outcome 1.2 of the Regulated and Significant Tree Overlay;*
2. *The removal of the tree is not justified by any of the criteria in Performance Outcome 1.3 of the Regulated and Significant Tree Overlay.*

Resolution to vary a decision of the Assessment Manager
*The Council Assessment Panel resolves to vary the decision of the Assessment Manager in relation to Development Application 23010962 by including the following reasons for refusal:*

- *[insert additional / alternate reasons]*

Resolution to set aside a decision of the Assessment Manager

*The Council Assessment Panel resolves to set aside the decision of the Assessment Manager to refuse Planning Consent to Development Application 23010962 and substitute the following decision:*

- *Development Application 23010962 is not seriously at variance with the Planning and Design Code and Planning Consent is granted to the application subject to the following conditions and notes:*

*Conditions*

1. *The development granted Planning Consent shall be undertaken and completed in accordance with the stamped plans and documentation, except where varied by conditions below (if any).*

2. *A minimum of three (3) replacement tree(s), in accordance with the Landscape Plan prepared by oxigen (dated 19.07.22 and marked "Revision A"), shall be planted on the subject land as soon as is practical within 12 months of the date of this Approval. The replacement trees shall not be planted within 10 metres of a dwelling or in ground swimming pool and cannot be of a species identified in Regulation 3F(4)(b) of the Planning, Development and Infrastructure (General) Regulations 2017.*

3. *The Applicant shall plant trees and plants and install irrigation in accordance with the plan prepared by oxigen dated 19.07.22 and marked "Revision A" in the next planting season following the removal of the tree and thereafter shall maintain the new trees and plants and replace any diseased or dying plants, all to the reasonable satisfaction of the Assessment Manager for the City of Norwood Payneham and St Peters.*

*Notes*

1. *Appeal Rights - General rights of review and appeal exist in relation to any assessment, request, direction or act of a relevant authority in relation to the determination of this application, including conditions.*

2. *No work can commence on this development unless a Development Approval has been obtained. If one or more Consents have been granted on this Decision Notification Form, you must not start any site works or building work or change of use of the land until you have received notification that Development Approval has been granted.*

3. *Consents issued for this Development Application will remain valid for the following periods of time:*

    a. *Planning Consent is valid for 24 months following the date of issue, within which time Development Approval must be obtained;*
    b. *Development Approval is valid for 24 months following the date of issue, within which time works must have substantially commenced on site;*
    c. *Works must be substantially completed within 3 years of the date on which Development Approval is issued.*

    *If an extension is required to any of the above-mentioned timeframes a request can be made for an extension of time by emailing the Planning Department at townhall@npsp.sa.gov.au. Whether or not an extension of time will be granted will be at the discretion of the relevant authority.*

4. *The Applicant is advised that any works undertaken on Council owned land (including but not limited to works relating to crossovers, driveways, footpaths, street trees and stormwater connections) will require the approval of the Council pursuant to the Local Government Act 1999 prior to any works being undertaken. Further information may be obtained by contacting Council's Public Realm Compliance Officer on 8366 4513.*

5. *The granting of this consent does not remove the need for the beneficiary to obtain all other consents which may be required by any other legislation.*

*The Applicant's attention is particularly drawn to the requirements of the Fences Act 1975 regarding notification of any neighbours affected by new boundary development or boundary fencing. Further information is available in the 'Fences and the Law' booklet available through the Legal Services Commission.*

6. *The Applicant is advised that the condition of the footpath, kerbing, vehicular crossing point, street tree(s) and any other Council infrastructure located adjacent to the subject land will be inspected by the Council prior to the commencement of building work and at the completion of building work. Any damage to Council infrastructure that occurs during construction must be rectified as soon as practicable and in any event, no later than four (4) weeks after substantial completion of the building work. The Council reserves its right to recover all costs associated with remedying any damage that has not been repaired in a timely manner from the appropriate person.*

7. *The Applicant is reminded of its responsibilities under the Environment Protection Act 1993, to not harm the environment. Specifically, paint, plaster, concrete, brick wastes and wash waters should not be discharged into the stormwater system, litter should be appropriately stored on site pending removal, excavation and site disturbance should be limited, entry/exit points to the site should be managed to prevent soil being carried off site by vehicles, sediment barriers should be used (particularly on sloping sites), and material stockpiles should all be placed on site and not on the footpath or public roads or reserves. Further information is available by contacting the EPA.*

8. *The Applicant is advised that construction noise is not allowed:*
   a. *on any Sunday or public holiday; or*
   b. *after 7pm or before 7am on any other day*

Resolution to defer review hearing

*The Council Assessment Panel resolves to defer its decision in relation to its review of the decision of the Assessment Manager to refuse Planning Consent to Development Application 23010962 until:*

- *The next ordinary meeting of the Panel;*
- *The next ordinary meeting of the Panel after [insert additional information which has been requested by the Panel] is provided;*
- *Until the next ordinary meeting of the Panel after [insert date (i.e. giving an applicant 2 months to provide information).*

Recommendations to Allow Consideration of the Matter in Confidence Following the Hearing

*That pursuant to Regulation 13(2)(a)(ix) and Regulation 13(2)(b) of the Planning Development & Infrastructure (General) Regulations 2017, together with clause 5.5 of the Council Assessment Panel Review of Decisions of the Assessment Manager, the Council Assessment Panel orders that the public, with the exception of the Council's General Manager Urban Planning & Environment and Planning Assistant, be excluded from the meeting.*

*That the public be allowed to return to the meeting and that pursuant to Regulation 14(4) of the Planning, Development & Infrastructure (General) Regulations 2017 and clause 5.5 of the Council Assessment Panel Review of Decisions of the Assessment Manager Policy, the discussion shall remain confidential.*

City of Norwood Payneham & St Peters

| | |
|---|---|
| **NAME OF POLICY:** | Council Assessment Panel Review of Decisions of the Assessment Manager |
| **POLICY MANUAL:** | Governance |

## BACKGROUND

The *Planning Development and Infrastructure Act 2016* (the Act) provides that where an application for development is made to an Assessment Manager, a person who has applied for the development authorisation may apply to the Council Assessment Panel for a review of a prescribed matter.

## DISCUSSION

The Council Assessment Panel (CAP) has endorsed the following Policy.

## KEY PRINCIPLES

The Policy has been prepared to provide clear guidance on the procedures involved in the CAP's review of an Assessment Manager's decision.

## POLICY

### 1. Introduction

1.1 Section 202 (Rights of Review & Appeal) of the *Planning, Development & Infrastructure Act 2016* (PDI Act) allows an applicant who has received a determination from a relevant authority, including the Council Assessment Panel or Assessment Manager, regarding a Development Application, the right to seek a review of the decision.

1.2 Where such a decision has been made by the Assessment Manager (or his or her delegate), Section 202 (1)(b)(i)(A) permits the applicant to apply to the Council Assessment Panel (CAP) to review the decision regarding a Prescribed Matter.

1.3 Section 203(2)(a) of the PDI Act states that CAP may adopt a procedure for the consideration of such review requests as it thinks fit. This Policy has been formulated to accord with Section 203 of the PDI Act.

1.4 This Policy outlines the process to be followed by an applicant when lodging such a request for review and how the matter will be considered by CAP.

1.5 This Policy applies in addition to the statutory requirements for the review by the Council Assessment Panel (CAP) of a decision of an Assessment Manager as set out in Part 16, Division 1 of the PDI Act.

### 2. Definitions & interpretation

2.1 "**applicant**" in this instance refers to the person or entity named as such on the Development Application form who sought the development authorisation in question and who may or may not be the owner of the land on which the development is to occur.

2.2 "**Assessment Manager**" in this instance includes his or her delegate

2.3 "**business day**" means any day except— (a) Saturday, Sunday or a public holiday; or (b) any other day which falls between 25 December in any year and 1 January in the following year;

2.4 "**next available meeting**" is not necessarily the next in-time CAP meeting (which could be a matter of days away) as the agenda for the next meeting may have closed or is full, or there may be insufficient time for the CAP members to consider the information provided to them, it is intended that the review would be assigned to and be heard at, the meeting after the next in time CAP meeting.

2.5 A "**Prescribed Matter**" means:

2.5.1 any assessment, request, decision, direction or act of the Assessment Manager under the Act that is relevant to any aspect of the determination of the development application, or

2.5.2 a decision to refuse to grant development authorisation to the application, or

2.5.3 the imposition of conditions in relation to a grant of development authorisation, or

2.5.4 subject to any exclusion prescribed by the *Planning, Development and Infrastructure (General) Regulations 2017*, any other assessment, request, decision, direction or act of the Assessment Manager under the PDI Act in relation to the granting of a development authorisation.

## 3. Commencing a review

3.1 An application for review in relation to a development application or development authorisation may only be commenced by the applicant for the development authorisation.

3.2 An application for review must relate to a Prescribed Matter in relation to which the Assessment Manager was the relevant authority.

3.3 An application for review must be:

3.3.1 made using the Application to Assessment Panel for Assessment Manager's Decision Review form (the Form - for ease of reference, a copy of the current Application to CAP Form is attached to this Policy).

3.3.2 lodged in a manner identified on the Form, and

3.3.3 lodged within one (1) month of the applicant receiving notice of the Prescribed Matter, unless the Presiding Member, in his or her discretion, grants an extension of time.

3.4 In determining whether to grant an extension of time, the Presiding Member may consider:

3.4.1 the reason for the delay;

3.4.2 the length of the delay;

3.4.3 whether any rights or interests of other parties would be affected by allowing the review to be commenced out of time;

3.4.4 the interests of justice;

3.4.5 whether the applicant has, or is within time to, appeal the Prescribed Matter to the ERD Court, and

3.4.6 any other matters the Presiding Member considers relevant.

3.5 An application for review should, upon receipt by the CAP, be notified to the Assessment Manager within five (5) business days.

## 4. Materials for review hearing

4.1 Within the time prescribed in Clause 4.2, the Assessment Manager shall collate for the Panel:

4.1.1 all materials which were before the Assessment Manager (or delegate) at the time of the decision on the Prescribed Matter, including but not limited to:

4.1.1.1 application documents, reports, submissions, plans, specifications or other documents submitted by the applicant;

4.1.1.2 internal and/or external referral responses, and

4.1.1.3 any report from Council staff or an external planning consultant written for the Assessment Manager;

4.1.2 any assessment checklist used by the Assessment Manager or delegate when making the decision on the Prescribed Matter;

4.1.3 a report prepared by the Assessment Manager (or delegate) setting out the details of the relevant development application; the Prescribed Matter; and the reasons for the Assessment Manager (or delegate's) decision on the Prescribed Matter; and

4.1.4 any further information requested by the Presiding Member or CAP.

4.2 The CAP will not consider any additional information that was not before the Assessment Manager at the time of the decision on the Prescribed Matter.

4.3 After the completion of the requirements in Clause 4.1, the Assessment Manager should assign the review application to the next available Panel meeting.

4.4 The documents identified in Clause 4.1 will be included as Attachments to the agenda item.

4.5 The Assessment Manager should advise the applicant in writing of the time and date of the Panel meeting at which the review application will be heard not less than five (5) business days before the meeting.

**5. Review hearing**

5.1 On review, the CAP will consider the Prescribed Matter afresh.

5.2 The CAP will not receive submissions or hear addresses from any party.

5.3 The Assessment Manager should be present at the CAP meeting to respond to any questions or requests for clarification from the CAP.

5.4 The Presiding Member will invite all CAP Members to speak on any matter relevant to the review and ask questions of the applicant and/or Assessment Manager.

5.5 During the review hearing the Panel may ask questions of staff and the applicant in public, however the Panel's deliberation and final determination will be conducted in private, with the applicant and public gallery excluded.

5.6 The CAP may resolve to defer its decision if it considers it requires additional information from the applicant or the Assessment Manager (including legal or other professional advice), to make its decision.

5.7 The deferral will be to the next ordinary meeting of the CAP, or such longer period of time as is determined by the CAP and/or the Presiding Member in consultation with the Assessment Manager to enable the information sought to be obtained and considered.

5.8 Where an Assessment Manager is to provide further information to the CAP pursuant to Clause 5.6, a copy of the information must also be provided to the applicant not less than five (5) business days before the meeting at which it will be considered by the Panel.

**6. Outcome on review hearing**

6.1 The CAP may, on a review:

6.1.1 affirm the Assessment Manager's decision on the Prescribed Matter;

6.1.2 vary the Assessment Manager's decision on the Prescribed Matter; or

6.1.3 set aside the Assessment Manager's decision on the Prescribed Matter and substitute its own decision.

6.2 An applicant should be advised in writing of the CAP's decision by the Assessment Manager (or delegate) within two (2) business days of the Panel's decision.

## 7. Draft resolutions

The draft resolutions below are intended to provide guidance to the CAP as to how it might word resolutions to give effect to the decisions it makes on review. CAP may adopt this wording, or amend it as appropriate.

7.1 Resolution to affirm a decision of the Assessment Manager:

*The Council Assessment Panel resolves to affirm the decision of the Assessment Manager [insert description of decision, for example:]*

- *that the application is not seriously at variance with the Planning and Design Code (disregarding minor variations) and that planning consent be granted to DA No [insert] for [insert nature of development] subject to the [insert number] of conditions imposed by the Assessment Manager*
- *that DA No [insert] is classified as code assessed (performance assessed) development*
- *that the application is not seriously at variance with the Planning and Design Code (disregarding minor variations), but that DA No. [insert] does not warrant planning consent for the following reasons:*

7.2 Resolution to vary a decision of the Assessment Manager:

*The Council Assessment Panel resolves to vary the decision of the Assessment Manager in relation to DA No [insert] by deleting condition [insert number] of planning consent and replacing it with the following condition:*

*[insert varied condition]*

7.3 Resolution to set aside a decision of the Assessment Manager:

*The Council Assessment Panel resolves to set aside the decision of the Assessment Manager to [insert description of decision being reversed, for example, refuse planning consent to DA No [insert]] and substitute the following decision:*

- *DA No [insert] is not seriously at variance with the Planning and Design Code (disregarding minor variations) and that planning consent is granted to the application subject to the following conditions:*

7.4 Resolution to defer review hearing:

*The Council Assessment Panel resolves to defer its decision in relation to its review of the decision of the Assessment Manager to [insert description of the decision] in relation to DA No [insert] until:*

- *the next ordinary meeting of the Panel;*
- *the next ordinary meeting of the Panel after [insert additional information which has been requested by the Panel] is provided*
- *until the next ordinary meeting of the Panel after [insert date (i.e. giving an applicant 2 months to provide information)] (etc).*

**REVIEW PROCESS**

The Council Assessment Panel will review this Policy within two (2) years of the adoption date of the Policy.

**INFORMATION**

The contact officer for further information at the City of Norwood Payneham & St Peters is the Council's General Manager, Urban Planning & Environment, telephone 8366 4501.

**ADOPTION OF THE POLICY**

This Policy was adopted by the Council Assessment Panel on 10 February 2021.

**TO BE REVIEWED**

This Policy will be reviewed in February 2023.

# APPLICATION TO ASSESSMENT PANEL[1]

## Decision Review Request

Prescribed form pursuant to section 203(1) for review of a decision of an Assessment Manager under section 202(1)(b)(i)A) of the *Planning, Development and Infrastructure Act 2016* (Act)

| | |
|---|---|
| **Applicant details:** | Name: Ditara Pty Ltd<br>Phone: 0407019748<br>Email: phil@phillipbrunning.com<br>Postal address: [redacted] |
| **Development Application Number:** | 23010962 |
| **Subject Land:** | 1 Kensington Road, Norwood SA 5067<br><br>Allotment 3 in Filed Plan 40070 Certificate of Title Volume 6115 Folio 494<br>Allotment 3 in Filed Plan 40070 Certificate of Title Volume 6115 Folio 495<br>Allotment 100 in Deposited Plan 60431 Certificate of Title Volume 5885 Folio 186 |
| **Date of decision of the Assessment Manager:** | 18 May 2023 |
| **Decision (prescribed matter[2]) for review by Assessment Panel:** | The decision of the Assessment Manager to refuse Planning Consent |
| **Reason for review:** | The Assessment Manager was wrong to conclude that the removal of the tree is not justified having regard to PO 1.3 as it presents an unacceptable risk to public and private safety due to limb drop. Furthermore, all reasonable remedial treatments and measures, including pruning, have now been shown to be ineffective. See attached letter from Hilditch Lawyers dated 8 June 2023. |
| **Do you wish to be heard by the Assessment Panel?** | ☒ Yes<br>☐ No |
| **Date:** | 9 June 2023 |
| **Signature:** | ☒ *If being lodged electronically please tick to indicate agreement to this declaration.* |

[1] This application must be made through the relevant facility on the SA planning portal. To the extent that the SA planning portal does not have the necessary facilities to lodge this form, the application may be lodged—
(i) by email, using the main email address of the relevant assessment panel; or
(ii) by delivering the application to the principal office or address of the relevant assessment panel.

[2] **Prescribed matter**, in relation to an application for a development authorisation, means—
(a) any assessment, request, decision, direction or act of the Assessment Manager under the Act that is relevant to any aspect of the determination of the application; or
(b) a decision to refuse to grant the authorisation; or
(c) the imposition of conditions in relation to the authorisation; or
(d) subject to any exclusion prescribed by the regulations, any other assessment, request, decision, direction or act of the assessment manager under the Act in relation to the authorisation.

This form constitutes the form of an application to an assessment panel under section 202(1)(b)(i)(A) of the *Planning, Development and Infrastructure Act 2016*, determined by the Minister for Planning and Local Government, pursuant to regulation 116 of the Planning, Development and Infrastructure (General) Regulations 2017. Last amended: 31 July 2020

Government of South Australia
Attorney-General's Department

HILDITCH LAWYERS
Level 1, 24 Grote Street
Adelaide SA 5000
GPO Box 11010
Adelaide SA 5001
www.hilditchlawyers.com
Tel 08 7325 5900
Fax 08 8231 8323
lawyers@hilditchlawyers.com

8 June 2023

**The Council Assessment Panel**
**City of Norwood, Payneham & St Peters**
175 The Parade
Norwood SA 5067

Dear Presiding Member

**DA 23010962 – Ditara Pty Ltd (Removal of a significant River Red Gum tree) – Application to Assessment Panel**

I confirm I act for Ditara Pty Ltd which is the applicant in relation to Development Application Number 23010962 ("the Second DA").

**The Review Process**

This letter is provided in direct response to the **"Application to Assessment Panel"** Form which has been prescribed pursuant to section 203(1) of the PDI Act, 2016 and Regulation 116(1) of the PDI Regulations, 2017 ("the Form"). The Form has been determined by the Minister and published on the SA Planning Portal pursuant to these provisions.

To the extent that any inconsistency may arise between the Form (and the information and responses that it requires) and any relevant Council Policy, the legislation (and the Form determined pursuant to that legislation by the Minister) must prevail. My client must of course respond to all parts of the Form to ensure that a valid and proper application is made.

In this regard, I note the Form, as determined by the Minister and published on the Portal, requires the Applicant (Ditara Pty Ltd) to identify the "Reason for Review". When doing so, the Applicant must *"Briefly state the facts, circumstances and other relevant matters upon which this application is based. Attach additional pages as necessary*".

The Form determined by the Minister also directly asks the following question *"Do you wish to be heard by the Assessment Panel?"* The answer to that question is "Yes" and the opportunity must be afforded irrespective of any Council policy to the contrary should the CAP hold a hearing. I note that

Regulation 116 of the PDI Regulations, 2017 has been amended to clearly identify and entrench these fundamental rights and provides as follows:

***"116—Rights of review and appeal***

*(1) For the purposes of section 203(1) of the Act, an application under section 202(1)(b)(i)(A) must be made in a form determined by the Minister and published on the SA planning portal.*

*(2) An applicant to an assessment panel for a review of a prescribed matter must be given an opportunity to provide the assessment panel with the applicant's submissions in relation to the review (and, if the assessment panel determines to hold a hearing, must be given written notice of the date of the hearing and an opportunity to appear and make submissions at the hearing in person)." (my underlining)*

I would respectfully suggest that this has always been the position at law, having regard to the content of the Form and the responses that it requires, in any event. The position is now clarified in Regulation 116.

**Reason for Review:**

This letter comprises a direct response to that part of the Form which requires the Applicant to identify the "Reason for Review" and it should be put before the Council Assessment Panel members as it is an integral part of the required response.

I am instructed that the facts, circumstances and other relevant matters upon which the Application to the Council Assessment Panel for Review under section 203 of the PDI Act, 2016 is based are as follows:

1. Ditara Pty Ltd is the owner of the Britannia Hotel.

2. The canopy of the subject River Red Gum ("the Tree") which is the subject of the Second DA extends over a portion of the car park of the Britannia Hotel (as well as over part of the adjoining office car park and a portion of a public laneway providing access to both).

3. The western canopy of the tree extends over 8 hotel car parking spaces and part of a dual aisle which provides vehicular access through the car park and to a drive through bottle shop. Pedestrians of course filter through the car parks and aisle beneath the canopy.

4. On Melbourne Cup Day in 2021 a large limb fell from the Tree and caused significant damage to 4 cars in the Hotel car park.

5. Dr Dean Nicolle, a highly qualified and experienced arborist, was requested by my client to assess the situation. Dr Nicolle recommended whole tree removal after concluding that all reasonable remedial treatments and measures would not be effective. Dr Nicolle has rejected pruning as a solution for the reasons outlined in his reports and sworn evidence. In short, Dr Nicolle's opinion has been that the only pruning

option is to lop the tree which will result in a loss of amenity and subsequent epicormic regrowth and the additional risk of weak branch attachment points. A development application for whole tree removal was lodged as a result by my client but consent was refused.

6. My client appealed against the decision to refuse consent to remove the Tree to the ERD Court. The ERD Court conducted a formal hearing. It inspected the site and locality and heard expert evidence and submissions from the parties. The matter has already consumed significant resources for all parties.

7. The ERD Court delivered judgement on 21 December 2022 ([2022] SAERDC 19) and made the following findings:

*"56 We find:*

- *the tree is a significant tree that warrants protection as that it makes an important contribution to the character and amenity of the local area and forms a notable visual element to the landscape of the local area;*
- *the tree poses an unacceptable risk to public and private safety due to limb drop;*
- *pruning is a reasonable remedial treatment, and the appellant has not demonstrated that would be ineffective; and*
- *the tree does not warrant removal in the first instance."*

8. In making its findings, the Court preferred the approach of the Council's arborist, Mr Selway, regarding the option of pruning. Mr Selway maintained that no pruning was immediately required because the tree was a low risk in his opinion. However he prepared a pruning plan which he considered would meet relevant standards, retain overall height and canopy form and manage risk. Dr Nicolle did not agree that the pruning plan would manage risk to an acceptable level.

9. A major branch of approximately 300mm in diameter then fell from the tree on the night of 27 January 2023, not long after the Court delivered its judgement.

10. The Tree was pruned in accordance with Mr Selway's pruning plan under Mr Selway's supervision using one of Council's contractors on 2 February 2023.

11. Then, on 18 February 2023 (only a couple of weeks after it was pruned under Mr Selway's supervision), yet another branch, this time with a diameter of 90 mm, fell from the tree. This branch landed in a car space just seconds after a person drove their car out of this space. Mr Selway obviously had not identified this as a branch which required pruning/removal.

12. These events are documented, including in photographs, in the report of Dr Nicolle which accompanied the DA. CCTV footage has been provided to the Council, including footage of the incident which occurred on 18 February 2023 (and should be reviewed by the CAP members). CCTV footage of the Melbourne Cup Day incident was played to the ERD Court during its hearing.

13. The applicant seeks a review of the Assessment Manager's decision of 18 May 2022 in light of the above facts.

14. The fact is that the ERD Court has already found that this tree poses an unacceptable risk to public and private safety due to limb drop. However, when it delivered judgement on 21 December 2022, it was not at that point satisfied that pruning had been demonstrated to be ineffective following the evidence given by Mr Selway. The Applicant submits that pruning has now been demonstrated to be ineffective.

15. Not long after the delivery of judgment another very large branch fell in the Hotel carpark notwithstanding Mr Selway's evidence in the hearing that no pruning was immediately required because the Tree was low risk. Dr Nicolle's concerns were realised.

16. Then, even after the tree was pruned under Mr Selway's supervision, another worrying incident occurred only within weeks on 18 February 2023 as detailed above.

17. As a result, my client has lodged the second DA for whole tree removal. It is again supported by Dr Nicolle who sees no other realistic option.

18. Having regard to the Decision Notification Form dated 22 May 2023, the Assessment Manager has concluded that "The removal of the tree is not justified by any of the criteria in Performance Outcome 1.3 of the Regulated and Significant Tree Overlay." The facts simply do not support this conclusion at all. Pruning has been demonstrated to be ineffective.

19. The replacement planting plan prepared by Oxigen, which accompanies the second DA, presents a preferable and more sensible solution for the site. The Applicant is prepared to proceed in accordance with the replacement planting plan should consent for whole tree removal be granted. The condition could read as follows:

    *"The Applicant shall plant trees and plants and install irrigation in accordance with the plan prepared by Oxigen dated 19.07.22 and marked "Revision A" in the next planting season following the removal of the tree and thereafter shall maintain the new trees and plants and replace any diseased or dying plants, all to the reasonable satisfaction of the Council".*

In all the circumstances the Applicant requests the Council Assessment Panel to exercise its power under section 203(4)(c) of the PDI Act to set aside the decision of the Assessment Manager to refuse consent and to substitute its own decision granting consent to the application for whole tree removal.

I confirm the Applicant requests that Mr Hayes KC be given the opportunity to appear on its behalf before the Council Assessment Panel to speak to this application and answer any questions the Panel members might have.

I would be grateful if you would please advise of the date and time of the meeting at which this Review application will be considered.

Yours Faithfully,

James Hilditch

james@hilditchlawyers.com

Our Ref: JRH:000803
Your Ref:

# DECISION NOTIFICATION FORM

*Section 126(1) of the Planning, Development and Infrastructure Act 2016*

**TO THE APPLICANT(S):**

| |
|---|
| Name: Ditara Pty Ltd |
| Postal address: 26 WAKEHAM STREET ADELAIDE SA 5000 |
| Email: phil@phillipbrunning.com |

**IN REGARD TO:**

| | |
|---|---|
| Development application no.: 23010962 | Lodged on: 21 Apr 2023 |
| Nature of proposed development: Removal of a significant River Red Gum tree | |

**LOCATION OF PROPOSED DEVELOPMENT:**

| | | |
|---|---|---|
| **Location reference:** 1 KENSINGTON RD NORWOOD SA 5067 | | |
| **Title ref.:** CT 6115/494 | **Plan Parcel:** F40070 AL3 | **Council:** THE CITY OF NORWOOD PAYNEHAM AND ST PETERS |

| | | |
|---|---|---|
| **Location reference:** 1 KENSINGTON RD NORWOOD SA 5067 | | |
| **Title ref.:** CT 6115/495 | **Plan Parcel:** F40070 AL3 | **Council:** THE CITY OF NORWOOD PAYNEHAM AND ST PETERS |

| | | |
|---|---|---|
| **Location reference:** 37-39 CLARKE ST NORWOOD SA 5067 | | |
| **Title ref.:** CT 5885/186 | **Plan Parcel:** D60431 AL100 | **Council:** THE CITY OF NORWOOD PAYNEHAM AND ST PETERS |

**DECISION:**

| **Decision type** | **Decision** (granted/refused) | **Decision date** | **No. of conditions** | **No. of reserved matters** | **Entity responsible for decision** (relevant authority) |
|---|---|---|---|---|---|
| Planning Consent | Refused | 18 May 2023 | | | Assessment Manager at City of Norwood, Payneham and St. Peters |
| Development Approval - Planning Consent | | | | | City of Norwood, Payneham and St. Peters |

| |
|---|
| **FROM THE RELEVANT AUTHORITY:** Assessment Manager - Section 96 - Performance Assessed at City of Norwood, Payneham and St. Peters |
| Date: 22 May 2023 |

## REFUSAL REASONS

### Planning Consent

Consent is refused as the proposed development is not considered to accord sufficiently with the provisions of the Planning & Design Code for the following reasons:

1. The tree displays attributes worthy of its retention in accordance with Performance Outcome 1.2 of the Regulated and Significant Tree Overlay;
2. The removal of the tree is not justified by any of the criteria in Performance Outcome 1.3 of the Regulated and Significant Tree Overlay.

## ADVISORY NOTES

### Planning Consent

Advisory Note 1

Appeal Rights - General rights of review and appeal exist in relation to any assessment, request, direction or act of a relevant authority in relation to the determination of this application, including conditions.

Advisory Note 2

Ongoing scheduled assessments of tree health and integrity are recommended to be completed at intervals of 3 years, with the next assessment recommended to be conducted during the latter part of 2025 to early 2026. Where changes in tree health or its environment are noted, earlier assessment is advisable.

## CONTACT DETAILS OF CONSENT AUTHORITIES

| | |
|---|---|
| Name: City of Norwood, Payneham and St. Peters | Type of consent: Planning |
| Telephone: 0883664530 | Email: developmentassessment@npsp.sa.gov.au |
| Postal address: PO Box 204, Kent Town SA 5071 | |

**ASSESSMENT REPORT**

| | |
|---|---|
| **DEVELOPMENT NO.:** | 23010962 |
| **APPLICANT:** | Ditara Pty Ltd |
| **NATURE OF DEVELOPMENT:** | Removal of a significant River Red Gum tree |
| **ZONING INFORMATION:** | **Zones:**<br>• Suburban Business<br>• Suburban Business<br>**Overlays:**<br>• Prescribed Wells Area<br>• Regulated and Significant Tree<br>• Traffic Generating Development<br>• Airport Building Heights (Regulated)<br>• Future Road Widening<br>• Hazards (Flooding - General)<br>• Major Urban Transport Routes<br>• Prescribed Wells Area<br>• Regulated and Significant Tree<br>• State Heritage Place<br>• Traffic Generating Development<br>• Airport Building Heights (Regulated)<br>• Heritage Adjacency<br>• Hazards (Flooding - General)<br>**Technical Numeric Variations (TNVs):**<br>• Maximum Building Height (Levels) (Maximum building height is 2 levels)<br>• Maximum Building Height (Levels) (Maximum building height is 3 levels) |
| **LODGEMENT DATE:** | 21 Apr 2023 |
| **RELEVANT AUTHORITY:** | Assessment panel/Assessment manager at City of Norwood, Payneham and St. Peters |
| **PLANNING & DESIGN CODE VERSION:** | 21 Apr 2023 |

## DETAILED DESCRIPTION OF PROPOSAL:

Removal of a significant river red gum tree

## LOCATION OF DEVELOPMENT:

**Location reference:** 1 KENSINGTON RD NORWOOD SA 5067

| | | |
|---|---|---|
| **Title ref.:** CT 6115/494 | **Plan Parcel:** F40070 AL3 | **Council:** THE CITY OF NORWOOD PAYNEHAM AND ST PETERS |

**Location reference:** 1 KENSINGTON RD NORWOOD SA 5067

| | | |
|---|---|---|
| **Title ref.:** CT 6115/495 | **Plan Parcel:** F40070 AL3 | **Council:** THE CITY OF NORWOOD PAYNEHAM AND ST PETERS |

**Location reference:** 37-39 CLARKE ST NORWOOD SA 5067

| | | |
|---|---|---|
| **Title ref.:** CT 5885/186 | **Plan Parcel:** D60431 AL100 | **Council:** THE CITY OF NORWOOD PAYNEHAM AND ST PETERS |

## CONSENT TYPE REQUIRED:

Planning Consent

## CATEGORY OF DEVELOPMENT:

- **PER ELEMENT:**
  Tree-damaging activity: Code Assessed - Performance Assessed
- **OVERALL APPLICATION CATEGORY:**
  Code Assessed - Performance Assessed
- **REASON**
  P&D Code

## PUBLIC NOTIFICATION

No

- **REASON**
  N/A

## AGENCY REFERRALS

## INTERNAL REFERRALS

- Matthew Cole

**PLANNING & DESIGN CODE POLICIES**

The complete list of relevant policies is contained in the snapshot in the DAP. The most relevant policies to this assessment are:

*Regulated and Significant Tree Overlay POs 1.2 and 1.3*

## PLANNING ASSESSMENT *with reference to P&D Code policies where appropriate*

This tree has a long history of applications for its removal. More recently, Council refused an application in 2021, which the applicant then appealed to the ERD Court. The Court upheld the decision of the Council in that instance, finding that the tree represented a moderate risk to private and/or public safety, but that the appellant had failed to demonstrate that all reasonable remedial treatments and measures would be ineffective. Specifically, they failed to demonstrate that pruning of the tree would be ineffective in mitigating the risk of limb drop or the like.

This application has now been lodged on the back of a 300m-diameter branch failure on 27 January 2023 and a 90mm-diameter branch failure on 18 February 2023. It is worth noting that pruning was undertaken on 2 February 2023 in accordance with a pruning plan devised by the Council's arborist as part of the Court proceedings. The applicant in this instance is therefore alleging that the pruning was ineffective, hence the latest 90mm-diamater branch drop.

I believe I am not mistaken in saying it is undisputed between parties that the tree meets the criteria for retention in PO 1.2 – it makes an important contribution to the character and amenity of the local area; it represents an important habitat for native fauna; is important to the maintenance of biodiversity in the local environment; and forms a notable visual element to the landscape of the local area.

Accordingly, this assessment turns to whether or not the latest limb drop constitutes an event worthy of condemning the tree to removal. In other words, does the tree now present an unacceptable risk and have all reasonable remedial treatments and measures been determined to be ineffective per PO 1.3(b) of the RST Overlay?

In this regard, the applicant has supplemented their application with a report by Dr Nicolle. Council has engaged its own City Arborist and the services of Shane Selway of Adelaide Arb to undertake their own inspection of the tree and provide a report of their findings. Each arborist's findings in respect of PO 1.3 are outlined in the table below.

| Policy | Dr Nicolle's view | Shane Selway's view | City Arborist's view |
|---|---|---|---|
| **(a) tree-damaging activity is only undertaken to:** | | | |

| | | | | |
|---|---|---|---|---|
| | ***(i) remove a diseased tree where its life expectancy is short*** | The tree is diseased by borer activity.<br><br>The tree has exceeded its useful life expectancy due to an unacceptable and unmanageable risk | The tree is not diseased and has a useful life expectancy of 10-20 years<br><br>Observed borer activity in the primary and secondary structure.<br><br>Noted that the hollows created by the borers were not large enough, relative to the diameter of the branch, to be considered a structural concern for the tree (pp 19-20). | Did not comment on this aspect |
| | ***(ii) mitigate an unacceptable risk to public or private safety due to limb drop or the like*** | The tree *does* represent a moderate and marginally unacceptable, and increasing, risk to safety. This arises from the continuously increasing likelihood of branch failure events associated with over-extended and end-weighted branches, as well as structural defects within the tree. | The tree *does not* represent an unacceptable risk.<br><br>Instead, Shane's assessment using the VALID tree risk-benefit system indicates an acceptable risk rating. | The tree *does not* present an unacceptable risk. |
| | ***(iii) rectify or prevent extensive damage to a building of value as comprising any of the following:***<br><br>***A. a Local Heritage Place***<br><br>***B. a State Heritage Place***<br><br>***C. a substantial building of value*** | N/A<br><br>Although Dr Nicolle did note the damage to the carpark but did not consider this as justification alone for removal of the tree | N/A | Did not comment on this aspect. |
| | ***(iv) reduce an unacceptable hazard associated with a tree within 20m of an existing residential, tourist accommodation or other habitable building from bushfire*** | N/A | N/A | N/A |
| | ***(v) treat disease or otherwise in the general interests of the health of the tree*** | N/A | N/A | N/A |
| | ***(vi) maintain the aesthetic appearance and structural integrity of the tree*** | N/A | N/A | N/A |

| | | | |
|---|---|---|---|
| **In relation to a significant tree, tree-damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective.** | *It is worth prefacing this part by stating that it was agreed as part of the ERD Court appeal that the following remedial options would be ineffective and/or unreasonable: an exclusion zone around the tree; an under-canopy structure; and branch cabling. Nobody's position in this respect has changed since.*<br><br>*Accordingly, the only remedial measure to be considered is pruning of the tree.* | | |
| | The pruning that took place on 2 February 2023 has not significantly reduced the likelihood of branch failure to the extent that would alter Dr Nicolle's risk rating of 'moderate and marginally unacceptable'.<br><br>Pruning is not a viable method to reduce and maintain the risk because of:<br>• Structurally defective branches within the canopy;<br>• Over-extended and end-weighted branches;<br>• Absence of internal pruning points to maintain a viable canopy; and<br>• The extent of pruning required to acceptably mitigate the risk would result in the tree no longer being worthy of retention per PO 1.2, and therefore justify its removal anyway. | The pruning that took place on 2 February 2023 *has been effective* in mitigating any risk to public or private safety.<br><br>The risk rating attributed to the tree remains as acceptable, and no further remedial work is required. | The pruning that has taken place will inevitably result in the tree taking some time to adjust to its altered form and therefore altered wind dynamics and loads. Is confident that, given time, the tree will make this adjustment and the recent small branch failure is not evidence alone that the pruning is ineffective and does not condemn the tree. |

Thus, we have differing opinions – one where Dr Nicolle condemns the tree with a 'moderate and marginally unacceptable, and increasing' risk to safety; and two where Shane and Council's Arborist do not consider the tree to present an unacceptable risk, with Shane suggesting the rating is 'acceptable'.

In their report, Shane Selway mentioned that the recent pruning that has taken place resulted in substantial crown form changes and therefore results in parts of the tree becoming subject to altered dynamic wind loading, to which the tree will take some time to adjust. This could explain the recent small branch drop, along with the windy weather experienced that day. (BOM data suggests that maximum gust speeds were recorded at 39km/h that day, at 13:23pm, from a WSW direction). In Shane and Council's Arborist's opinions, this recent failure does not alter the risk rating of the tree and does not condemn it for removal.

Following a conversation with Shane, I was also advised that he ran the VALID risk rating model 5 times, for 5 different scenarios, including manipulating the data input to increase the likelihood of limb drop, and in all 5 cases the risk rating provided was acceptable.

As a final point, I would also note that in the Judge Durrant's judgment on the recent ERD Court appeal, he stated that he found the risk rating to be 'at least moderate' in his discussion, before stating at the end summary that it was unacceptable. On the finding that the risk was at least moderate, PO 1.3(b) – i.e. remedial measures – would not be a consideration because the tree-damaging activity would not be warranted per PO 1.3(a) at all.

Considering all of the opinion/evidence before me, I am of the opinion that:

1. The tree is worthy of preservation in accordance with PO 1.2 of the RST Overlay;
2. The tree does not represent an unacceptable risk to public or private safety due to limb drop of the like; and
3. While PO 1.3(b) is technically not applicable because I don't consider a tree-damaging activity to be justified under PO 1.3(a), I am convinced that the recent pruning that has taken place is effective for mitigating any risk associated with the tree.

As such, the application should be refused.

## RECOMMENDATION

Refuse planning consent

Pursuant to Section 107(2)(c) of the Planning, Development and Infrastructure Act 2016, and having undertaken an assessment of the application against the Planning and Design Code, the application is NOT seriously at variance with the provisions of the Planning and Design Code.

REFUSAL REASONS

**Planning Consent**

Consent is refused as the proposed development is not considered to accord sufficiently with the provisions of the Planning & Design Code for the following reasons:

1. The tree displays attributes worthy of its retention in accordance with Performance Outcome 1.2 of the Regulated and Significant Tree Overlay;
2. The removal of the tree is not justified by any of the criteria in Performance Outcome 1.3 of the Regulated and Significant Tree Overlay.

CONDITIONS

**Planning Consent**

To be determined

ADVISORY NOTES

**Planning Consent**

Advisory Note 1

Appeal Rights - General rights of review and appeal exist in relation to any assessment, request, direction or act of a relevant authority in relation to the determination of this application, including conditions.

Advisory Note 2

Ongoing scheduled assessments of tree health and integrity are recommended to be completed at intervals of 3 years, with the next assessment recommended to be conducted during the latter part of 2025 to early 2026. Where changes in tree health or its environment are noted, earlier assessment is advisable.

## OFFICER MAKING RECOMMENDATION

**Name:** Kieran Fairbrother

**Title:** Senior Urban Planner

**Date:** 18 May 2023

## DECISION AUTHORITY

**Relevant Authority**: Assessment panel/Assessment manager at City of Norwood, Payneham and St. Peters

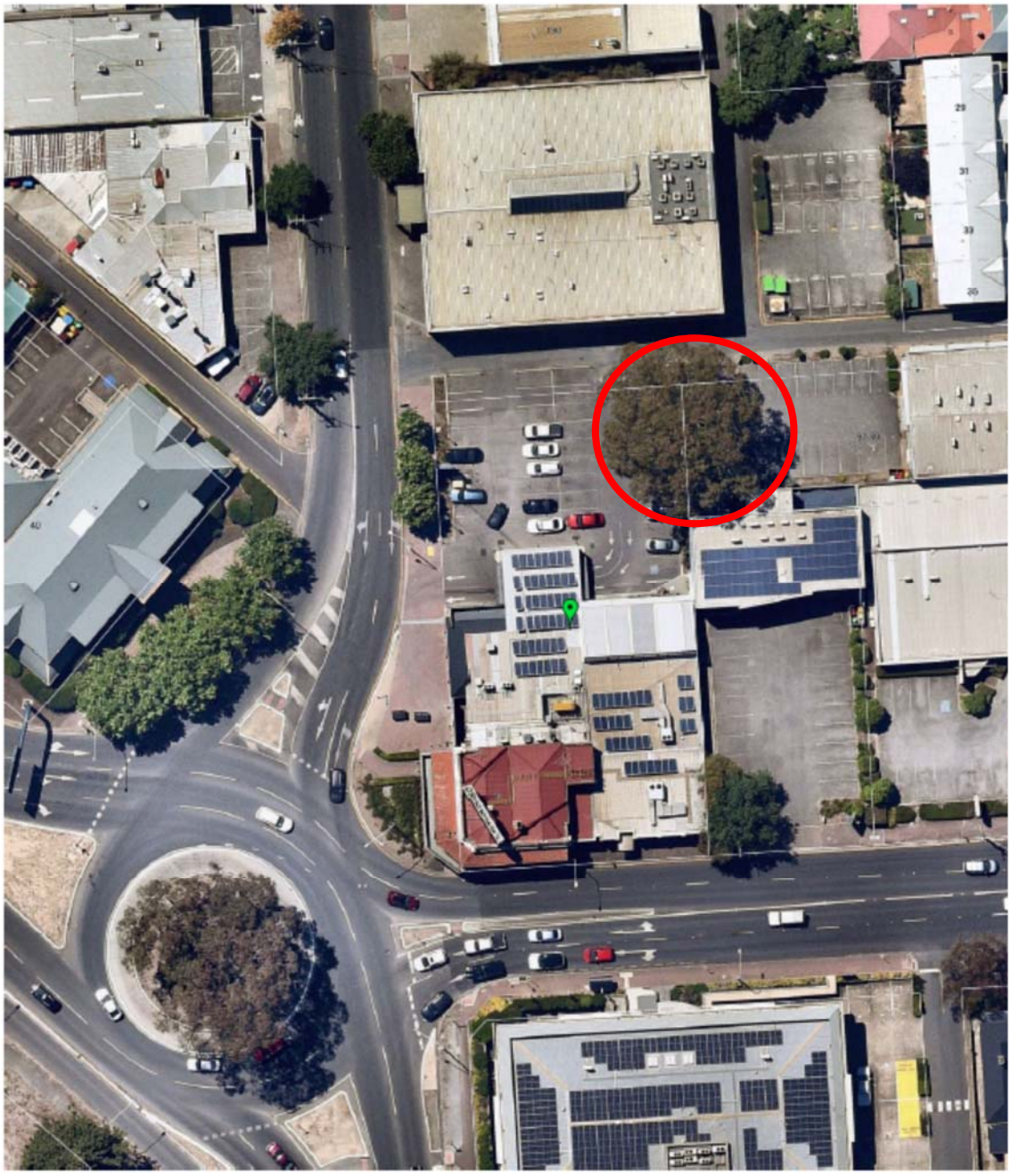
**Consent**: Planning Consent

**Date**: 18 May 2023

**Delegation Policy:** NPSP

**Delegate Name:** Kieran Fairbrother

**Delegate Title:** Senior Urban Planner



TREE TO BE REMOVED
1 Kensington Road & 39 Clarke Street, Norwood

Norwood 1616 003

17 April 2023

Town Planning
Development Advice
Strategic Management

Mr Geoff Parsons
Manager Development Assessment
City of Norwood Payneham & St Peters
Via the Plan SA Portal

Dear Geoff,

**Development Application – Ditara Pty Ltd – Removal of Significant Tree – Safety Considerations - Britannia Hotel, 1 Kensington Road, Norwood**

I confirm I am engaged by Ditara Pty Ltd.

I refer to the most recent, and second, Development Application lodged on behalf of Ditara Pty Ltd, the owner of the Britannia Hotel located at 1 Kensington Road, Norwood. This latest development application seeks planning consent to remove a large tree from the carpark associated with these licensed premises due to ongoing and unresolved safety considerations.

Generally speaking, the following has occurred in recent times:

1. The ERD Court handed down its judgement in relation to the previous DA for tree removal on 21 December 2022 (ERD-22-2).

2. A very large branch then broke away from the tree a bit over a month later on 27 January 2023.

3. The tree was pruned in accordance with Mr Selway's pruning plan and under Mr Selway's supervision on 2 February 2023.

4. A further incident occurred on 18 February 2023 when another branch fell and very nearly caused injury and damage.

5. Dr Nicolle has now undertaken a fresh assessment of the tree following the above and has prepared a report accordingly.

The most recent incident occurred on Saturday 18 February 2023, when a substantial branch dropped into the car park (photographs provided), narrowly missing a vehicle and its driver as shown I the CCTV footage that I will provide separately (only PDF documents may be uploaded onto the Plan SA Portal).

This is clearly an ongoing problem that continues to present an unacceptable risk to persons and property within this car parking area, notwithstanding the pruning that was undertaken by Council's usual contractor on 2 February 2023 under the supervision of, and in line with the pruning plan prepared by, Mr Shane Selway.

Phillip Brunning & Associates

ABN 40 118 903 021

26 Wakeham Street
Adelaide SA 5000
0407 019 748
phil@phillipbrunning.com

You will of course be aware that the Environment Resources and Development Court handed down its decision on 21 December 2022, dismissing an appeal by Ditara Pty Ltd against Council's decision to refuse to permit removal of this tree. I provide a copy of this judgment for ease of reference.

I draw your attention more specifically to the findings of the Court at page 11.

*56 We find:*

- *the tree is a significant tree that warrants protection as that it makes an important contribution to the character and amenity of the local area and forms a notable visual element to the landscape of the local area;*
- *the tree poses an unacceptable risk to public and private safety due to limb drop;*
- *pruning is a reasonable remedial treatment, and the appellant has not demonstrated that would be ineffective; and*
- *the tree does not warrant removal in the first instance.*

Acknowledging the contribution that this tree makes to the character and amenity of the local area, the Court nonetheless found that it poses an unacceptable risk to public and private safety due to limb drop.

The Court then found that pruning is a reasonable remedial treatment to reduce this risk, and that (at the time) the appellant (Ditara Pty Ltd) had not demonstrated that this would be ineffective. Soon after this decision of the Court, the tree was pruned in line with the recommendations of, and under the supervision of, Council's tree expert, Mr Selway.

There are three things to note about this unfolding situation:

1. It is my understanding and assessment that the large branch that broke away from the tree on 27 January 2023 was not identified by Mr Selway as a threat in his evidence in ERD-22-2 and he had not recommended its pruning or removal. This highlights the unpredictable and volatile nature of the problem.

2. The second serious incident on 18 February 2023 occurred after Mr Selway's recommended safety pruning had been undertaken under his supervision. Again, the pruning plan has already been shown be ineffective in addressing the risk.

3. Dr Nicolle has visited the site on 8 March 2023 and has undertaken a thorough reassessment of the tree following the completion of remedial pruning and the further incident on 18 February 2023.

I draw your attention to Dr Nicolle's Tree Report in relation to his inspection on 8 March 2023.

Dr Nicolle continues to express the view that the risk to safety represented by the tree cannot be effectively mitigated by pruning or other practicable means and that the pruning of the tree has not significantly reduced the likelihood of branch failure such that the tree represents an acceptable risk in its current situation.

Dr Nicole goes on to say that such branch failures are likely to be ongoing, regardless of the pruning of this tree and that the target area below (where limbs will drop) is only

of course likely to increase in size over time with ongoing growth of the tree. The current target area extends over 8 spaces on the site of the Hotel and 3 spaces on the site of the adjoining office building.

I note that the Court found that neither an exclusion zone nor an under-canopy structure to be reasonable treatments in this case, due to the impact on commercial land uses. I agree that the loss of 11 parking spaces in this locality which is characterised by low parking availability, would have a significant impact.

With reference to Performance Outcome 1.3 for the Regulated and Significant Tree Overlay within the Planning and Design Code, I am of the view that the removal of this tree is necessary to mitigate unacceptable risk to public and private safety due to limb drop and that remedial treatments (pruning) have been ineffective. Another obvious benefit from whole tree removal will be that the uneven, unusable and unsafe car spaces immediately adjoining the tree's trunk could be reinstated, repaired and made level which is a further relevant consideration.

Accordingly, I see no other option than for the planning authority to consent to the removal of this tree in light of the evolving and changing circumstances surrounding the subject tree.

Once again, the application is accompanied by a landscape plan prepared by Oxigen which would be implemented upon the removal of the tree and my client is prepared to agree to an appropriate condition of consent accordingly.

Yours faithfully

**PHILLIP BRUNNING & ASSOCIATES PTY LTD**

**PHILLIP BRUNNING** RPIA
Registered Planner
Accredited Professional – Planning Level 1, 2 & 3

**Calyptra Pty Ltd**
*trading as*
**Dean Nicolle**
OAM, BAppSc Natural Resource Management, BSc Botany (Hons), PhD

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Arboriculture - Botany - Ecology - Eucalypt Research

# Tree Report: Britannia Hotel, Norwood, SA

## Arboricultural assessment of a significant *Eucalyptus camaldulensis* (river red gum) tree

Arboricultural assessment and report requested by Phillip Brunning of *Phillip Brunning and Associates*, on the 28th of February 2023.

Arboricultural report prepared by Dean Nicolle following numerous site inspection and tree assessments since 2017, the latest on the 8th of March 2023.

**Report dated the 8th of March 2023.**

**CONTENTS**

## 1.0 BACKGROUND

I was initially engaged to inspect the tree and provide my preliminary opinion by Mr Phillip Brunning in 2017. At that time I recall forming the opinion that the tree's removal was not warranted. I only provided oral advice at that time. I was again requested by Mr Brunning to inspect the tree in November 2021, following a major branch failure incident. When inspecting the tree in November 2021, I noted that the canopy was larger and consisted of longer, more end-weighted, vigorous branches. In light of the major branch failure incident and other changes to the canopy size and structure, my opinion regarding tree retention on this occasion was quite different to in 2017.

I then assessed the tree on the 9th November 2022, with my findings and recommendations presented in a written report dated the 9th November 2022. I understand that there was then a development application to remove the tree, which was refused.

At the request of the client, I attended the subject site and reinspected the subject tree again on the 30th March 2022, the 26th April 2022, and the 8th June 2022, the last time (7th June 2022) to observe a climbing inspection of the tree undertaken by Shane Selway of *Adelaide Arb Consultants* on behalf of the City of Norwood Payneham and St Peters council.

As part of an appeal in response to the refused development application to remove the tree, I was requested to prepare an expert witness statement (statement dated the 19th August 2022), an addendum statement (statement dated the 8th September 2022) and a document of agreed facts regarding the expert statements of arborist Mr Selway and myself (document dated the 8th September 2022). I understand that the appeal of the refused development application was unsuccessful (dismissed) on the 21st December 2022.

I understand that the tree was pruned by the City of Norwood Payneham & St Peters' pruning contractor (*Urbans Arboriculture*) under the supervision of Mr Selway on the 2nd of February 2023. This pruning appears to have been undertaken in accordance with the 'Tree Pruning Plan' report of Mr Selway dated the 9th of September 2022.

Subsequent to the dismissed appeal of the refused development application to remove the tree on the 21st December 2022, there have been another two noteworthy branch failure events from the tree:

- A major branch approximately 300 mm in diameter that failed from the northern side of the tree on the night of the 27th January 2023 (prior to the pruning of the tree on the 2nd of February 2023); and
- A smaller branch approximately 90 mm in diameter that failed from the western side of the tree on the 18th February 2023 (after the pruning of the tree on the 2nd of February 2023).

In response to these two branch failure events and the ongoing risk to safety represented by the tree, I have been requested by the client to reassess the tree and compile a new tree assessment report. I understand that there will be another development application to remove the tree.

I have now visited the site to inspect and/or assess the tree on the following seven occasions:

- 16th June 2017
- 9th November 2021
- 30th March 2022
- 26th April 2022
- 8th June 2022
- 19th September 2022
- 8th March 2023

All my assessments of the tree were undertaken from ground level only, from within the allotments of the Britannia Hotel and from 37-39 Wadham Lane, as well as from nearby publicly-assessable areas.

This March 2023 report supersedes all other reports and statements that I have compiled for the subject tree. However, this report considers all my earlier assessments of the tree and includes some earlier data and photographs of the tree (as indicated) where necessary to illustrate my findings and recommendations. This report includes:

1. An assessment of the health, structure, and risk to safety represented by the tree; and
2. An assessment of the retention value of the tree; and
3. An assessment of the tree against the Desired Outcome and Performance Outcomes of the Regulated and Significant Tree Overlay of the *Planning & Design Code* adopted 30 March 2023.

It should be noted that my general findings and recommendations regarding the tree remain the same as that detailed in my earlier reports and statements regarding the tree.


*Figure 1. My photograph of the subject tree, looking approximately south-east from Wadham Lane on the 8th of March 2023, following the recent pruning of the tree (in February 2023) and the recent branch failure events from the tree (in January and February 2023). Note the large canopy of the tree overhanging a number of formal car parking spaces within the car park of the Britannia Hotel.*

*Figure 2. My photograph of the subject tree, looking approximately west from the carpark at 37-39 Wadham Lane on the 8th of March 2023, following the recent pruning of the tree (in February 2023) and the recent branch failure events from the tree (in January and February 2023). Note the large canopy of the tree overhanging a number of formal car parking spaces within the car park at 37-39 Wadham Lane.*

## 2.0 TREE ASSESSMENT

Location: On the common boundary of the Britannia Hotel allotment and the adjacent allotment of 37-39 Wadham Lane in Norwood, South Australia (Figures 1 and 2).

The centre of the tree at ground level (the origin point of the tree) is entirely within the allotment of the Britannia Hotel, with approximately 20% of the trunk now extending onto the adjacent allotment of 37-39 Wadham Lane.

The canopy of the tree currently overhangs approximately eight formal car parking spaces in the Britannia Hotel carpark (Figure 1) and three formal car parking spaces in the allotment of 37-39 Wadham Lane (Figure 1).

Species: *Eucalyptus camaldulensis* subsp. *camaldulensis* (river red gum).

Key references: Nicolle (2022). *Native Eucalypts of Victoria and Tasmania, South-eastern Australia.* Pp. 94–95.

Nicolle (2016). *Taller Eucalypts for Planting in Australia - Their Selection, Cultivation and Management.* Pp. 56–59.

Nicolle (2013). *Native Eucalypts of South Australia.* Pp. 44–45.

Legal status: A **significant** tree as defined by the *Planning, Development and Infrastructure Act 2016* and the *Planning, Development and Infrastructure (General) Regulations 2017*.

| | |
|---|---|
| - *Species*: | *Eucalyptus camaldulensis* |
| - *Trunk circ. at one metre*: | Approximately 3.70 metres |
| - *Distance to dwelling/pool*: | Not applicable for this species |
| - *Bushfire Risk*: | Excluded area |
| - *Living/dead status*: | Currently alive |
| - *Exemptions*: | No generic exemptions |

Current size: 24.5 metres tall (laser-measured 8/3/23). Average of 21.25 metres wide (canopy spread, laser-measured 8/3/23).

Trunk structure: Single trunk up to four metres above ground level, from where irregularly-spaced, small to heavy branches of moderate to long length begins.

Canopy structure: Rounded in shape, generally moderate in density, and generally evenly weighted on all sides.

Anticipated size: Not yet fully-grown under the existing environmental and site conditions and considering the species, age, health, and structure of the tree. Eventual size approximately 26 metres tall x 26 metres spread.

| | |
|---|---|
| Species origin: | Indigenous to the locality. |
| Tree origin: | Most likely self-seeded, but certainly of post-European settlement origin (i.e. semi-remnant). |
| Estimated age: | 25 – 50 years. |
| Biodiversity value: | Very high. A reproductively mature specimen of a locally indigenous species; some small faunal-habitable hollows are evident in the tree, suitable as nesting sites by small birds such as pardalotes (Figures 15, 18, 19 and 20). |
| Landscape value: | High. The tree is a locally large (but not yet fully-grown) specimen and is quite visible from both Fullarton Road and Wadham Lane (Figures 1 and 3). |
| *Actual* Life Expectancy[1]: | Another 30+ years. |
| *Useful* Life Expectancy[2]: | Exceeded, due to the unacceptable and unmanageable risk that the tree represents to safety and to property. |
| Health: | Above average[3]. |
| Vigour: | Moderate. |
| Borer activity: | Longhorn borer (*Phoracantha sp.*) activity is evident in the tree when viewed from ground level (note that I have not done a climbing inspection of the tree), which is typical of mature individuals of the species. However, the scar created by the structural failure of a major branch in 2021 reveals a number of large heartwood galleries and pupal chambers caused by a species of borer which has caused larger holes and galleries (Figure 6), and which has structurally weakened the wood. Similarly large entries to pupal cells and galleries are evident in at least four large branches (Figures 23 to 25 and 18 to 21), which have also been partly damaged by galahs/corellas/ cockatoos, presumably to access the insects for food. |
| Termite activity: | None visibly evident. |
| Fungal wood decay: | None visibly evident. |

[1] *The Actual Life Expectancy (ALE) of the tree is the amount of time that the tree is expected to be alive, regardless of the landscape value of the tree and its risk to safety and to property.*

[2] *The Useful Life Expectancy (ULE) of the tree is the amount of time that the tree is expected to be alive and fulfil its function in the locality by having some landscape value and representing an acceptable and manageable risk to safety and to property.*

[3] *The health of a tree can be unrelated to the structure and associated risks to safety represented by the tree. As such, a healthy tree can sometimes be structurally flawed and/or otherwise represent an unacceptable risk to safety (as is the case here) while a dead tree can sometimes be structurally sound and represent an acceptable risk to safety. In the case of mature* Eucalyptus camaldulensis *trees in the Adelaide region, it is often the healthiest and most vigorous trees that are the most prone to sudden limb failures, due to their rapid growth of end-weighted branches.*

General structure: Below average (due to the over-extended and end-weighted branches forming the canopy in conjunction with structural defects at various points in some branches) and deteriorating over time (due to the increasing length and end-weighting of branches forming the canopy).

Basal structure: Well buttressed, healthy and generally sound.
Trunk structure: Healthy and generally sound.
WTSF likelihood: The likelihood of Whole-of-Tree Structural Failure (i.e. the whole tree structurally failing at ground level or through the trunk, and falling over) is currently considered to be **extremely low**.

BF likelihood: Primary branch junctions in the tree appear to be healthy and generally well-structured. However, most branches are over-extended and end-weighted (Figures 1, 2, 8 and 10), and are becoming increasingly so over time (due to the tree's ongoing growth). At least four major branches also have visible structural defects caused by large borer galleries and associated bird damage (Figures 7 to 10 and 12 to 15). These factors significantly increase the *likelihood* of structural Branch Failure events, and especially of sudden limb failure events. Overall, the *likelihood* of Branch Failure in this individual is currently considered to be moderate[4] and increasing over time (as the branches become longer and more end-weighted with ongoing growth).

BF consequence: The *consequence* (impact potential) of any structural Branch Failure events from the tree is amplified by the use of almost the entire under-canopy area of the tree as uncovered commercial carparks.

Failure history: The tree has had an extensive history of recent branch failure events, most notably:

- A major branch (approximately 300 mm in diameter at its point of failure) that failed from a height of approximately six metres above ground level from the north-western canopy of the tree on the afternoon of the 2nd November 2021 (Figures 3 to 9). This failure event damaged three cars parked in the Britannia Hotel carpark (Figure 4). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event (Figure 6). The failed branch was likely over-extended and end-weighted (like most

[4] *Most trees have a low to very low (but never zero) likelihood of structural branch failure. A moderate likelihood of structural branch failure is therefore atypical and represents an elevated likelihood compared to that of most trees. Very rarely a tree will be assessed as having a high likelihood of structural branch failure, and this term is more usually used for specific branches within a tree that in the process of physically failing.*

branches forming the canopy of the tree) and the failure scar indicates large longhorn borer galleries in the heartwood (Figure 6) – both of these likely contributed to the failure of this branch.

- A major branch (approximately 300 mm in diameter at its point of failure) that failed from a height of approximately seven metres above ground level from the northern canopy of the tree at 12:43 am on the night of the 27th January 2023 (prior to the pruning of the tree on the 2nd of February 2023) when there we no vehicles in the car parking spaces beneath the tree (Figures 3, 7, 8 and 9). This branch failure occurred in a healthy branch, at an internodal point, and in calm conditions (as evidenced in video of the branch failure captured by CCTV footage at the site), and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree), which likely contributed to the failure of this branch.
- A minor branch (approximately 90 mm in diameter at its point of failure) that failed from a height of approximately ten metres above ground level from the western canopy of the tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023; Figures 10 to 13). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event (Figures 10 and 11). The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree, despite the recent pruning) which likely contributed to the failure of this branch.

Similar events involving major branch failures are certain to occur on an ongoing basis in the future, although it is difficult to determine the frequency, and impossible to determine the timeframe, of future major branch failures.

Risk to safety: Currently considered to be **moderate[5] (and in my opinion unacceptable), and increasing over time**.

The risk to safety is associated with both the increased likelihood branch failure events, and the increased consequence

[5] *The vast majority of trees have a low to very low (or rarely zero) risk to safety. A low to moderate risk to safety is uncommon, while a moderate risk to safety is much rarer and represents an elevated level compared to that of most trees. Relatively rarely a tree will be assessed as having a high risk to safety.*

of branch failure events, coupled with the under-canopy use of the site.

Tree-caused damage: There is up to 500 mm of vertical displacement of the bitumen-sealed surface of both the carpark at the Britannia Hotel carpark and the carpark in the allotment of 37-39 Wadham Lane (Figure 11), caused by an ongoing increase in the diameter of the roots of the tree. The concrete edge to the carpark at the Britannia Hotel has also been displaced by the tree.

Nuisances: The ongoing shedding of leaves, flowers, fruits, and bark from the tree may represent a manageable nuisance issue on adjacent paved surfaces.


*Figure 3. My photograph of the subject tree, looking south from Wadham Lane on the 8th of March 2023. The pruning scars of the stubs from the two largest structural failures in the tree are indicated. Note that the canopy of the tree overhanging numerous car parking spaces at the Britannia Hotel carpark and in the neighboring allotment of 37-39 Wadham Lane.*

*Figure 4. Photograph of the subject tree and the branch failure that occurred on the 2nd November 2021 (photo taken by others and provided to me by Phillip Brunning of* Phillip Brunning and Associates*), looking approximately east from the Britannia Hotel carpark. Three vehicles were damaged by this branch failure event, which occurred in non-extreme weather.*

*Figure 5. My photograph of the subject tree, looking approximately south from the Britannia Hotel carpark on the 9th of November 2021 (following a recent major branch failure). The superimposed yellow ring indicates the recent branch failure scar. This failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree) and the failure scar indicates large longhorn borer galleries in the heartwood – both of these likely contributed to the failure of this branch (also see Figure 6). This failure scar has now been pruned back more cleanly, presumably for aesthetic reasons (see Figure 7).*

*Figure 6. My photograph of the scar caused by the recent failure of a major branch from the tree, photographed on the 7th of June 2022. This failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree) and the failure scar indicates large longhorn borer galleries in the heartwood – both of these likely contributed to the failure of this branch. The superimposed yellow ring indicates the area where longhorn borers have created large heartwood galleries and pupal chambers. This failure scar has now been pruned back more cleanly, presumably for aesthetic reasons (see Figure 7).*


*Figure 7. My photograph of the subject tree, looking approximately south-east from the Britannia Hotel carpark on the 8th of March 2023. The pruning scars of the stubs from the two largest structural failures in the tree are indicated. Both of these failure scars have been pruned back more cleanly, presumably for aesthetic reasons.*


*Figure 8. Photograph of the subject tree and the branch failure that occurred on the 27th January 2023 (photo taken by others and provided to me by the client on the 27th January 2023), looking approximately east from the Britannia Hotel carpark. Also note the failure scar from the 2021 major branch failure.*


*Figure 9. Photograph of the subject tree and the branch failure that occurred on the 27th January 2023 (photo taken by others and provided to me by the client on the 27th January 2023), looking approximately east from the Britannia Hotel carpark. Also note the failure scar from the 2021 major branch failure.*

*Figure 10. My photograph of the butt end of a minor branch (approximately 90 mm in diameter at its point of failure; photo taken on the 8th of March 2023) that failed from a height of approximately ten metres above ground level from the western canopy of the subject tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree, despite the recent pruning) which likely contributed to the failure of this branch.*

*Figure 11. My close-up photograph of the butt end of a minor branch (approximately 90 mm in diameter at its point of failure; photo taken on the 8th of March 2023) that failed from a height of approximately ten metres above ground level from the western canopy of the subject tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event.*

*Figure 12. My photograph of the failure scar in the western canopy caused by the failure of a minor branch (approximately 90 mm in diameter at its point of failure; photo taken on the 8th of March 2023) that failed from a height of approximately ten metres above ground level from the western canopy of the subject tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023; also see Figure 13). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree, despite the recent pruning) which likely contributed to the failure of this branch.*

*Figure 13. My photograph of the western and central canopy of the tree; looking approximately north from the Britannia Hotel carpark on the 8th of March 2023. The superimposed yellow arrow indicates the position of the failure scar caused by the failure of a minor branch (approximately 90 mm in diameter at its point of failure) that failed from a height of approximately ten metres above ground level from the western canopy of the subject tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023; also see Figure 12). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site).*

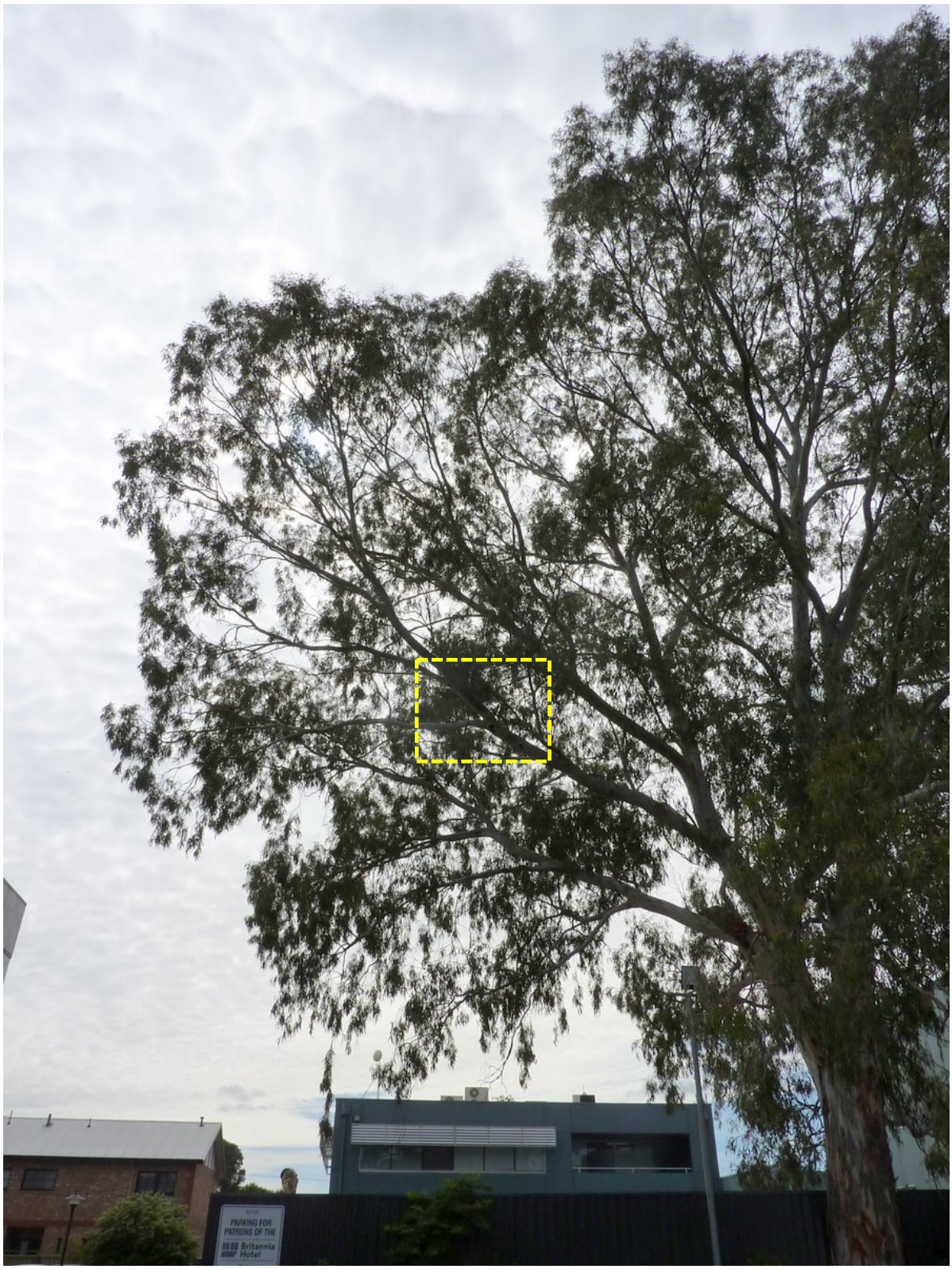



*Figure 14 My photograph of the subject tree, looking approximately east from the Britannia Hotel carpark on the 9th of November 2021. The superimposed yellow rectangle indicates the field of view in Figure 7, where a primary branch in the northern canopy of the tree is structurally defective. The removal of this branch would open the canopy to other potential branch failures (noting other similar branches would also require removal). Also note the increasingly over-extended structure of most branches forming the canopy of the tree.*

*Figure 15. My photograph of a primary branch in the <u>western</u> canopy of the tree (refer to Figure 10) on the 9th of November 2021, with the superimposed yellow arrow indicating an entry/exit hole to longhorn borer pupal cells or galleries and surrounding damage to cambium by galahs/corellas/ cockatoos (presumably to access the insects for food). This branch is also structurally defective at this point, but its removal would open the canopy to other potential branch failures (noting other similar branches would also require removal).*

*Figure 16. My photograph of the subject tree, looking approximately north from the Britannia Hotel carpark on the 9th of November 2021. The superimposed yellow rectangle indicates the field of view in Figure 9, where a primary branch in the northern canopy of the tree is structurally defective. The removal of this branch would open the canopy to other potential branch failures (noting other similar branches would also require removal). Also note the increasingly over-extended structure of most branches forming the canopy of the tree.*

*Figure 17. My photograph of the subject tree, looking approximately north-east from the Britannia Hotel carpark on the 8th of March 2023. There is up to 500 mm of vertical displacement of the bitumen-sealed surface of both the carpark at the Britannia Hotel carpark and the carpark in the allotment of 37-39 Wadham Lane, caused by an ongoing increase in the diameter of the roots of the tree. The concrete edge to the carpark at the Britannia Hotel has also been displaced by the tree.*

*Figure 18. My photograph of a primary branch in the <u>northern</u> canopy of the tree (refer to Figure 19) on the 7th of June 2022, with the superimposed yellow arrows indicating entry/exit holes to longhorn borer pupal cells or galleries and surrounding damage to cambium by galahs/corellas/ cockatoos (presumably to access the insects for food). This branch is structurally defective at these points, but its removal would open the canopy to other potential branch failures (noting other similar branches would also require removal).*

*Figure 19. My photograph of part of the canopy of subject tree on the 7th of June 2022, looking approximately south from Wadham Lane. The superimposed yellow rectangle indicates the field of view in Figure 18, where a primary branch in the southern canopy of the tree is structurally defective. The removal of this branch would open the canopy to other potential branch failures.*

*Figure 20. My photograph of a primary leader in the upper, central canopy of the tree (refer to Figure 21) on the 7th of June 2022, with the superimposed yellow arrow indicating an entry/exit hole to longhorn borer pupal cells or galleries and surrounding damage to cambium by galahs/corellas/ cockatoos (presumably to access the insects for food). This leader is structurally defective at this point, but its removal would significantly open the canopy to other potential branch failures (noting other similar branches would also require removal).*

*Figure 21. My photograph of the canopy of subject tree on the 7th of June 2022, looking approximately west from the carpark in the allotment of 37-39 Wadham Lane. The superimposed yellow rectangle indicates the field of view in Figure 20, where a primary leader is structurally defective. The removal of this leader would open the canopy to other potential branch failures.*

## 3.0 RETENTION VALUE

The retention value of the tree is based on the following data:

- Historical significance (*National Trust of South Australia*);
- Tree origin;
- Current health;
- Further Actual Life Expectancy (ALE);
- Biodiversity value;
- Landscape value;
- Tree structure;
- Risk to safety; and
- Damage and nuisances.

The tree has been scored for each of these nine characteristics (see Table 1). The sum of scores for the tree provides a total score: the higher the total score, the more valuable the tree (see Table 2). The total score for a tree can vary from -160 (lowest point value for all nine characteristics) to 140 points (highest point value for all nine characteristics).

**In this case, the tree has a score of 26 (see Table 1), and is therefore assessed to be of low value (see Table 2).**

***Table 1. Scoring for retention value.*** *The characteristics and character states used to score the tree to determine its retention value. The character states for the subject tree are highlighted green.*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Historical significance (*NTSA*[6])** | *National importance* **Score: 40** | *State importance* **Score: 30** | *Regional importance* **Score: 20** | *Local importance* **Score: 10** | *Not listed on NTSA* [4] **Score: 0** | | | |
| **Origin** | *Remnant* **Score: 20** | *Remnant/semi* **Score: 15** | *Semi-remnant* **Score: 10** | *Semi- / planted* **Score: 5** | *Planted* **Score: 0** | *Planted / weed* **Score: -5** | *Weed* **Score: -10** | |
| **Health** | *Excellent* **Score: 10** | *Above average* **Score: 8** | *Average* **Score: 5** | *Below average* **Score: 3** | *Poor* **Score: 0** | | *Very poor* **Score: -10** | *Dead* **Score: -20** |
| **Further ALE** | *30+ years* **Score: 10** | *20+ years* **Score: 8** | *10–20+ years* **Score: 5** | *10–20 years* **Score: 2** | *<10–20 years* **Score: 0** | *<5–10 years* **Score: -5** | *<5 years* **Score: -10** | *<2 years* **Score: -20** |
| **Biodiversity** | *Very high* **Score: 10** | *High* **Score: 8** | *Moderate* **Score: 5** | *Low* **Score: 2** | *Negligible* **Score: 0** | | *Invasive* **Score: -10** | |
| **Landscape** | *Very high* **Score: 10** | *High* **Score: 8** | *Mod to high* **Score: 5** | *Moderate* **Score: 3** | *Low to mod* **Score: 0** | | *Low* **Score: -10** | *Very low* **Score: -20** |
| **Structure** | *Excellent* **Score: 15** | | *Above average* **Score: 10** | | *Average* **Score: 5** | *Below average* **Score: -5** | *Poor* **Score: -10** | *Very poor* **Score: -20** |
| **Risk to safety** | *Very low* **Score: 15** | *Low* **Score: 10** | *Low to mod* **Score: 5** | *Moderate & stable* **Score: 0** | *Moderate, increasing* **Score: -10** | *Mod to high* **Score: -20** | *High* **Score: -30** | *Very high* **Score: -40** |
| **Damage & nuisances** | *None* **Score: 10** | | *No damage but some nuisances (eg leaf debris)* **Score: 5** | *No damage, but minor maintenance issues (eg lifted pavers)* **Score: 0** | *Damage to minor structures (eg paths/ driveways* **Score: -5** | *Damage to moderate structures (eg masonry walls* **Score: -10** | *Damage to substantial structures (eg dwellings)* **Score: -20** | |

[6] *National Trust of South Australia* register of significant trees.

***Table 2. Retention value categories.*** *The five retention value categories, for each category the score required, the general description, and the development constraints appropriate. The retention value category of the subject tree (assuming the tree is pruned as recommended; score of 26) is highlighted green.*

| Retention value | Score | General description | Development constraints |
|---|---|---|---|
| **Priority 1A** ***Very high value*** | >60 points | Remnant or semi-remnant trees in sound health, with a long further Useful Life Expectancy, of superior structure, and with a significant biodiversity value and landscape value | Trees of very highly value are relatively rare and should be retained by appropriate development design and construction. |
| **Priority 1** ***High value*** | 46 to 60 points | Trees in sound health and/or with a long further Useful Life Expectancy, of generally sound structure (or where defects can be practically mitigated or managed), and usually with a significant biodiversity value &/or landscape value | Trees of high value should be retained by appropriate development design and construction. |
| **Priority 2** ***Moderate value*** | 35 to 45 points | Trees in sound healthy and/or with an expected moderate to long further Useful Life Expectancy, of reasonable structure (or where defects can be mostly mitigated or managed), and of moderate to high biodiversity value &/or landscape value | Trees of moderate value should be retained whenever possible, by appropriate development design and construction. |
| **Priority 3** ***Low value*** | 20 to 34 points | Trees often of reduced health and/or having a short to moderate further Useful Life Expectancy, and/or may have some structural flaws, and are generally of lower biodiversity value &/or lower landscape value | Trees of low value should not constrain site development but may be retained if the proposed design and construction allows. |
| **Priority 4** ***No value*** | <20 points | Trees in poor health and/or having a short or exceeded Useful Life Expectancy, and/or have significant structural flaws that cannot be practically mitigated or managed, &/or are of no of little biodiversity value &/or landscape value | Trees of no value should not constrain site development and should be removed in the case of site development, even if they do not constrain the development. |

These retention value tables serve only as a summary of my professional judgement on the various criteria that I consider relevant to the question of whether the tree is worthy of retention. I use these retention value tables widely when assessing trees, regardless of whether the provisions of the Planning and Design Code Overlay are applicable or not.

Independently of assessing the retention value of the tree, I have also assessed the tree in the context of the following provisions of the Planning and Design Code Overlay. Some (but not all) of the criteria I have used to assess the retention value of the tree partly overlap with the criteria used to assess the provisions of the Planning and Design Code Overlay. My summary of findings and recommendations are the result of my assessment of the tree in the context of the identified Code provisions.

## 4.0 PLANNING AND DESIGN CODE
**adopted 30 March 2023**

**Regulated and Significant Tree Overlay – Assessment Provisions**

## 4.1 DESIRED OUTCOMES

***DO 1 Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss.***

The tree is significant as defined by the *Planning, Development and Infrastructure Act 2016* and the *Planning, Development and Infrastructure (General) Regulations 2017.*

The tree provides significant aesthetic and environmental benefits, as detailed in the Section 4.2 (*Performance Outcomes*) below.

## 4.2 PERFORMANCE OUTCOMES – Tree Retention and Health

***PO 1.2 Significant trees are retained where they:***

***(a) make an important visual contribution to the character or amenity of the local area***

I acknowledge that this matter may fall outside the area of my expertise. However, in my opinion the tree does make an important visual contribution to the character or amenity of the local area.

***(b) are indigenous to the local area and are listed under the* National Parks and Wildlife Act 1972 *as a rare or endangered native species***

The tree is of a species that is indigenous to the locality, but is not classified as rare or endangered under the *Act*.

***(c) represent an important habitat for native fauna***

The tree does represent an *important* habitat for native fauna. The tree is a large, reproductively mature specimen of a locally indigenous species. some small faunal-habitable hollows are evident in the tree, suitable as nesting sites by small birds such as pardalotes.

***(d) are part of a wildlife corridor of a remnant area of native vegetation***

The tree is not part of a wildlife corridor of remnant native vegetation.

***(e) are important to the maintenance of biodiversity in the local environment***

The tree is important to the maintenance of biodiversity in the local environment. The tree is a large, reproductively mature specimen of a locally indigenous species. some small faunal-habitable hollows are evident in the tree, suitable as nesting sites by small birds such as pardalotes.

***and / or***

***(f) form a notable visual element to the landscape of the local area.***

I acknowledge that this matter may fall outside the area of my expertise. However, in my opinion the tree does form a notable visual element to the landscape of the local area.

***PO 1.3 A tree damaging activity not in connection with other development satisfies (a) and (b):***

***(a) tree damaging activity is only undertaken to:***

***(i) remove a diseased tree where its life expectancy is short***

The tree is unusually diseased, in that the borers present (which in itself is typical of mature individuals of the species) have caused relatively large-diameter holes and galleries in the wood of a number of primary and secondary branches. The Useful Life Expectancy of the tree has been exceeded due to the unacceptable (and increasing) and unmanageable risk that the tree represents to safety and to property, associated with the branch structure of the tree.

***(ii) mitigate an unacceptable risk to public or private safety due to limb drop or the like***

The tree currently represents a moderate and marginally unacceptable, and increasing risk to safety.

The risk to safety is associated with both the increased (and continuously increasing) *likelihood* of branch failure events (associated with the over-extended and end-weighted branches forming the canopy in conjunction with structural defects at various points in some branches), and the increased (and continuously increasing) *consequence* of branch failure events (associated with the canopy size and height and the under-canopy use of the site).

***(iii) rectify or prevent extensive damage to a building of value as comprising any of the following:***

***A. a Local Heritage Place***
***B. a State Heritage Place***
***C. a substantial building of value***

The tree is not currently causing or threatening to cause extensive damage to a building of value of any of the above.

There is, however, damage to carpark surface and concrete edging both in the Britannia Hotel carpark and the carpark in the allotment of 37-39 Wadham Lane (Figure 11), where closest to the tree. This carpark damage alone would not justify the removal of the tree in my opinion.

***(iv) reduce an unacceptable hazard associated with a tree within 20 m of an existing residential, tourist accommodation or other habitable building from a bushfire***

The tree is not a bushfire hazard.

***(v) treat disease or otherwise in the general interests of the health of the tree***

Not applicable.

***and / or***

***(vi) maintain the aesthetic appearance and structural integrity of the tree***

Not applicable.

***(b) in relation to a significant tree, tree damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective.***

The significantly elevated and increasing risk to safety is associated with both the increased (and continuously increasing) *likelihood* of branch failure events (associated with the over-extended and end-weighted branches forming the canopy in conjunction with structural defects at various points in some branches), and the increased (and continuously increasing) *consequence* of branch failure events (associated with the canopy size and height and the under-canopy use of the site). The increasingly over-extended and end-weighted branches forming the canopy is associated with the rapid growth of the tree. Slower-growing specimens of the species typically have shorter, less end-weighted branches and have a much lower likelihood of branch failure and thus a lower associated risk to safety (regardless of the under-canopy use).

Risk mitigation techniques, including exclusion zones, under-canopy protective structures, pruning techniques, and branch cabling have been considered but are not considered to be viable solutions in this case, for the reasoning detailed below.

*Exclusion zones:*
The target area of the tree is approximately 14 metres radius from the centre of the tree (based on an average canopy spread of 11 radius and some lateral movement of falling limbs via wind-load). An exclusion zone would require this area (14 m radius = 616 $m^2$) to be significantly modified to be of low use (i.e. the removal of 8 x carparks at the Britannia Hotel and 3 x carparks at 37-39 Wadham Lane). This solution is unlikely to be viable considering the large target area and the existing site constraints.

*Under-canopy structures:*
Under-canopy protective structures would be required over the whole of the target area (14 m radius = 616 $m^2$) to significantly reduce the risk to safety associated with the tree. The canopy size of the tree (both height and spread) will continue to increase over time. Therefore the target area and the area requiring under-canopy protective structures will also increase over time. The target area may increase to be as much as 20 metres in radius over the next 20 to 30 years (assuming a canopy size of 26 metres tall x 26 metres spread), which will result in a target area of 1257 $m^2$, which is over double the area of the current target area. Under-canopy protective structures are unlikely to be viable considering the large area requiring an under-canopy protective structure (both now and in the future) and the costs associated with construction of such structures.

*Pruning:*
The pruning of the tree that occurred on the 2nd of February 2023 has not, in my opinion, significantly reduced the *likelihood* of branch failure to an extent that the risk to safety represented by the tree is reduced to an acceptable risk in its current situation. It should be noted that the branch failure that occurred on the 18th February 2023, which missed hitting a person getting into their car by less than a few seconds (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site**)**, occurred only a couple of weeks after the pruning of the tree. Such branch failures are likely to be ongoing, regardless of the pruning of the tree.

Pruning is not a viable method to reduce and maintain the risk associated with the tree at an acceptable level in this individual due to a number of structurally defective branches in the canopy of the tree (Figures 14 to 16 and 18 to 21) and most remaining branches being over-extended (even following the February 2023 pruning) and lacking internal pruning points in which to maintain a viable canopy. The extent of pruning that would be required to mitigate the structural defects in the tree (both the point-defects from borer/bird damage and

the more generic defects of increasingly over-extended and end-weighted branches) is such that the bulk of the tree's canopy would require removal. Such pruning would immediately reduce the risk to safety associated with the tree to a lower and acceptable level, but is not recommended for the following reasons:

- Such pruning will significantly reduce the landscape value of the tree, to an extent that tree removal is a more reasonable option; and
- Such pruning will significantly reduce the biodiversity value of the tree, to an extent that tree removal is a more reasonable option; and
- Such pruning will destroy the structure of the tree and result in the vigorous growth of weakly-attached reshoots of epicormic origin, which will present major management issues in the medium to long-term, including a longer-term increased risk to safety associated with the tree; and
- Such pruning will not alleviate the ongoing displacement to the bitumen-sealed surface of both the carpark at the Britannia Hotel carpark and the carpark in the allotment of 37-39 Wadham Lane, caused by an ongoing increase in the diameter of the roots of the tree.

*Branch cabling:*

Branch cabling is not an viable solution due to the vigour of the tree (the canopy size increasing rapidly over time, resulting in the balance of branches, and therefore the required cabling positions, changing over time), the wood characteristics of the species (the wood being relatively brittle and more subject to point-fractures than in many other species), most branches being over-extended and end-weighted (meaning extensive cabling to ensure every over-extended branch is cabled), and the high under-canopy use of the site. The combination of these factors will mean that cabling would either be ineffective, or, more troublingly, may result in a single branch failure causing the structural failure of other branches that are cable-attached to it.

## 5.0 SUMMARY of FINDINGS

### 5.1 *Legal status of the tree*

The tree is significant as defined by the *PDI Act 2016* and the *PDI (General) Regulations 2017*. Development approval is therefore required to remove or otherwise damage the tree.

### 5.2 *Arboricultural assessment*

The tree has high value from a biodiversity and landscape amenity viewpoint. However, the tree currently represents an elevated and increasing risk to safety, associated with both the amplified (and continuously increasing) *likelihood* of branch failure events (associated with the over-extended and end-weighted branches forming the canopy in conjunction with structural defects at various points in some branches, and the recent history of a major branch failure event), and the amplified (and continuously increasing) *consequence* of branch failure events (associated with the canopy size and height of the tree and the under-canopy use of the site).

The tree is atypical for a specimen of this species (*Eucalyptus camaldulensis* – river red gum), in its combination of over-extended and end-weighted branches (associated with its very rapid growth throughout its 25 to 50 year life) in conjunction with the numerous structural defects caused by atypical borer damage in the primary and secondary branches. These atypical features, in conjunction with the high under-canopy use of the site, results in this individual representing a much higher risk to safety than other river red gums without these features and/or with a lower under-canopy use.

This risk to safety represented by the tree cannot be effectively mitigated by pruning or other practicable means (as detailed under *Performance Outcomes* 1.3 (b)). The pruning of the tree that occurred on the 2nd of February 2023 has not, in my opinion, significantly reduced the *likelihood* of branch failure such that the tree represents an acceptable risk in its current situation. It should be noted that the branch failure that occurred on the 18th February 2023, which missed hitting a person getting into their car by less than a few seconds (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site), occurred only a couple of weeks after the pruning of the tree. Such branch failures are likely to be ongoing, regardless of the pruning of the tree.

### 5.3 *Planning and Design Code - Performance Outcomes*

The tree satisfies *Performance Outcomes* 1.2 (a), (c), (e) and (f) of the Regulated and Significant Tree Overlay Assessment Provisions in the Code.

Tree damaging activity (in the form of tree removal) satisfies *Performance Outcomes* 1.3 (a) (i) and (ii), and (b).

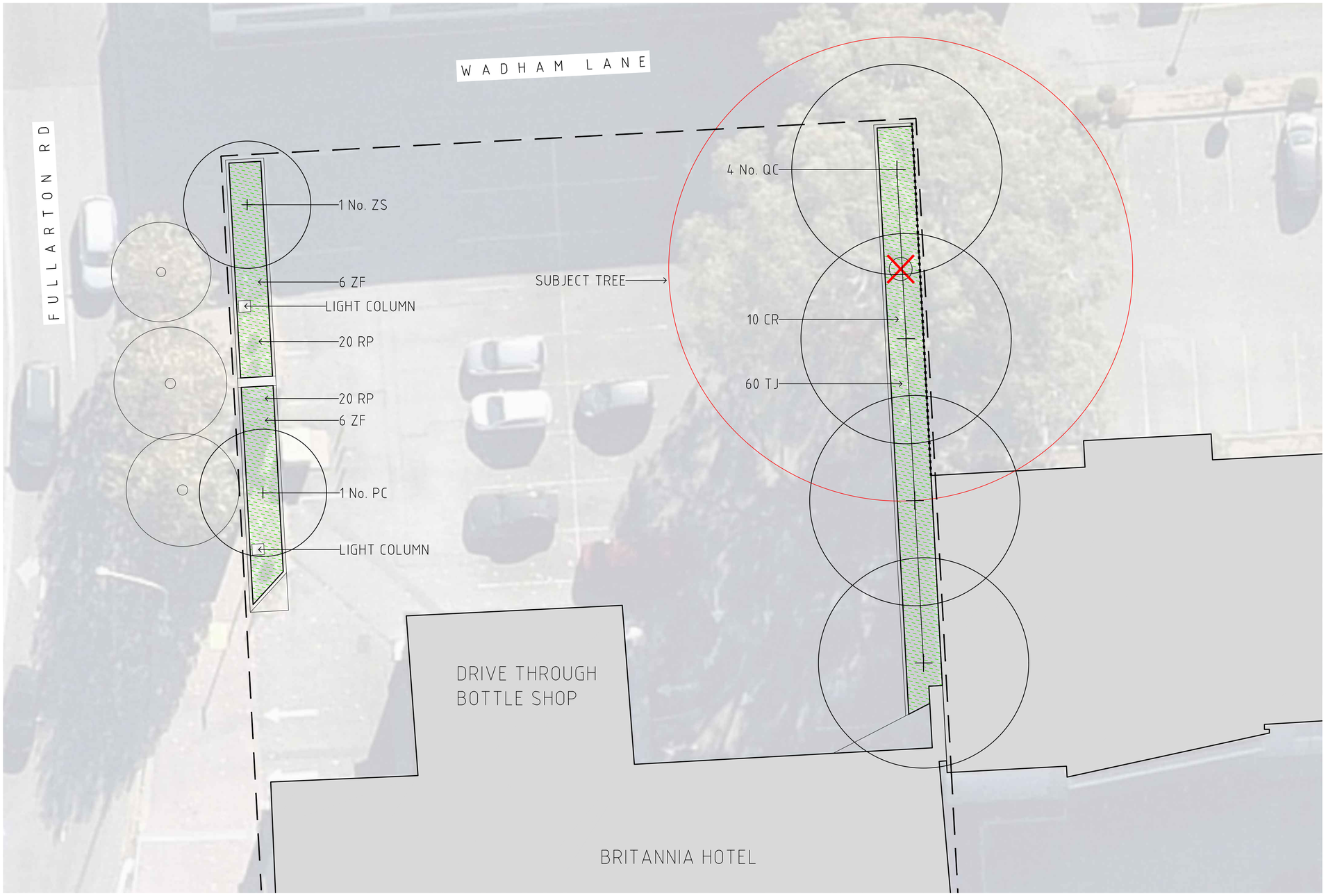
## 6.0 RECOMMENDATIONS

In its current situation, I am supportive of any development application to remove the subject tree.

I could only support the retention of the tree if the target area on the site (currently approximately 12 metres radius from the center of the tree, but likely to increase in size over time with ongoing growth of the tree) is significantly modified to be of low use (requiring the removal of at least 8 x carparks at the Britannia Hotel and 3 x carparks at 37-39 Wadham Lane), *or* if under-canopy, overhead protective structures are constructed over the whole of the target area. Both of these alternative solutions may not be practical considering the existing site constraints.

I thank you for the opportunity to provide this arboricultural assessment and report.
If you require further information or clarification please contact me for assistance.

Dean Nicolle
OAM, BAppSc Natural Resource Management, BSc Botany (Hons), Ph.D




## LEGEND

NEW

NEW TREE

PLANTING

EXISTING

EXISTING TREE

TREE FOR DEMOLITION

## TREE SCHEDULE

| CODE | BOTANIC NAME | SPACING | SIZE | QTY |
|---|---|---|---|---|
| PC | Pistacia chinensis | AS SHOWN | 45L | 1 |
| QC | Quercus cerris | AS SHOWN | 45L | 4 |
| ZS | Zelkova serrata | AS SHOWN | 45L | 1 |

## PLANT SCHEDULE

| CODE | BOTANIC NAME | SPACING | SIZE | QTY |
|---|---|---|---|---|
| CR | Cycas revoluta | 1/m$^2$ | 150mm | 18 |
| RP | Rosmarinus officinalis prostratus | 3/m$^2$ | 150mm | 40 |
| TJ | Trachelospermum jasminoides | 3/m$^2$ | 150mm | 60 |
| ZF | Zamia furfuracea | 1/m$^2$ | 150mm | 12 |

## NOTES

EXISTING SERVICES

THE CONTRACTOR MUST LOCATE AND MARK ALL UNDERGROUND SERVICES BEFORE COMMENCING WORK ON SITE.

TREE PLANTING

PREPARE TREE HOLES TO A MINIMUM SIZE OF THE DEPTH OF THE ROOTBALL x 1m WIDE AND BREAK THE SUBGRADE TO A MINIMUM DEPTH OF 200MM BELOW. TAKE PARTICULAR CARE TO BREAK UP ANY GLAZING TO SIDES OF TREE HOLE. FINISH THE ROOTBALL LEVEL WITH THE FINAL SURROUNDING SOIL LEVEL AND BACKFILL THE PLANTING HOLE WITH SITE TOPSOIL BLENDED WITH 20% ORGANIC MIX. PROVIDE A 1m DIAMETER MULCHED WATERING BOWL TO THE BASE OF THE TREE. STAKE TREES WITH 2No. 2500x50x50 HARDWOOD STAKES AND TIE WITH 50mm HESSIAN TIES SECURELY STAPLED TO THE STAKES. ENSURE STAKES AND TIES REMAIN CLEAR OF BRANCHES, FOLIAGE AND ROOTBALL.

PLANTING BEDS

CULTIVATE EXISTING GROUND TO A MINIMUM DEPTH OF 300 MM AND PLACE 300MM IMPORTED 'ORGANIC MIX'. PLACE PLANTS IN THE CENTRE OF THE PLANTING HOLE AND FINISH THE TOP OF THE ROOT BALL LEVEL WITH THE FINISHED SURFACE OF THE SURROUNDING SOIL. APPLY TERRACOTTEM FERTILISER TO MANUFACTURERS RATES AT TIME OF PLANTING AND AFTER PLANTING PLACE A 100MM MINIMUM DEPTH OF COTTAGE MULCH. THOROUGHLY WATER PLANTS BEFORE AND IMMEDIATELY AFTER PLANTING, AND AS REQUIRED TO MAINTAIN HEALTH AND VIGOUR. AVERAGE 2 PLANTS/M$^2$

IRRIGATION

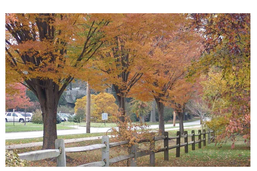
PROVIDE AN AUTOMATIC IN-LINE DRIP IRRIGATION SYSTEM TO ALL PLANTING BEDS AND TREES.

DRIP IRRIGATION SPECIFIED AS NETAFIM TECHLINE 16 POLY TUBE 1.6Lph @ 0.5M SPACINGS OR SIMILAR APPROVED.

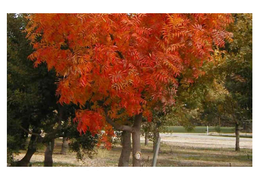
FOR ALL TREE PLANTING INSTALL AT BASE OF TREE 4No 4Lph PC DRIP EMITTERS ON 13MM POLY LOOP (OR INLINE EQUIVALENT).

ALL POLY TUBING TO BE LAID ON SURFACE AND COVERED WITH MULCH.

PROVIDE BACKFLOW PREVENTION, AUTOMATIC CONTROLLER AND OTHER DEVICES AS REQUIRED.

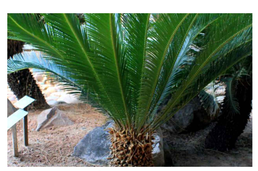


***Zelkova serrata***
Japanese Elm
Height: 14m
Width: 10m



***Pistacia chinensis***
Chinese Pistachio
Height: 8-10m

***Quercus cerris***
*Turkey Oak*
Height: 12-18m



***Cycas revoluta***
Sago Palm
Height: 3m
Width: 2m

***Trachelospermum jasminoides***
Star Jasmine
Height: 0.4m
Width: 3-6m

***Zamia furfuracea***
Cardboard Palm
Height: 1m
Width: 1.5-2m

***Rosmarinus officinalis prostratus***
Rosemary
Height: 1.5m
Width: 1.2-1.5m

| | | | | | | |
|---|---|---|---|---|---|---|
| oxigen | Project<br>**BRITANNIA HOTEL** | Drawing Title<br>**SITEWORKS** | 1:100 (A1), 1:200 (A3)<br>0 1 2 3 4 5m N | Client<br>**HILDITCH LAWYERS** | Project number<br>**22.022** | Revision<br>**A** | Date<br>**19.07.22** |

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Prepared for the City of Norwood Payneham & St Peters
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Date: 17th May 2023

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# Tree Risk Assessment Report

# 1 Kensington Road, Norwood

**Shane Selway**

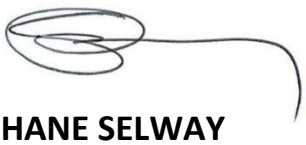
**Adelaide Arb Consultants**

Date: 17th May 2023

# Executive Summary

- The tree is identified as *Eucalyptus camaldulensis* - River Red Gum and is located within a car parking area to the north of the Britannia Hotel at 1 Kensington Road, Norwood and to the west of the building at 39 Clarke Street, Norwood.
- The trunk circumference is estimated to be greater than 300cm at one metre above ground level and is therefore controlled as a significant tree under the current provisions of the *Planning, Development & Infrastructure Act 2016.*
- The tree is worthy of preservation as outlined in the Plan SA *Planning & Design Code.*
- The tree displays good health and is sustainable within its environment.
- A climbing assessment identified that wood boring insect exit holes within primary and secondary branches have not resulted in an elevated potential for branch failure.
- The tree's structure is good, and recent pruning management has been applied to enable sustainable tree retention at an acceptable level of risk to public and private safety.
- The VALID Tree Risk Benefit System applies the ISO 31000 – Risk Management and the Tolerability of Risk Framework, both internationally recognised risk assessment parameters to tree risk assessment.
- The VALID Tree Risk-Benefit System has demonstrated that the tree represents an Acceptable risk to public and private safety.
- Risk mitigation using crown pruning techniques has recently been undertaken which has suitably managed the risks associated with the tree at an acceptable level to public and private safety.
- Ongoing scheduled assessments of tree health and integrity are recommended to be completed at intervals of 3 years with the next assessment recommended to be conducted during the latter part of 2025 to early 2026. Where changes in tree health or its environment are noted, earlier assessment is advisable.

Yours sincerely



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# Introduction

## Brief and Relevant Background Information

My business was engaged to conduct a comprehensive assessment of one tree located at The Britannia Hotel, 1 Kensington Road, Norwood and to prepare a tree risk assessment report.

This tree has been the subject of a historical Development Application for tree removal resulting in previous assessments being undertaken by myself and Dr Dean Nicolle. Further, the subsequent refusal by the City of Norwood, Payneham and St Peters for this tree removal application led to an appeal within the Environment, Resources and Development Court (ERD) of South Australia where Dr Nicolle and I both presented assessment findings.

Previous assessments conducted by me found that the tree displayed sustainable health and structural form and that pruning options were present within the form that would enable the tree's retention at an acceptable level of risk to public and private safety.

The ERD found, following the opinions presented by Dr Nicolle and I, that the tree represented a moderate risk at the time of hearing and that pruning options were available to reduce this risk and maintain the tree at an acceptable level.

Following the completion of the ERD hearing (21st December 2022), one medium to large diameter branch failure occurred on the 27th January. This failure resulted in minor damage to the eastern boundary fence of the property however no significant structural damage or personal harm occurred in this event.

Following this event, I was commissioned by the Duke Group of Companies to oversee pruning management within the tree. I confirm that this management conformed to the pruning recommendations presented by me to the ERD Court.

It has now been noted that a small diameter lateral branch has failed from within the western crown which causing a near miss to impact of a pedestrian and vehicle below the tree at the time of the failure.

My assessment included:

- A detailed assessment of the tree and its surrounding environment.
- Reassessment of climbing inspection notes of the tree including structural attributes such as primary and secondary branch unions[1] as well as various wounds throughout the form caused by insect activity.
- A Tree Risk Assessment using an industry endorsed Tree Risk Assessment Model.
- A detailed tree report outlining the tree's attributes, current risk posed by the tree to public and private safety and management strategies to mitigate elevated risks where required.
- Pruning management options that may be required to maintain the tree at an acceptable level of risk to public and private safety.

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## Provided Information

- *Tree Removal Plan* – 5325815 indicating the location of the subject tree, (Received 24th April 2023) anon.
- *Tree Removal Request*, 17th April 2023. Phillip Brunning.
- Email requesting assessment and detailing assessment criteria, 24th April 2023. Kieran Fairbrother.
- Tree Report - Britannia Hotel, Norwood, SA. *Arboricultural assessment of a significant Eucalyptus camaldulensis (river red gum) tree.* 8th March 2023, Dr Dean Nicolle.
- *CCTV Footage – Britannia Hotel* of target frequency at time of recent small diameter branch failure. 18th February 2023.
- *Tree Planting Plan*, Oxigen Landscape Architects. 19th July 2022.

## Tree Report Scope

The assessment criteria included:

- An assessment of the specified tree at 1 Kensington Road, Norwood. I have not assessed or reported on any other trees within or adjacent to the site in this report.
- The tree's current health, structure and sustainability within its current environmental conditions.
- A review of the previous aerial (climbing) assessment of the tree's structural attributes including primary and secondary branch unions as well as an assessment of boring insect exit holes and their relationship to branch integrity.
- A tree risk assessment using the VALID tree risk assessment model.
- The tree's control status under the current provisions of the *Planning, Development & Infrastructure Act 2016* including an assessment against the relevant Plan SA *Planning and Design Code* Performance Outcomes.
- Crown management possibilities that conform to the current guidelines of Australian Standard AS 4373-2007 *Pruning of amenity trees* to reduce the risk of potential branch failure and prolong the Useful Life Expectancy of the tree.
- Any other factors that were relevant to tree management in the situation.

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# Site Access and Assessment

## Site Visit Details

A ground-based Level 2 Visual Tree Assessment[2] of one *Eucalyptus camaldulensis* - River Red Gum was conducted by me on the 10th of May 2023.

The weather at the time of the ground-based assessment was clear and sunny. No restrictions to the assessment were noted because of weather.

A Level 3 Tree Climbing Assessment was carried out by me on 7th June 2022. Mr Michael Palamountain (Adelaide Arb Consultants), Dr Dean Nicolle (Calyptra Pty Ltd) and Mr Andrew Bower (City of Norwood, Payneham and St Peters) also attended this assessment.

All crown and trunk dimensions are estimates and measurements relating to the tree's location, crown projection or root zone extent are taken from the centre of the trunk at ground level. All other measurements are as specified in the report.

Data collection describes observations noted during the 10th May 2023 assessment, from the car parking areas of the Britannia Hotel (1 Kensington Road), 39 Clarke Street (at the western portion of this property), the carriageway of Wadham Lane as well as within the crown during the climbing assessment conducted during June of 2022.

## Site Description

The properties are located at 1 Kensington Road and 39 Clarke Street, Norwood. The vegetative character of the local area consists of a mix of indigenous and introduced native trees throughout the eastern Adelaide Parklands and surrounding streets and private properties. The site is linked to wildlife corridors including the southern and eastern parklands extending between Victoria Park, Rymill Park, Adelaide Botanic Gardens and the River Torrens.

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The tree is located on the dividing boundary between the Britannia Hotel car park (1 Kensington Road) and 39 Clarke Street, Norwood. This tree is approximately 10m from the northern boundary alignment of these properties and is labelled *Eucalyptus camaldulensis* on the attached site plan.


The tree's root zone consists of sealed surfacing in all directions surrounding the stem with a narrow linear garden bed extending to the north and south of the stem. A two-storey building housing office suites is situated approximately 13m to the south of the stem. There have been no obvious recent disturbances within this area. The surfacing of the bitumen car park into the east and west are both damaged within the structural root zone as a result of root development with various undulations and bitumen cracking.

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## Target zone assessment

The Tree Risk-Benefit Management & Assessment System has been utilised to calculate tree related risk. This system generates a risk assessment outcome by applying failure likelihood outcomes, the likelihood of target occupation and the consequence of the most likely tree part failure impacting the target with the highest likelihood of being present.

To enable this assessment, an analysis of target areas surrounding the tree is required. Some being located below the crown spread while others are within the distance of the tree height laterally.

Target areas are classified under four primary categories (human occupation, vehicles being driven, property damage (including buildings, structures and unoccupied vehicles, and large scale events with high concentration of people) with some being further subscribed to sub categories depending on the effect weather events may have on target frequency, the speed of vehicular movement (and the drivers resultant ability to react to an event) or where multiple people are likely to be present within the target area at the same time.

The following assessment outcomes were noted:

| Target | Location | Occupancy Type | Target Occupancy Parameter |
|---|---|---|---|
| Office building | 13m south of tree | Property | Constant presence |
| Vehicles (Stationary within car park) | Below canopy | Property | Constant presence |
| Pedestrians | Below canopy (Accessing vehicles) | People (not foul weather affected) | Low (between 10 min and 1hr intervals) |
| Wadham Lane traffic | 10-14m north of tree | Vehicular Traffic | (50km/h) |
| Driveways (Both sites) | Below canopy | Vehicular Traffic | (<20km/h) |

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# Tree Observations

| Tree 1 | *Eucalyptus camaldulensis* - River Red Gum | |
|---|---|---|
| Species Origin | Indigenous |  Above: The subject tree when viewed from the west and within the Britannia Hotel car park. |
| Height | 14-20m | |
| Spread (Diameter) | >20m | |
| Age | Mature | |
| Useful Life Expectancy[3] | 10-20 years | |
| Basic Health | Good | |
| Basic Structure | Good | |
| Form | Good | |
| Trunk Circumference | >300cm (estimated) | |
| Legislative Control | Significant Tree[4] | |

| **Root Protection Zones** | |
|---|---|
| Diameter @ Breast Height[5] | 90cm (estimated) |
| Tree Protection Zone[6] | **Radius = 10.80m**<br>**Area = 366m²** |
| Diameter @ Root Buttress[7] | 110cm |
| Structural Root Zone[8] | **Radius = 3.44m** |

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## General Observations

The tree consists of a single stem from ground level to approximately 4m at which point it bifurcates. Each of the stems bifurcates again and all support many radiating, ascending and horizontally arranged lateral branches. These lateral branches support many further, smaller diameter, lateral branches where recent pruning has been undertaken to reduce length creating a moderately broad and domed canopy which remains typical of the species.

Tree health is good, and consistent with the previous assessment notes. Foliage density throughout the form is typical of the species with greater foliage retention than previously noted. No signs of pests or disease are present within the form. A moderate proportion of small diameter deadwood, epicormic growth[9] and wounding is noted within the form however tree function is occurring normally and there is no indication that these are resulting in health decline or tree stress.

- Image above: The tree when viewed from the north. Branch arrangement and distribution is typical of the species and reduction pruning has been applied suitably. Small wounds are also visible on some branches within this image. These attributes are not expected to be causing health decline or tree stress at this time.

Various wounds are observable through areas of the primary and secondary structure. These wounds are the result of wood boring insect exit holes, with characteristics of *Phoracantha sp.*– Longhorn, or other wood boring insect species of *Cossidae* Family – Wood Moth.

The primary, secondary and tertiary structure is good. Root and trunk buttressing is well formed which leads into good stem and trunk taper. Primary branch unions throughout the form are free of recognisable defects while lateral branches display elongated internodal length in some cases, with horizontal arrangement and slightly reduced taper. Secondary lateral branches are typical in form and distribution.

The recent pruning conducted during February 2023 has reduced the length of most horizontally arranged lateral branches within the crown. The arrangement of the remaining primary and secondary lateral branches are well formed and without observable defects.


- Image above: The southeastern crown with substantially less extension as a result of the recent pruning (right image). The increase in foliage density is also notable in this image indicating good tree vigour and therefore ability to generate structural adaptations to maintain integrity following branch failure and pruning operations.

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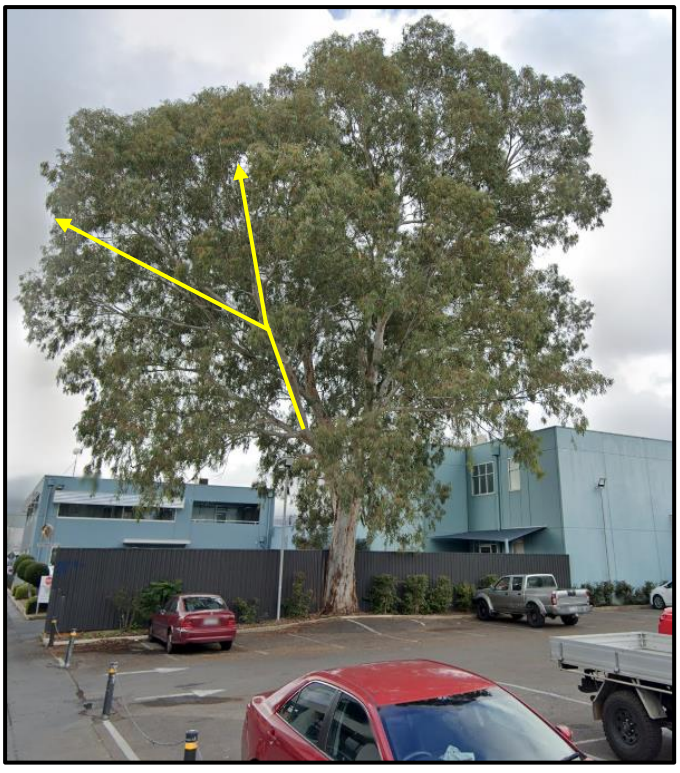
A branch failure within the northern lower crown occurred on the 2nd of November, 2021, resulting in damage to vehicles and was the precursor to an application for the tree's removal. Fibres at the failure site were slightly torn at the top of the failure wound. Chronological imagery (Google Street view) also indicated that the branch that failed displayed substantial elongation prior to the failure event. The wind speed on the day of that failure was moderately increased with recorded wind gusts of 43km/h[10].

While it was not been confirmed, no obvious signs of pruning history such as pruning wounds, other than for crown lifting to clear trafficways, were observed within the crown[11] at the time that this branch failed.

- Image right: the remains of the failure wound.



- Image right: The extension of the branch that failed prior to the failure event. (Google Maps Streetview dated August 2020).

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Following the decision process to retain the tree, a second large diameter branch failure occurred within the northern crown which inspired pruning management to be conducted within the tree as per the recommendations within my previous reports and statements.

This branch displayed well-formed attachment to the trunk however also displayed substantial elongation as noted within the image below. In addition to this elongation, the loss of the previous branch resulted in a substantial crown form change and therefore an altered dynamic load application arrangement.

The more recent of these failures has notably resulted in further alterations to the crown form and therefore dynamic load applications.

The pruning management undertaken during February 2023 has been conducted with terminally arranged branch reduction cuts which have reduced terminal loading and created a more compact overall crown form.

- Image right: The subject tree when looking from the northwest on the 14th December 2021. The yellow perforated line illustrates the location and extent of the large diameter branch failure that occurred during late January 2023.

- Image right: The subject tree when looking from the west-northwest on the 12th May 2023. A void within the northwestern crown is notable as a result of the branch failure while the overall horizontal crown form is likewise notably smaller following the recent pruning management.

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On the 18th February 2023 it was observed that a small diameter branch failure occurred within the middle western crown and above a car parking area. A video was provided of the incident enabling a clear timeline of the event. Assessment of the information available indicates that:

- A small diameter branch failed from within the middle western crown and fell unimpeded to the ground from an unknown height.
- It is likely that the branch became entangled within the lower branch on its descent, giving doubt to prescribing an accurate fall distance. This is evident by the people within the video realising the branch had failed and had time to react to the incident.

- Image right: An extract of the video provided by Duke Group. It is clear in this image that pedestrians are aware of the suspended branch within the crown.

- The branch had partially failed prior to the presence of people within the failure target area.
- Three cars were present in the vicinity of the location where the failed branch landed.
- A vehicle owner moved to the failure target zone after the branch failure had occurred to move a vehicle.
- The branch fell from its place of lodgement immediately following the departure of this vehicle.

- Image right: An extract of the video provided by Duke Group 31 seconds post the initial video extract above. In this image, the branch is visible falling in the location where the vehicle had been moved from.

- The remaining two vehicles were not impacted by the branch failure.
- No reports of property damage or personal harm were noted as a result of this incident.
- It is acknowledged that the incident would have resulted in property damage should the vehicle owner not moved the car.
- It is most likely that such property damage would have consisted of minor dents to the vehicle roof and or roof racks. This was given a property value range between $5,000 and $50,000.


- Image right: An extract of the video provided by Duke Group 17 seconds post the branch failure decent. In this image, the branch is visible in the location where a vehicle had been parked however no damage to adjacent vehicle was reported.

- Observations within the video of vegetation movement indicate that wind events were occurring at the time of failure by movement of shrubs and shadows of branches swaying on the building in the right portion of the frame.
- BOM weather observations indicate that wind speeds of 54km/h were recorded in Adelaide at a similar time. It is not known what wind velocities were subjected to the subject tree at the time of the incident however.
- Assessment of the branch failure stub, both within Dr Nicolle's report and the remaining portion within the tree, indicate that the branch failed at the union however no structural flaw was present within the union or timber fibres.
- No observation of boring insect damage was noted within the branch failure site.
- Wood fibres at the failure site are elongated and torn.

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## Climbing Assessment Observations

A climbing assessment was completed on the 7th of June 2022 to enable clear observations of various wounds, branching habits, structural attributes and insect activity to be recorded through areas of the primary and secondary tree structure.

Documentation provided by Dr Nicolle to support the tree removal application refers to the presence of boring insects and an increased potential for branch failure as a result.

The climbing assessment identified that:

- Branch unions throughout the form were suitably structured to maintain structural integrity.
- Branching habit within the crown was typical of the species and tree age.
- Boring insect exit holes were present within many areas of the structural form.
- Boring insect exit holes were present within branches which had not failed more so than the branch that had failed at the time of the assessment in 2022.
- The diameter of boring insect exit holes were smaller than 35mm in all cases.
- Some boring insect exit holes has begun to occlude.
- None of the boring insect galleries created branch hollows that exceeded the t/R ratio threshold.

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# Discussion

The tree is identified as *Eucalyptus camaldulensis* – River Red Gum and attains a trunk circumference measurement that exceeds three metres at one metre above ground level. This tree is therefore controlled as a significant tree under the provisions of the *Planning, Development & Infrastructure Act 2016.*

The tree displays good and sustainable health attributes with no significant or unusual signs of pest infestation, sustainable foliage density and natural levels of small diameter deadwood and epicormic growth for the tree species and age. The tree species is indigenous to many parts of Metropolitan Adelaide, commonly grows throughout the local area and is well suited to the local soil and climatic conditions.

The growing environment surrounding the tree is less than favourable, however the species is tolerant of such urban environments. No remedial treatment to improve tree health or function is currently required.

The tree structure is also noted to be good. Primary structural attributes including root and trunk buttressing, trunk taper and primary/secondary branch unions are generally free of recognisable defects. The potential for primary tree part failure (trunk or large diameter primary branch) in this case is improbable and mitigation to manage these structural attributes has recently and suitably been completed.

Secondary lateral branches in the lower crown display horizontal arrangement however branch distribution is well dispersed with consistent and suitable internodal lengths[12]. Most horizontally arranged lateral branches have likewise been subjected to reduction pruning.

On the 2nd of November 2021, a large diameter secondary lateral branch failed from the northern crown which impacted vehicles and caused substantial damage to them. The branch that failed was noted using chronological imagery to have had substantial elongation and extended beyond the crown extent of surrounding branches.

On the 27th January 2023, a second large diameter branch failure occurred. This branch was located immediately adjacent to the initial failure location and occurred prior to the application of pruning management. It is most likely that this branch failure was resultant of a changed crown form to dynamic load arrangements.

Elongation of horizontally arranged lateral branches increases the loading applied. Trees are reactive organisms that develop structural integrity through the laying down of fibres following stress events such as dynamic (wind events) and constant (gravitational) loading. Wood fibres buckle, stretch and tear during these events causing a response in growth patterns, a process called thigmomorphogenesis[13]. This process requires some time to affectively stabilise a crown structure following rapid changes in load applications, such as major branch failure events or removal of shelter such as an adjacent tree or tall building.

The pruning management conducted within the tree following the second large diameter failure event has suitably rectified structural weaknesses and reduced the potential for large diameter branch failure substantially.

The weather on the days of each failure, including the most recent small diameter failure was observed by the Australian Bureau of Meteorology[14].

This indicates that the weather on the 2nd November 2021 included wind gusts of 43km/h from the north/northeast within the Adelaide area. That the weather on the 27th January 2023 included wind gusts of 46km/h from the north/east within the Adelaide area and weather on the 18th February 2023 included wind gusts of 54km/h from the south/southwest within the Adelaide area.

These wind velocities alone are unlikely to result in substantial branch failure in sound tree structures. Where branch extension is exaggerated (that is the branch is elongated) or the crown form has been altered, such weather events may cause loading to exceed the structural capabilities of the affected branch.

The application of reduction pruning[15] as described within AS4373-2007 *Pruning of amenity trees* has reduced such loading by reducing static load (overall weight of the branch) and dynamic load application (sail area. This has suitably reduced the potential for future large diameter branch failure events to occur.

The occurrence of wood boring insects within this tree has repeatedly been noted as a point of structural concern within the tree removal application documents presented to the City of Norwood, Payneham and St Peters. Wood boring insect are a natural and common occurrence in many tree species including *Eucalyptus camaldulensis* - River Red Gum.

Insect species such as *Phoracantha sp.* – Longhorn are more successful and increase in number in trees under stress or in health decline. They commonly feed on the cambium[16] and sapwood[17]. There was little evidence of damage to the tree from this insect group[18].

Other wood boring insect groups such as those within the *Cossidae* Family – Wood Moths will colonise apparently healthy trees[19]. They create tunnels that are 3cm across into the heartwood. I found evidence of this insect activity in the heartwood of the failed branch, as well as exit holes of branches in the secondary structure.

The notation of wood boring insect exit holes being a cause of structural decline is relevant in some cases however assessment is required to enable appropriate consideration of the effect of these holes to tree structure including branch failure. The exit holes identified in this tree have resulted in small cavities (insect galleries) and wounds (fauna grazing and bird chewing at the exit hole margins) which required a detailed analysis to determine branch integrity throughout the crown.

It is accepted that cavities and wounds reduce the integrity of stems and branches in trees. The proportion of integrity loss however relates directly to the size of the cavity or wound in comparison to the size of the tree part. The following thresholds outline parameters for integrity of stems and branches that display cavities and wounds.

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**Tree failure thresholds with hollow trunks and open cavities**

**Trunk structure**

The presence of an open cavity and/or a hollow trunk/branch may indicate that tree part failure is possible. The likelihood of tree part failure is determined after considering the following calculations.

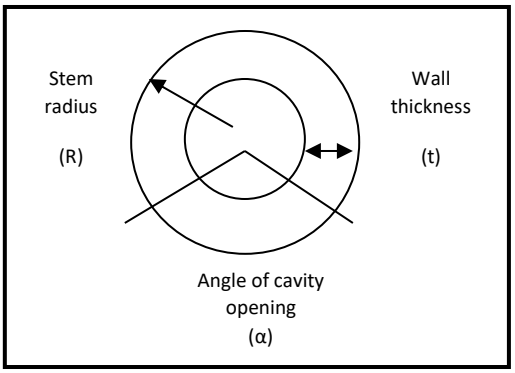



Diagram above: Mattheck, C. and Breloer, H. (1994). *The body language of trees; A handbook for failure analysis*. Research for Amenity Trees #4. London: The Stationery Office)

**Wall thickness ratio**

The ratio of residual wall thickness to stem radius at the point of the wound is calculated as follows;

Wall thickness (t) is xmm

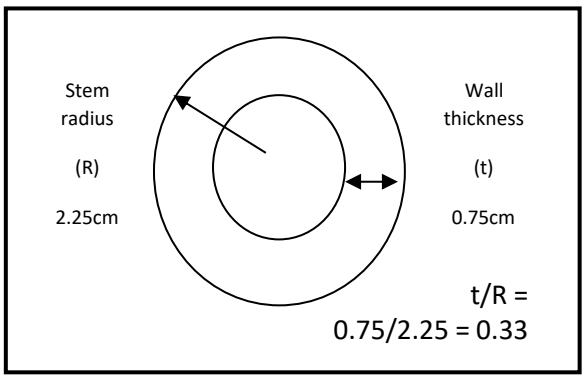
Stem radius (R) is xmm

Wall thickness ratio = t/R = x%

Wall thickness ratio (t/R) of 30-35% or greater usually have sufficient integrity while t/R which are less than 30-35% may have a greater potential for stem failure to occur[20].

In all cases where cavities were accessible for measurement in the subject tree, the t/R ratio percentage exceeded 100% meaning greater than half of the branch thickness remained opposite the exit hole.

Using the formula above, a Wood Moth with a gallery diameter of 3cm (as was noted within the subject tree) may cause unsustainable damage to structural integrity of branches with a diameter being less than 4.5cm (see example below). In all cases where branches have a larger diameter, the t/R ratio must be higher than 30-35%.



**Trunk cavity angle**

The angle of the cavity opening as a proportion of the overall trunk circumference is calculated as follows;

The diameter of the cavity at the widest point is xmm

The total trunk circumference at this point is ymm

The angle of the cavity opening (α) is x/y = a% = b°

The acceptable threshold for a cavity opening angle is 120° before failure is likely to occur.

In all cases where wounds and cavity openings were measured in the subject tree, the cavity opening angle was less, and often much less, than 60° indicating that the cavities and wounding is unlikely to have a bearing on branch integrity.

In practice, trees with closed or almost closed cavities are extremely unlikely to fail as the result of bending fractures. Where the thickness of the sound residual wall is less than 30-35% of the stem radius, failure results from cross-sectional flattening. Where there is an opening occupying 120° or more of the circumference, failure from bending fracture or cross-sectional flattening is probable[21].

No peer reviewed research or evidence has been provided, nor found in a search conducted for the purpose of this assessment, that supported the idea that boring insect activity resulted in a reduction of branch strength and increased the potential for branch failure in the species *Eucalyptus camaldulensis.*

Additionally, the topic of sudden branch drop (also known as summer branch drop) has repeatedly been discussed as a point of structural concern within the tree removal application documents presented to the City of Norwood, Payneham and St Peters. This phenomenon is poorly understood with some research supporting its occurrence while others refuting such. Similarly, tree species subject to such an event are also not proven despite the applicant documentation stating such.

In either case, the risk associated with branch failure to occur with symptoms of sudden branch drop is extremely low, which may be the reason there is a lack of research to explore whether this type of branch failure exists and what the likelihood and circumstances may be[22].

The most recent branch failure consisted of a small diameter lateral branch that remained suspended within the crown for an unknown time and then fell to ground level. It is noted that a vehicle was moved immediately prior to the branch falling in response to the branch having failed.

The branch in question was unlikely to result in severe personal harm or damage to property. Various risk assessment inputs were calculated to determine the greatest risk however none attained an unacceptable or even tolerable risk assessment outcome. With this view, the recommended and applied pruning has successfully managed the risks associated with the subject tree at an acceptable level.

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## Tree Risk Assessment (VALID Tree Risk–Benefit Assessment System)

The VALID Tree Risk-Benefit Assessment System (VALID) has been used to determine the risk posed by this tree at the site to persons and property over the next 12 months during typical weather conditions[23]. This risk assessment model is used widely throughout Australia and the world.

The VALID Tree Risk-Benefit System conforms to the principles outlined within Minimum Industry Standard - MIS501 *Tree Risk Assessment*[24] as well as the internationally recognised Tolerability of Risk Framework (ToR) and allows for balanced risk management decisions to be applied. It uses inputs relating to the likelihood of occupation, the likelihood of tree part failure and the consequence of the most likely tree part to fail impact the most likely occupant.

Tree risk is calculated considering these outcomes:

Likelihood of Occupancy

Target areas are classified under four primary categories (human occupation, vehicles being driven, property damage (including buildings, structures and unoccupied vehicles, and large scale events with high concentration of people) with some being further subscribed to sub categories depending on the effect weather events may have on target frequency, the speed of vehicular movement (and the drivers resultant ability to react to an event) or where multiple people are likely to be present within the target area at the same time.

The VALID assessment outcome appended to the report demonstrates the occupancy inputs selected for this assessment.

Likelihood of failure

The risk assessment model uses five classes to direct the assessor to interpret attributes displayed by or associated with the tree that may increase the potential for tree part failure. These are explained as follows:

**Vitality** This is an overview of health, function and the tree's ability to maintain these elements during times of adversity. Attributes such as foliage density, colour and size, presence of pests or disease and/or deadwood and their locations within the crown and level of growth noted, using twig extension, response growth or occlusion rates are a measuring tool.

**Anatomy** The timber properties of the species in conjunction with the structural form of the trunk and branches are a factor in this class. The tree height to trunk diameter ratio is also relevant in assessing the likely potential for large diameter tree part failure.

**Load** The trees exposure to storm events and whether any changes to dynamic loading arrangements have occurred within the recent history, whether this be though changes in crown form or removal of sheltering items such as adjacent trees or tall buildings. Changes in root architecture may also be a factor in this.

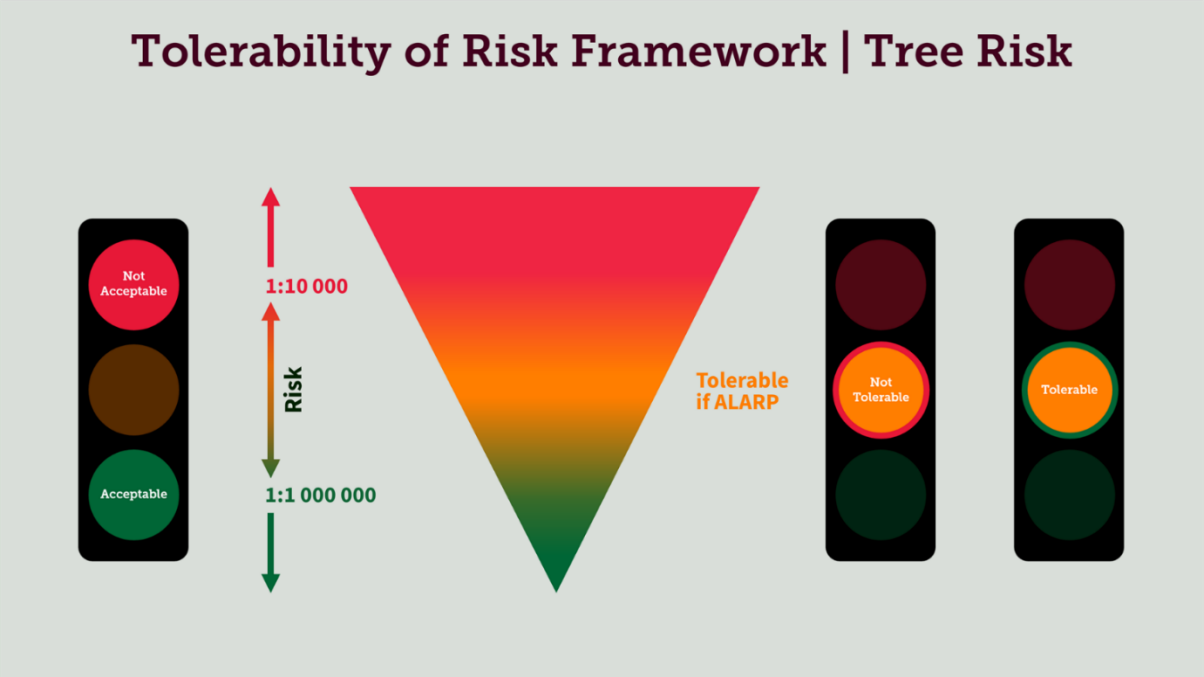
**Identity** Aspects including the tree species typical ability to undergo CODIT[25] as well as any history of tree part failure and the timeframe since such occurring. Other factors may include the typical growth rate of the species, potential for growth defects and the species suitability to the growing environment.

**Defect** Defects may include a variety of attributes of differing severities. Some defects may not result in a significant elevation in tree part failure potential. The identification of some decays will result in elevated potential for tree part failure, as may severe hollowing and wounding/cavities. Branch union defects may also become unstable.

Consequence of Failure

The consequence of tree part failure impacting a target is embedded within the VALID Tree Risk-Benefit system however various parameters are required to be imputed to generate the outcome. The size of tree part identified in the assessment and/or the monetary value of repair or replacement to property are required to be input into the assessment fields which then generates a risk outcome.

VALID applies ISO 31000 – Risk Management and the Tolerability of Risk Framework to tree risk-benefit management and assessment. Management of tree related risk occurs under four, traffic light coloured risk ratings using this system.




**Red** Not Acceptable risks will be reduced to an Acceptable level.

**Amber** Not Tolerable risks will be reduced to an Acceptable level, but with a lower priority than red Not Acceptable risks.

**Amber** Tolerable risks will not be reduced, but may require an increased frequency of assessment than green Acceptable risks.

**Green** Acceptable risks will not be reduced.

Date: 17th May 2023

The risk associated with the subject tree has been completed using this risk assessment system with the following inputs and outcomes.

VALID

Eucalyptus Camaldulensis | Detailed Tree Risk-Benefit Assessment

Site Britannia Hotel Carpark — Ref: Britannia Hotel

## Eucalyptus Camaldulensis

## Summary

| | |
|---|---|
| **Highest Risk** | **Acceptable** |
| Risk Reduction | None currently required. |
| Tree Management | None currently required. |
| **Review Year** | **2025** |
| Date Assessed | 2023-05-11 11:33 |
| Assessed By | Shane Selway |
| Phone Number | 0428827007 |
| Email | info@adelaidearb.com.au |

## Risk


## Tree Details and Location

| Species | Height (m) | Stem Ø (cm) | Crown Ø (m) |
|---|---|---|---|
| Eucalyptus Camaldulensis<br>Eucalyptus camaldulensis x ovata | 21 | 110 | 20.5 |

1 Kensington Road
Norwood SA 5067

## Risk Inputs

### Likelihood of Occupation

Structure | Parked | Services | Train | Tram

O

Property

### Consequences

Tree | Stem | Branch | Deadwood

C

3 Moderate

### Likelihood of Failure

| | | | |
|---|---|---|---|
| VITALITY | V | crown density woundwood response growth | G |
| ANATOMY | A | wood properties architecture H/D ratio | G |
| LOAD | L | exposure changes to the tree changes around tree | A |
| IDENTITY | I | species profile age of wounds CODIT | G |
| DEFECT | D | soundwood decay - extent feature or fault | G |

Tree displays good foliage density throughout. There are no significant signs of pests or disease that may have an effect on tree health or integrity.

Structure displays stable unions throughout. A history of failure is noted. Recent pruning has reduced potential for large dia failure.

Tree is exposed to prevailing wind. Recent severe storm events have not resulted in lg dia failure. Recent sml dia failure was during inclement winds.

The species is long lived and has good codit potential. Wounds within the form range in ages however most significant wounds are not old.

No hollowing is known to be present within the tree. Boring insects are noted within the form however have no bearing on tree health or integrity.

F

4 Low

### Notes

The highest risk is small diameter branch failure impacting a car.

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Date: 17th May 2023

# Conclusions

- The tree is identified as *Eucalyptus camaldulensis* - River Red Gum and is located within a car parking area to the north of the Britannia Hotel at 1 Kensington Road, Norwood and to the west of the building at 39 Clarke Street, Norwood.
- The trunk circumference is estimated to be greater than 300cm at one metre above ground level and is therefore controlled as a significant tree under the current provisions of the *Planning, Development & Infrastructure Act 2016.*
- The tree is worthy of preservation as outlined in the Plan SA *Planning & Design Code.*
- The tree displays good health and is sustainable within its environment.
- A climbing assessment identified that wood boring insect exit holes within primary and secondary branches have not resulted in an elevated potential for branch failure.
- The tree's structure is good, and recent pruning management has been applied to enable sustainable tree retention at an acceptable level of risk to public and private safety.
- The VALID Tree Risk Benefit System applies the ISO 31000 – Risk Management and the Tolerability of Risk Framework, both internationally recognised risk assessment parameters to tree risk assessment.
- The VALID Tree Risk-Benefit System has demonstrated that the tree represents an Acceptable risk to public and private safety.
- Risk mitigation using crown pruning techniques has recently been undertaken which has suitably managed the risks associated with the tree at an acceptable level to public and private safety.
- Ongoing scheduled assessments of tree health and integrity are recommended to be completed at intervals of 3 years with the next assessment recommended to be conducted during the latter part of 2025 to early 2026. Where changes in tree health or its environment are noted, earlier assessment is advisable.

Date: 17th May 2023

## Planning and Design Code – (Regulated and Significant Tree Overlay)

**Desired Outcomes (DO)**

**DO 1. Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss.**

The subject tree is notable from the Britannia Roundabout and entrance to Fullarton Road (north of roundabout) and provides significant aesthetic benefit to the local area. As an indigenous species that is linked to wildlife corridors, it has important environmental value.

**Performance Outcomes (PO) – Tree Retention and Health**

**PO 1.2 Significant trees are retained where they [achieve any of the following attributes]:**

**a) make an important contribution to the character or amenity of the local area.**
Yes – The tree is linked to a stand of same species trees within the eastern parklands. It is my opinion that it is a contributor to the vegetative character provided by these trees.

**b) are indigenous to the local area and are listed under the *National Parks and Wildlife Act 1972* as a rare or endangered native species.**
No – While the species is indigenous to the local area, it is not listed as rare or endangered.

**c) represent an important habitat for native fauna.**
Yes – The tree is identified as an indigenous native species and it is linked to a wildlife corridor.

**d) are part of a wildlife corridor of a remnant area of native vegetation.**
Yes – The tree is linked to the wildlife corridor extending through the southern-eastern parklands, the Adelaide Botanic Gardens and the River Torrens.

**e) are important to the maintenance of biodiversity within the local environment.**
Yes - This tree contributes to the biodiversity of the Urban Forest. As a locally indigenous species, it also contributes to the natural biodiversity in the local area.

**f) form a notable visual element to the landscape of the local area.**
Yes – The tree displays a large, well and typically formed crown that is a dominant skyline feature when approaching Fullarton Road (north of the Britannia Roundabout). It is my opinion that these attributes constitute a notable visual element to the landscape of the local area.

**PO 1.3 A tree damaging activity not in connection with other development satisfies (a) or (b):**

**(a) Tree damaging activity is only undertaken to:**

**(i) remove a diseased tree where its life expectancy is short.**
No – The tree displays good health and has a Useful Life Expectancy of 10-20 years.

**(ii) mitigate an unacceptable risk to public and private safety due to limb drop or the like.**

No – The VALID Tree Risk-Benefit System indicates that the tree represents an Acceptable risk rating.

**(iii) rectify or prevent extensive damage to a building of value as comprising any of the following:**

**A. a Local Heritage Place**

No - The application does not relate to or involve a Local Heritage Place.

**B a State Heritage Place**

No - The application does not relate to or involve a State Heritage Place.

**C. a substantial building of value**

No – No evidence was provided to indicate that the tree is causing extensive damage to a substantial building of value.

**and there is no reasonable alternative to rectify or prevent such damage other than to undertake a tree damaging activity.**

The tree has not been shown to be causing damage to buildings or heritage places and therefore remedial treatments to rectify such as not required.

**(iv) reduce an unacceptable hazard associated with a tree within 20m of an existing residential, tourist accommodation or other habitable building from bushfire.**

No – The tree is not situated within a bushfire hazard area.

**(v) treat disease or otherwise in the general interests of the health of the tree.**

No – The tree is not diseased, and the application relates to tree removal which will not be beneficial to maintaining tree health.

**(vi) maintain the aesthetic appearance and structural integrity of the tree.**

No – The application relates to tree removal which will not maintain the aesthetic of the tree.

**(b) in relation to a significant tree, tree-damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective.**

No – Risk mitigation has been undertaken and the tree currently represents an acceptable risk to public safety.

The recent events of small diameter branch failure fit within the risk assessment model likely outcomes including minor damage to property and/or personal harm.

# Endnotes

[1] **Branching order** describes the divisions between successively smaller branches in a tree. The main trunk/s is/are what emerge/s from the ground and are not considered branches. First order branches (or primary branches) emerge from the main trunk or stems and are the main scaffold branches of the tree. Second order branches (or secondary branches) emerge from these first order branches, followed by third order branches (tertiary branches) and so on. Successive branching is usually characterised by a reduction in branch diameter at each division.

(Draper, D., and Richards, P., (2009) *Dictionary for Managing Trees in Urban Environments* CSIRO Publishing and Institute of Australian Consulting Arborists.)

A **lateral** is a branch arising from another branch (Australian Standard AS 4373 – 2007 *Pruning of amenity trees*.)

[2] **ISA TRAQ – Levels of Assessment** - Tree and risk assessments can be conducted at different levels of detail, each employing varying methods and providing the client with varied options for reporting and recommendations. The level selected should be appropriate for the assignment.

**Level 1 - Limited Visual Assessment**

- Visual assessment of an individual tree or population of trees near specified targets
- Conducted from a specified perspective.
- To identify certain obvious defects or specified conditions.
- Typically focusses on identifying trees with imminent and/or probable likelihood of failure.
- Typically, one or two of the three factors is/are considered as a constant.
- This is the fastest, but least thorough, means of assessment and are intended primarily for managing large populations of trees when time and resources are limited.
- This can be carried out as a walkover, drive-by or fly-over inspection.

**Level 2 – Basic Assessment**

- A level 2 or basic assessment is a detailed visual inspection of a tree and its surrounding site.
- This is the level of assessment that is commonly performed by arborists in response to client's requests for individual tree risk assessments.
- It is ground based and requires the arborist to inspect completely around the tree – looking at the site and visible buttress roots, trunk, and branches.
- The use of simple tools may be required (measuring tools, Binoculars, magnifying glass, mallet, probe, hand digging tools, compass, camera)
- Often a basic assessment is adequate for assessing risk and making recommendations, but it sometimes reveals the need for more advanced assessment measures.
- The primary limitation of a basic assessment is that it only includes conditions that can be detected from a ground based visual inspection. Internal, below-ground, and upper-crown factors may be impossible to see or difficult to assess.

**Level 3 - Advanced Assessment**

- Advanced assessments are performed to provide detailed information about specific tree parts, defects, targets or site conditions.
- An advanced assessment may be conducted in conjunction with or after a basic assessment if additional information is needed and the client approves the additional service.
- Specialised equipment, data collection and analysis and/or expertise are usually required for advanced assessments.
- The assessments are generally more time intensive and expensive.
- There are many types of advanced assessments that can be conducted (aerial inspection, detailed target analysis, detailed site evaluation, decay testing, health evaluation, root inspection, tree stability monitoring and load testing).

(Dunster, J et.al. (2017), *Tree Risk Assessment Manual – Second Edition* – International Society of Arboriculture, Champaign, Illinois, pp. 15-34.)

[3] **Life expectancy** is the estimated life span, or remaining life span of a tree. The **useful life expectancy** is the number of years a tree can be expected to be useful at the site, with acceptable levels of amenity, health and risk under the current site conditions. Consideration should be given to tree benefits, amenity value, historical values, tree surroundings, site use, risk management options and costs, habitat opportunities and other relevant factors. Simply remaining alive (life expectancy) may not be reasonable in an urban setting. Trees should continue to provide amenity and other benefits with acceptable levels of risk (useful life expectancy). For some trees, habitat value may contribute to or increase a trees useful life expectancy.

[4] **Significant tree meaning**
***Planning, Development and Infrastructure Act 2016***
**Part 1 – Preliminary**
**Section 3 – Interpretation**
significant tree means—

(a) a tree declared to be a significant tree, or a tree within a stand of trees declared to be significant trees, under the Planning and Design Code (whether or not the tree is also declared to be a regulated tree, or also falls within a class of trees declared to be regulated trees, by the regulations); or

(b) a tree declared to be a regulated tree by the regulations, or a tree within a class of trees declared to be regulated trees by the regulations that, by virtue of the application of prescribed criteria, is to be taken to be a significant tree for the purposes of this Act;

***Planning, Development and Infrastructure (General) Regulations 2017***
**Section 3F—Regulated and significant trees**

(1) Subject to this regulation, the following are declared to constitute classes of regulated trees for the purposes of paragraph (a) of the definition of regulated tree in section 3(1) of the Act, namely trees within a designated regulated tree overlay that have a trunk with a circumference of 2 m or more or, in the case of trees that have multiple trunks, that have trunks with a total circumference of 2 m or more and an average circumference of 625 mm or more, measured at a point 1 m above natural ground level.

(2) Subject to this regulation—

(a) a prescribed criterion for the purposes of paragraph (b) of the definition of **significant tree** in section 3(1) of the Act is that a regulated tree under subregulation (1) has a trunk with a circumference of 3 m or more or, in the case of a tree with multiple trunks, has trunks with a total circumference of 3 m or more and an average circumference of 625 mm or more, measured at a point 1 m above natural ground level; and

(b) regulated trees under subregulation (1) that are within the prescribed criterion under paragraph (a) are to be taken to be significant trees for the purposes of the Act.

(3) For the purposes of subregulations (1) and (2), the measurement of the circumference of the trunks of a tree with multiple trunks is to be undertaken on the basis of the actual circumference of each trunk and without taking into account any space between the trunks.

[5] **Diameter at Breast Height (DBH)** is the diameter of the trunk (circumference ÷ π) measured at breast height (1.40m above ground level). This diameter is used to calculate the Tree Protection Zone radius (TPZ) using the Australia Standard method outlined in AS 4970-2009 *Protection of trees on development sites*. When calculating a DBH for a tree with multiple trunks, the following formula is used.

$$\text{Combined DBH} = \sqrt{(A^2 + B^2 + C^2 \text{ etc.})}$$

(A, B and C etc. are the DBH of each individual stem)

(Refer to appendix A of AS 4970 *Protection of trees on development sites.)*

[6] **Tree Protection Zone** (TPZ) A specified area above and below ground and at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development.

The TPZ is the principal means of protecting trees on development sites. The TPZ 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 TPZ incorporates the Structural Root Zone (SRZ).

The radius of the TPZ is calculated for each tree by multiplying the Trunk Diameter at Breast Height (DBH) × 12.

**TPZ = DBH × 12**

DBH = trunk diameter measured at 1.4 m above ground.

Radius is measured from the centre of the stem at ground level.

A TPZ should not be less than 2 m nor greater than 15 m (except where crown protection is required).

Clause 3.3 covers variations to the TPZ.

The TPZ of palms, other monocots, cycads and tree ferns should not be less than 1 m outside the crown projection.

The diversity of trunk shapes, configurations and growing environments requires that DBH be measured using a range of methods to suit particular situations and Appendix A in AS 4970 provides examples.

When calculating a DBH for a tree with multiple stems, the combined DBH do not accurately represent the root volume or area and the TPZ becomes exaggerated. Combining DBH in the following formula results in a revised total DBH that better represents the total stem cross sectional area as if it were 1 stem. From this a more proportional TPZ can then be calculated.

**Combined DBH = √ ($A^2 + B^2 + C^2$ etc.)**
**(A, B and C etc. are the DBH of each individual stem)**

(Australian Standard: AS 4970 – 2009 *Protection of trees on development sites*)

[7] The diameter of the stem (circumference ÷ π) measured immediately above the root buttress (basal flare). This measurement is taken in metres which is included within the formula to calculate a tree's Structural Root Zone.

[8] **Structural Root Zone** (SRZ) The area around the base of a tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and expressed by its radius in metres.

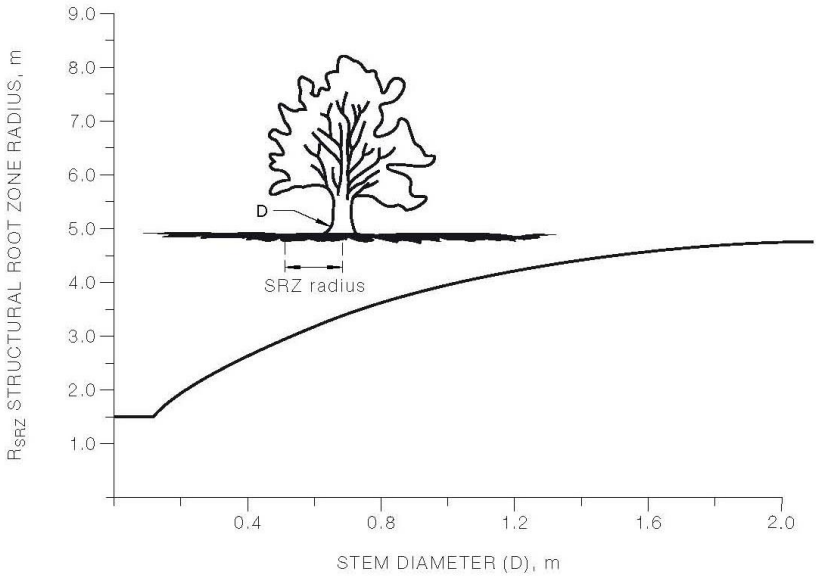
This zone considers a tree's structural stability only, not the root zone required for a tree's vigour and long-term viability, which will usually be a much larger area.

The SRZ only needs to be calculated when major encroachment into the TPZ is proposed.
There are many factors that affect the size of the SRZ (e.g., tree height, crown area, soil type, soil moisture). The SRZ may also be influenced by natural or built structures, such as rock and footings. An indicative SRZ radius can be determined from trunk diameter measured immediately above the root buttress using the following formula. Root investigation may provide more information on the extent of these roots.

**SRZ radius = $(D \times 50)^{0.42} \times 0.64$**

Where D = trunk diameter, in metres measured above the root buttress

Note** The SRZ for trees with trunk diameters less than 0.15m will be 1.5m.




The curve can be expressed by the following formula:
$R_{SRZ} = (D \times 50)^{0.42} \times 0.64$

NOTES:

1 $R_{SRZ}$ is the structural root zone radius.
2 D is the stem diameter measured immediately above root buttress.
3 The SRZ for trees less than 0.15 m diameter is 1.5 m.
4 The SRZ formula and graph do not apply to palms, other monocots, cycads and tree ferns.
5 This does not apply to trees with an asymmetrical root plate.

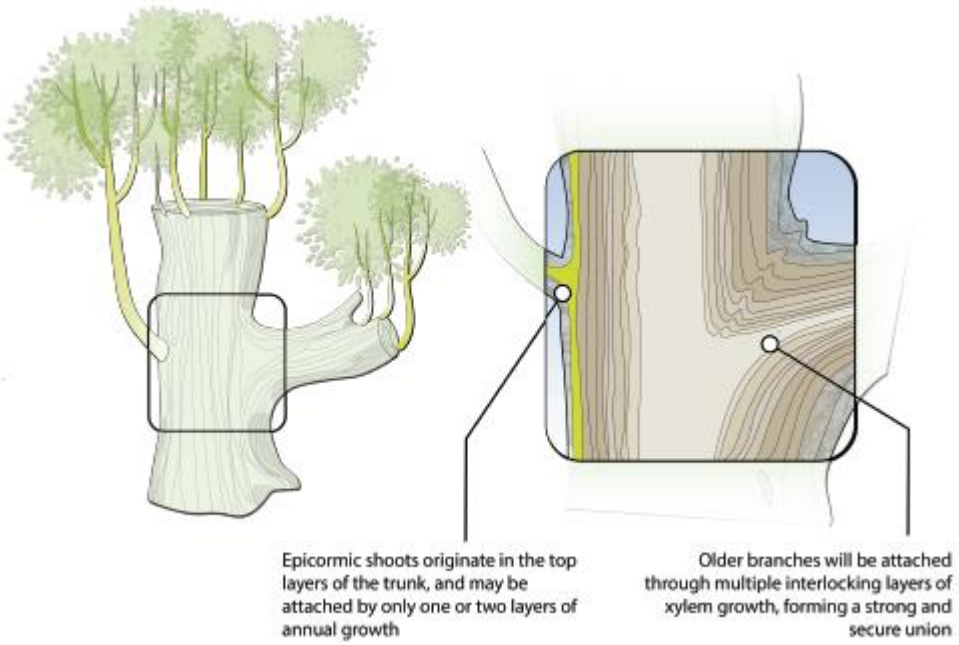
FIGURE 1 STRUCTURAL ROOT ZONE

(AS 4970-2009 *Protection of Trees on Development Sites*).

[9] **Epicormic Shoots** (known in the US as water shoots or water sprouts) are fast-growing shoots originating from buds in the tree trunk or structural branches. Epicormic shoots can be a normal part of growth, a sign of stress or loss of photosynthetic capacity in the upper canopy, a response to sunlight, or a result of damage caused by previous poor pruning practices.

Epicormic growth resulting from injury tends to be vigorous and fast-growing. Shoots may grow as much as three times faster than the tree's usual speed of growth.

Young epicormic shoots attach to just the outer layers of xylem – the layers that have formed after the bud started growing. This attachment is often weaker than an older branch of comparable size.




[10] **Daily weather observations** taken from the Bureau of Meteorology Website http://www.bom.gov.au/climate/dwo/ for the month of November 2021 at the West Terrace weather station. This weather station is 3.5km from the tree location. Specific weather conditions at the tree location may vary from that at the weather station.

[11] **Crown lifting** is the removal of the lower branches. Clearances shall be specified. The maximum diameter and location of the branches to be removed should be specified.

(Australian Standard: AS 4373 – 2007 *Pruning of amenity trees* section 7.3.3.)

[12] **Internode** The space between adjacent nodes (branch unions) on branches or stems separated by stem elongation.

[13] **Thigmomorphogenesis** – the creation of a new shape by touch; in the case of trees this most often relates to the 'touch' of the wind. In open grown trees and trees growing on the windward edge of a group of trees, exposure to wind leads to thicker structural roots, a thicker trunk with increased stem taper and a reduction in tree height, compared to their more sheltered counterparts. Thigmomorphogenesis is also responsible for growth that reinforces potential biomechanical weaknesses within the tree. Most obviously, this results in additional wood at the base of the trunk and the production of trunk flare. If a tree does not experience any crown movement, then this adaptive growth does not occur, leaving the tree vulnerable to failure. Adaptive growth is also associated with additional wood around a cavity or region of decay and the reinforcement of weak stem unions.

(Hirons, A. and Thomas, P. (2018), *Applied Tree Biology,* Wiley Blackwell, UK, pp. 111-113)

[14] **Bureau of Meteorology** – Weather observations data collected at Kent Town station (site number: 023090) (889m north northwest of the subject site) between 1977- 2020. Similar observations have been and continue to be observed at West Terrace station (site number 023000) (3.5km west of the subject site).

[15] For **reduction pruning** the ends of branches are removed to internal lateral branches or stems. The extent of crown or limb reduction shall be specified at the time of assessment. The lateral branch to which the final cut is made should be at least one third of the diameter of the branch being reduced at the point of the final cut. This may be difficult to achieve in remedial pruning and line clearance work. Reduction pruning is not lopping or topping.

(Australian Standard: AS 4373 – 2007 *Pruning of amenity trees* section 7.3.2.)

[16] The **cambium** is a thin sheath of dividing cells located between the wood and the bark and comprises of two layers of lateral meristematic tissue. These layers occur through all parts the tree. The first layer is responsible for the formation the vascular system of the tree. The cambium produces two kinds of tissue, xylem on the inside and phloem on the outside. A second cambial meristem called the cork cambium produces a new layer of bark on the outside. Cambium is critical to the survival and growth of the tree.

[17] **Sapwood** is the living cells at the perimeter of the stem or branch cross section and in vital to the transportation of water, solutes and oxygen. Sapwood is formed by numerous cell types that enable reaction to wounding, accelerated growth and a vascular network for transportation between roots and leaves.

[18] Farrow, R. (2016) *Insects of South-Eastern Australia – An Ecological and Behavioural Guide*. CSIRO Publishing, Clayton South, Victoria.

[19] Jones, D., Elliot, W. and Jones, S. (2015) Pests, Diseases, Ailments and Allies of Australian Plants. New Holland Publishers, London.

[20] The **t/R ratio** is the thickness (t) of sound wood in a branch or stem compared to the radius (R) of that same branch or stem. The critical t/R ratio where stem failure is more likely is below 30-35%. This ratio has been determined following extensive field studies of failed trees including:

- Mattheck, C. (1992). *Baumbruch und Stockfaule*. Deutscher Gartenbau 15, 960.
- Smiley, E.T. & Fraedrich, B.R. (1992). Determining strength loss from decay. *Journal of Arboriculture* 18, 20
- Wagener, W. (1963). *Judging hazard from Native Trees in California recreation areas: a guide for professional foresters*. US Forest Pacific Southwest Forest and Range Experiment Station, Berkley, CA. Research Paper PSW-P1.
- Mattheck, C. and Breloer, H. (1994). *The body language of trees; A handbook for failure analysis*. Research for Amenity Trees #4. London: The Stationery Office.

It is important to note that the t/R ratio alone is not the most reliable indicator of tree or branch failure alone. Other factors must be taken into account, including tree size, tree habit, exposure to prevailing winds, age, condition, species, previous pruning practices, previous branch failure patterns, amongst others.

Some aspects of this research have been criticized in recent years as being too pessimistic or overly conservative. That is especially because there are many examples of trees with a t/R ratio of well below 30% that remain standing.

[21] Mattheck, C. and Breloer, H. (1999) *The Body Language of Trees – A Handbook for Failure Analysis* Department of the Environment, Transport and the Regions. The Stationery Office, London. Page 186.

[22] VALID Tree Risk-Benefit Management Strategy. Summer branch drop strategy notes. Evans, D, 2022.

[23] **ISA TRAQ – Typical Weather Conditions**. Most tree failures occur during periods of adverse weather – wind or ice storms, blizzards or heavy rains coupled with strong winds. Tree risk assessment is undertaken considering normal circumstances and typical weather conditions, which may include storms.

(Dunster, J et.al. (2017), *Tree Risk Assessment Manual – Second Edition* – International Society of Arboriculture, Champaign, Illinois, p 52.)

Weather conditions may further influence occupancy rates. Most tree failures occur during adverse weather events. In general, it is reasonable to assume that there will be fewer people occupying a park, trail, or pedestrian area during torrential rains, typhoons, hurricanes, tornadoes, blizzards, or ice storms. Conversely, in many cities, car traffic increases in rainy weather as people avoid walking, bicycling, or using public transportation if it involves exposure to the weather. It is also important to consider outdoor areas where people will gather during storm events.

(*Tree Risk Assessment Manual – Second Edition* – International Society of Arboriculture 2017 p. 40-41)

[24] Minimum Industry Standard MIS501-*Tree Risk Assessment* (2020) Arboriculture Australia Minimum Industry Standards series.

[25] **Compartmentalisation of decay in trees** (CODIT) is a dynamic defence and protection process that occurs in trees to resist the spread of pathogens and decay organisms using existing and new cells as physical and chemical barriers. The concept was first developed by Alex Shigo from the US Department of Agriculture in 1979, after extensive field wounding and dissection on forestry trees.

Walls 1-3 are reaction zones present at the time of wounding. They are physical barriers to slow or limit the progression of wood decay.

**Wall 1** – Vertical resistance to spread of decay by blocking of vascular tissue – xylem and phloem.

**Wall 2** – Lateral resistance to spread of decay by radially arranged wood tissue – rays.

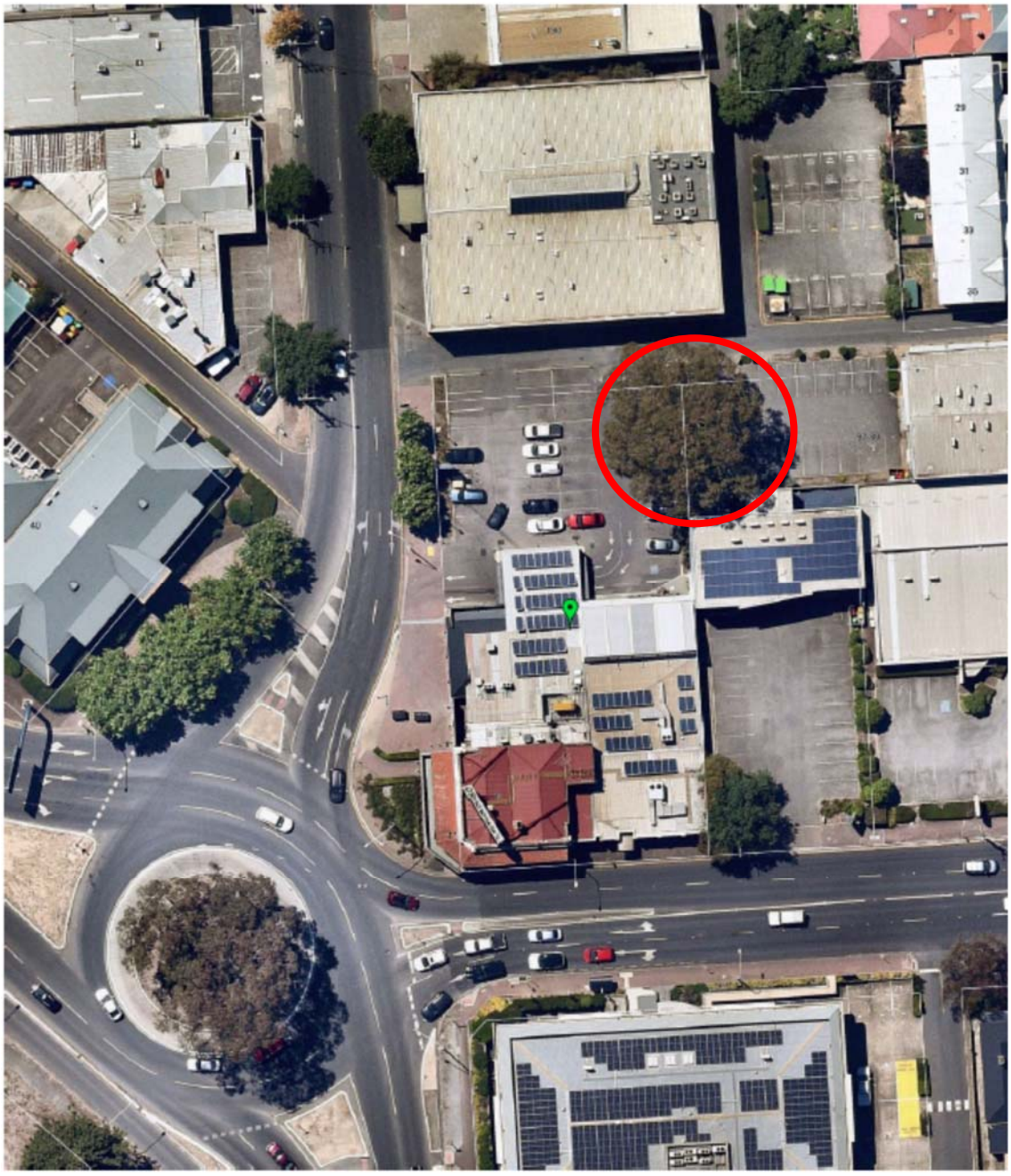
**Wall 3** – Inward resistance to spread of decay by annual growth rings - densely arranged xylem tissues.

Wall 4 consists of the new wood that grows around the wound area after wounding. This forms its own barrier to resist the spread of decay outwards into the newly formed wood.

**Wall 4** – Comprises an active barrier zone with new wood growth that involves the deposition of protective chemicals.

Without this response, trees can potentially succumb to fungal infection or pest invasion that may shorten the life of the tree or adversely affect its structural integrity. The process of compartmentalization requires substantial energy reserves.

Attachment 5



TREE TO BE REMOVED
1 Kensington Road & 39 Clarke Street, Norwood

**Calyptra Pty Ltd**
*trading as*
**Dean Nicolle**
OAM, BAppSc Natural Resource Management, BSc Botany (Hons), PhD

PO Box 808 Melrose Park, SA 5039
Phone: 0413 214 303
Email: dn@dn.com.au
Web: www.dn.com.au

Arboriculture - Botany - Ecology - Eucalypt Research

# Tree Report: Britannia Hotel, Norwood, SA

## Arboricultural assessment of a significant *Eucalyptus camaldulensis* (river red gum) tree

Arboricultural assessment and report requested by Phillip Brunning of *Phillip Brunning and Associates*, on the 28th of February 2023.

Arboricultural report prepared by Dean Nicolle following numerous site inspection and tree assessments since 2017, the latest on the 8th of March 2023.

**Report dated the 8th of March 2023.**

**CONTENTS**

## 1.0 BACKGROUND

I was initially engaged to inspect the tree and provide my preliminary opinion by Mr Phillip Brunning in 2017. At that time I recall forming the opinion that the tree's removal was not warranted. I only provided oral advice at that time. I was again requested by Mr Brunning to inspect the tree in November 2021, following a major branch failure incident. When inspecting the tree in November 2021, I noted that the canopy was larger and consisted of longer, more end-weighted, vigorous branches. In light of the major branch failure incident and other changes to the canopy size and structure, my opinion regarding tree retention on this occasion was quite different to in 2017.

I then assessed the tree on the 9th November 2022, with my findings and recommendations presented in a written report dated the 9th November 2022. I understand that there was then a development application to remove the tree, which was refused.

At the request of the client, I attended the subject site and reinspected the subject tree again on the 30th March 2022, the 26th April 2022, and the 8th June 2022, the last time (7th June 2022) to observe a climbing inspection of the tree undertaken by Shane Selway of *Adelaide Arb Consultants* on behalf of the City of Norwood Payneham and St Peters council.

As part of an appeal in response to the refused development application to remove the tree, I was requested to prepare an expert witness statement (statement dated the 19th August 2022), an addendum statement (statement dated the 8th September 2022) and a document of agreed facts regarding the expert statements of arborist Mr Selway and myself (document dated the 8th September 2022). I understand that the appeal of the refused development application was unsuccessful (dismissed) on the 21st December 2022.

I understand that the tree was pruned by the City of Norwood Payneham & St Peters' pruning contractor (*Urbans Arboriculture*) under the supervision of Mr Selway on the 2nd of February 2023. This pruning appears to have been undertaken in accordance with the 'Tree Pruning Plan' report of Mr Selway dated the 9th of September 2022.

Subsequent to the dismissed appeal of the refused development application to remove the tree on the 21st December 2022, there have been another two noteworthy branch failure events from the tree:

- A major branch approximately 300 mm in diameter that failed from the northern side of the tree on the night of the 27th January 2023 (prior to the pruning of the tree on the 2nd of February 2023); and
- A smaller branch approximately 90 mm in diameter that failed from the western side of the tree on the 18th February 2023 (after the pruning of the tree on the 2nd of February 2023).

In response to these two branch failure events and the ongoing risk to safety represented by the tree, I have been requested by the client to reassess the tree and compile a new tree assessment report. I understand that there will be another development application to remove the tree.

I have now visited the site to inspect and/or assess the tree on the following seven occasions:

- 16th June 2017
- 9th November 2021
- 30th March 2022
- 26th April 2022
- 8th June 2022
- 19th September 2022
- 8th March 2023

All my assessments of the tree were undertaken from ground level only, from within the allotments of the Britannia Hotel and from 37-39 Wadham Lane, as well as from nearby publicly-assessable areas.

This March 2023 report supersedes all other reports and statements that I have compiled for the subject tree. However, this report considers all my earlier assessments of the tree and includes some earlier data and photographs of the tree (as indicated) where necessary to illustrate my findings and recommendations. This report includes:

1. An assessment of the health, structure, and risk to safety represented by the tree; and
2. An assessment of the retention value of the tree; and
3. An assessment of the tree against the Desired Outcome and Performance Outcomes of the Regulated and Significant Tree Overlay of the *Planning & Design Code* adopted 30 March 2023.

It should be noted that my general findings and recommendations regarding the tree remain the same as that detailed in my earlier reports and statements regarding the tree.


*Figure 1. My photograph of the subject tree, looking approximately south-east from Wadham Lane on the 8th of March 2023, following the recent pruning of the tree (in February 2023) and the recent branch failure events from the tree (in January and February 2023). Note the large canopy of the tree overhanging a number of formal car parking spaces within the car park of the Britannia Hotel.*

*Figure 2. My photograph of the subject tree, looking approximately west from the carpark at 37-39 Wadham Lane on the 8th of March 2023, following the recent pruning of the tree (in February 2023) and the recent branch failure events from the tree (in January and February 2023). Note the large canopy of the tree overhanging a number of formal car parking spaces within the car park at 37-39 Wadham Lane.*

## 2.0 TREE ASSESSMENT

Location: On the common boundary of the Britannia Hotel allotment and the adjacent allotment of 37-39 Wadham Lane in Norwood, South Australia (Figures 1 and 2).

The centre of the tree at ground level (the origin point of the tree) is entirely within the allotment of the Britannia Hotel, with approximately 20% of the trunk now extending onto the adjacent allotment of 37-39 Wadham Lane.

The canopy of the tree currently overhangs approximately eight formal car parking spaces in the Britannia Hotel carpark (Figure 1) and three formal car parking spaces in the allotment of 37-39 Wadham Lane (Figure 1).

Species: *Eucalyptus camaldulensis* subsp. *camaldulensis* (river red gum).

Key references: Nicolle (2022). *Native Eucalypts of Victoria and Tasmania, South-eastern Australia.* Pp. 94–95.

Nicolle (2016). *Taller Eucalypts for Planting in Australia - Their Selection, Cultivation and Management.* Pp. 56–59.

Nicolle (2013). *Native Eucalypts of South Australia.* Pp. 44–45.

Legal status: A **significant** tree as defined by the *Planning, Development and Infrastructure Act 2016* and the *Planning, Development and Infrastructure (General) Regulations 2017*.

| | |
|---|---|
| - *Species*: | *Eucalyptus camaldulensis* |
| - *Trunk circ. at one metre*: | Approximately 3.70 metres |
| - *Distance to dwelling/pool*: | Not applicable for this species |
| - *Bushfire Risk*: | Excluded area |
| - *Living/dead status*: | Currently alive |
| - *Exemptions*: | No generic exemptions |

Current size: 24.5 metres tall (laser-measured 8/3/23). Average of 21.25 metres wide (canopy spread, laser-measured 8/3/23).

Trunk structure: Single trunk up to four metres above ground level, from where irregularly-spaced, small to heavy branches of moderate to long length begins.

Canopy structure: Rounded in shape, generally moderate in density, and generally evenly weighted on all sides.

Anticipated size: Not yet fully-grown under the existing environmental and site conditions and considering the species, age, health, and structure of the tree. Eventual size approximately 26 metres tall x 26 metres spread.

| | |
|---|---|
| Species origin: | Indigenous to the locality. |
| Tree origin: | Most likely self-seeded, but certainly of post-European settlement origin (i.e. semi-remnant). |
| Estimated age: | 25 – 50 years. |
| Biodiversity value: | Very high. A reproductively mature specimen of a locally indigenous species; some small faunal-habitable hollows are evident in the tree, suitable as nesting sites by small birds such as pardalotes (Figures 15, 18, 19 and 20). |
| Landscape value: | High. The tree is a locally large (but not yet fully-grown) specimen and is quite visible from both Fullarton Road and Wadham Lane (Figures 1 and 3). |
| *Actual* Life Expectancy[1]: | Another 30+ years. |
| *Useful* Life Expectancy[2]: | Exceeded, due to the unacceptable and unmanageable risk that the tree represents to safety and to property. |
| Health: | Above average[3]. |
| Vigour: | Moderate. |
| Borer activity: | Longhorn borer (*Phoracantha sp.*) activity is evident in the tree when viewed from ground level (note that I have not done a climbing inspection of the tree), which is typical of mature individuals of the species. However, the scar created by the structural failure of a major branch in 2021 reveals a number of large heartwood galleries and pupal chambers caused by a species of borer which has caused larger holes and galleries (Figure 6), and which has structurally weakened the wood. Similarly large entries to pupal cells and galleries are evident in at least four large branches (Figures 23 to 25 and 18 to 21), which have also been partly damaged by galahs/corellas/ cockatoos, presumably to access the insects for food. |
| Termite activity: | None visibly evident. |
| Fungal wood decay: | None visibly evident. |

[1] *The Actual Life Expectancy (ALE) of the tree is the amount of time that the tree is expected to be alive, regardless of the landscape value of the tree and its risk to safety and to property.*

[2] *The Useful Life Expectancy (ULE) of the tree is the amount of time that the tree is expected to be alive and fulfil its function in the locality by having some landscape value and representing an acceptable and manageable risk to safety and to property.*

[3] *The health of a tree can be unrelated to the structure and associated risks to safety represented by the tree. As such, a healthy tree can sometimes be structurally flawed and/or otherwise represent an unacceptable risk to safety (as is the case here) while a dead tree can sometimes be structurally sound and represent an acceptable risk to safety. In the case of mature* Eucalyptus camaldulensis *trees in the Adelaide region, it is often the healthiest and most vigorous trees that are the most prone to sudden limb failures, due to their rapid growth of end-weighted branches.*

General structure: Below average (due to the over-extended and end-weighted branches forming the canopy in conjunction with structural defects at various points in some branches) and deteriorating over time (due to the increasing length and end-weighting of branches forming the canopy).

Basal structure: Well buttressed, healthy and generally sound.

Trunk structure: Healthy and generally sound.

WTSF likelihood: The likelihood of Whole-of-Tree Structural Failure (i.e. the whole tree structurally failing at ground level or through the trunk, and falling over) is currently considered to be **extremely low**.

BF likelihood: Primary branch junctions in the tree appear to be healthy and generally well-structured. However, most branches are over-extended and end-weighted (Figures 1, 2, 8 and 10), and are becoming increasingly so over time (due to the tree's ongoing growth). At least four major branches also have visible structural defects caused by large borer galleries and associated bird damage (Figures 7 to 10 and 12 to 15). These factors significantly increase the *likelihood* of structural Branch Failure events, and especially of sudden limb failure events. Overall, the *likelihood* of Branch Failure in this individual is currently considered to be moderate[4] and increasing over time (as the branches become longer and more end-weighted with ongoing growth).

BF consequence: The *consequence* (impact potential) of any structural Branch Failure events from the tree is amplified by the use of almost the entire under-canopy area of the tree as uncovered commercial carparks.

Failure history: The tree has had an extensive history of recent branch failure events, most notably:

- A major branch (approximately 300 mm in diameter at its point of failure) that failed from a height of approximately six metres above ground level from the north-western canopy of the tree on the afternoon of the 2nd November 2021 (Figures 3 to 9). This failure event damaged three cars parked in the Britannia Hotel carpark (Figure 4). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event (Figure 6). The failed branch was likely over-extended and end-weighted (like most

[4] *Most trees have a low to very low (but never zero) likelihood of structural branch failure. A moderate likelihood of structural branch failure is therefore atypical and represents an elevated likelihood compared to that of most trees. Very rarely a tree will be assessed as having a high likelihood of structural branch failure, and this term is more usually used for specific branches within a tree that in the process of physically failing.*

branches forming the canopy of the tree) and the failure scar indicates large longhorn borer galleries in the heartwood (Figure 6) – both of these likely contributed to the failure of this branch.

- A major branch (approximately 300 mm in diameter at its point of failure) that failed from a height of approximately seven metres above ground level from the northern canopy of the tree at 12:43 am on the night of the 27th January 2023 (prior to the pruning of the tree on the 2nd of February 2023) when there we no vehicles in the car parking spaces beneath the tree (Figures 3, 7, 8 and 9). This branch failure occurred in a healthy branch, at an internodal point, and in calm conditions (as evidenced in video of the branch failure captured by CCTV footage at the site), and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree), which likely contributed to the failure of this branch.
- A minor branch (approximately 90 mm in diameter at its point of failure) that failed from a height of approximately ten metres above ground level from the western canopy of the tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023; Figures 10 to 13). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event (Figures 10 and 11). The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree, despite the recent pruning) which likely contributed to the failure of this branch.

Similar events involving major branch failures are certain to occur on an ongoing basis in the future, although it is difficult to determine the frequency, and impossible to determine the timeframe, of future major branch failures.

Risk to safety:

Currently considered to be **moderate[5] (and in my opinion unacceptable), and increasing over time**.

The risk to safety is associated with both the increased likelihood branch failure events, and the increased consequence

[5] *The vast majority of trees have a low to very low (or rarely zero) risk to safety. A low to moderate risk to safety is uncommon, while a moderate risk to safety is much rarer and represents an elevated level compared to that of most trees. Relatively rarely a tree will be assessed as having a high risk to safety.*

of branch failure events, coupled with the under-canopy use of the site.

Tree-caused damage: There is up to 500 mm of vertical displacement of the bitumen-sealed surface of both the carpark at the Britannia Hotel carpark and the carpark in the allotment of 37-39 Wadham Lane (Figure 11), caused by an ongoing increase in the diameter of the roots of the tree. The concrete edge to the carpark at the Britannia Hotel has also been displaced by the tree.

Nuisances: The ongoing shedding of leaves, flowers, fruits, and bark from the tree may represent a manageable nuisance issue on adjacent paved surfaces.


*Figure 3. My photograph of the subject tree, looking south from Wadham Lane on the 8th of March 2023. The pruning scars of the stubs from the two largest structural failures in the tree are indicated. Note that the canopy of the tree overhanging numerous car parking spaces at the Britannia Hotel carpark and in the neighboring allotment of 37-39 Wadham Lane.*

*Figure 4. Photograph of the subject tree and the branch failure that occurred on the 2nd November 2021 (photo taken by others and provided to me by Phillip Brunning of* Phillip Brunning and Associates*), looking approximately east from the Britannia Hotel carpark. Three vehicles were damaged by this branch failure event, which occurred in non-extreme weather.*

*Figure 5. My photograph of the subject tree, looking approximately south from the Britannia Hotel carpark on the 9th of November 2021 (following a recent major branch failure). The superimposed yellow ring indicates the recent branch failure scar. This failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree) and the failure scar indicates large longhorn borer galleries in the heartwood – both of these likely contributed to the failure of this branch (also see Figure 6). This failure scar has now been pruned back more cleanly, presumably for aesthetic reasons (see Figure 7).*

*Figure 6. My photograph of the scar caused by the recent failure of a major branch from the tree, photographed on the 7th of June 2022. This failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree) and the failure scar indicates large longhorn borer galleries in the heartwood – both of these likely contributed to the failure of this branch. The superimposed yellow ring indicates the area where longhorn borers have created large heartwood galleries and pupal chambers. This failure scar has now been pruned back more cleanly, presumably for aesthetic reasons (see Figure 7).*


*Figure 7. My photograph of the subject tree, looking approximately south-east from the Britannia Hotel carpark on the 8th of March 2023. The pruning scars of the stubs from the two largest structural failures in the tree are indicated. Both of these failure scars have been pruned back more cleanly, presumably for aesthetic reasons.*


*Figure 8. Photograph of the subject tree and the branch failure that occurred on the 27th January 2023 (photo taken by others and provided to me by the client on the 27th January 2023), looking approximately east from the Britannia Hotel carpark. Also note the failure scar from the 2021 major branch failure.*


*Figure 9. Photograph of the subject tree and the branch failure that occurred on the 27th January 2023 (photo taken by others and provided to me by the client on the 27th January 2023), looking approximately east from the Britannia Hotel carpark. Also note the failure scar from the 2021 major branch failure.*

*Figure 10. My photograph of the butt end of a minor branch (approximately 90 mm in diameter at its point of failure; photo taken on the 8th of March 2023) that failed from a height of approximately ten metres above ground level from the western canopy of the subject tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree, despite the recent pruning) which likely contributed to the failure of this branch.*


*Figure 11. My close-up photograph of the butt end of a minor branch (approximately 90 mm in diameter at its point of failure; photo taken on the 8th of March 2023) that failed from a height of approximately ten metres above ground level from the western canopy of the subject tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event.*

*Figure 12. My photograph of the failure scar in the western canopy caused by the failure of a minor branch (approximately 90 mm in diameter at its point of failure; photo taken on the 8th of March 2023) that failed from a height of approximately ten metres above ground level from the western canopy of the subject tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023; also see Figure 13). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site). This branch failure occurred in a healthy branch, at an internodal point, and in non-extreme weather, and is therefore indicative of a sudden branch failure event. The failed branch was likely over-extended and end-weighted (like most branches forming the canopy of the tree, despite the recent pruning) which likely contributed to the failure of this branch.*

*Figure 13. My photograph of the western and central canopy of the tree; looking approximately north from the Britannia Hotel carpark on the 8th of March 2023. The superimposed yellow arrow indicates the position of the failure scar caused by the failure of a minor branch (approximately 90 mm in diameter at its point of failure) that failed from a height of approximately ten metres above ground level from the western canopy of the subject tree on the 18th February 2023 (about two weeks after the pruning of the tree that occurred on the 2nd of February 2023; also see Figure 12). This branch fell from the tree and hit the ground only a few seconds after a person drove a car out of the car park (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site).*

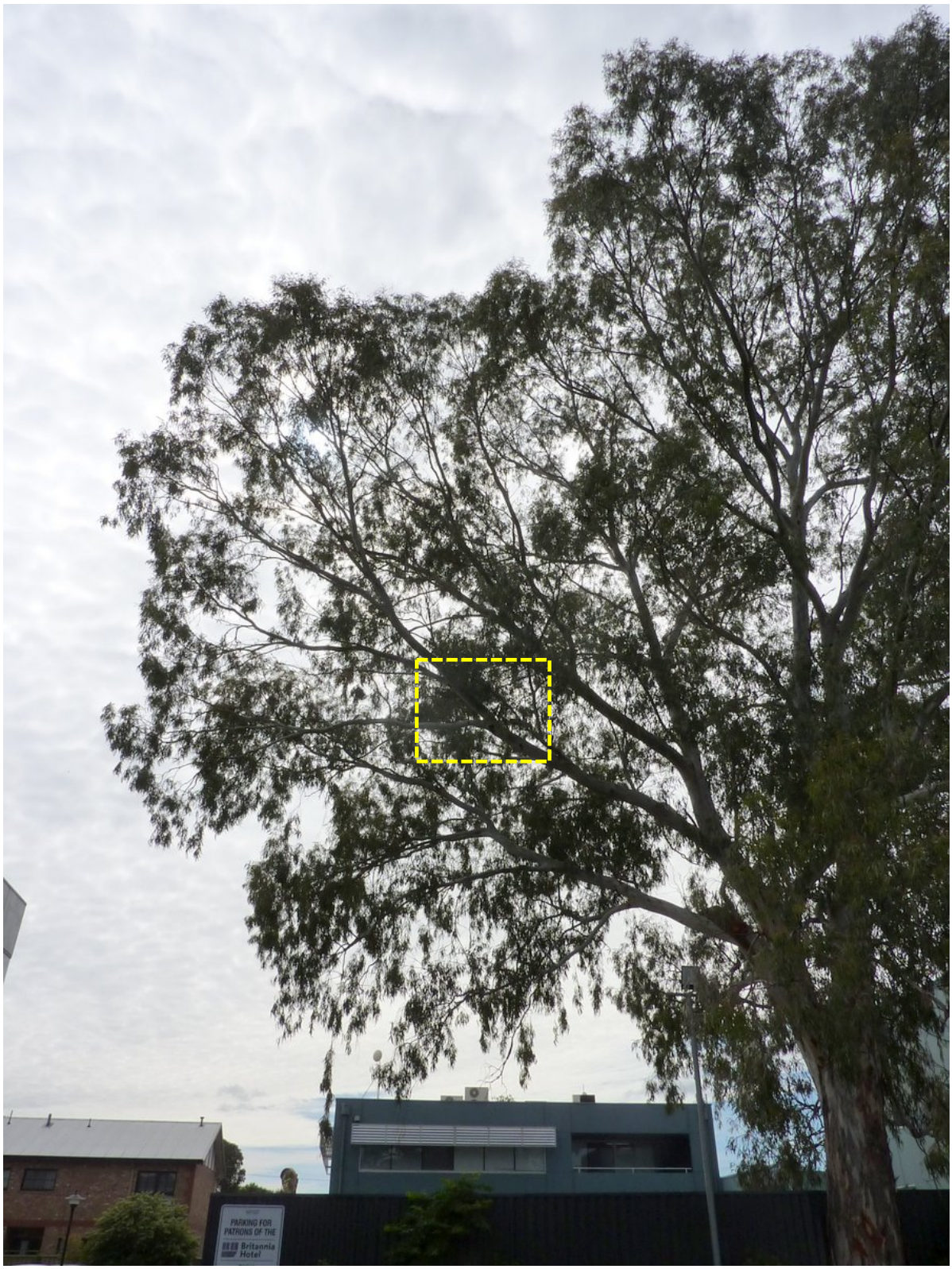



*Figure 14 My photograph of the subject tree, looking approximately east from the Britannia Hotel carpark on the 9th of November 2021. The superimposed yellow rectangle indicates the field of view in Figure 7, where a primary branch in the northern canopy of the tree is structurally defective. The removal of this branch would open the canopy to other potential branch failures (noting other similar branches would also require removal). Also note the increasingly over-extended structure of most branches forming the canopy of the tree.*

*Figure 15. My photograph of a primary branch in the <u>western</u> canopy of the tree (refer to Figure 10) on the 9th of November 2021, with the superimposed yellow arrow indicating an entry/exit hole to longhorn borer pupal cells or galleries and surrounding damage to cambium by galahs/corellas/ cockatoos (presumably to access the insects for food). This branch is also structurally defective at this point, but its removal would open the canopy to other potential branch failures (noting other similar branches would also require removal).*

*Figure 16. My photograph of the subject tree, looking approximately north from the Britannia Hotel carpark on the 9th of November 2021. The superimposed yellow rectangle indicates the field of view in Figure 9, where a primary branch in the northern canopy of the tree is structurally defective. The removal of this branch would open the canopy to other potential branch failures (noting other similar branches would also require removal). Also note the increasingly over-extended structure of most branches forming the canopy of the tree.*

*Figure 17. My photograph of the subject tree, looking approximately north-east from the Britannia Hotel carpark on the 8th of March 2023. There is up to 500 mm of vertical displacement of the bitumen-sealed surface of both the carpark at the Britannia Hotel carpark and the carpark in the allotment of 37-39 Wadham Lane, caused by an ongoing increase in the diameter of the roots of the tree. The concrete edge to the carpark at the Britannia Hotel has also been displaced by the tree.*

*Figure 18. My photograph of a primary branch in the <u>northern</u> canopy of the tree (refer to Figure 19) on the 7th of June 2022, with the superimposed yellow arrows indicating entry/exit holes to longhorn borer pupal cells or galleries and surrounding damage to cambium by galahs/corellas/ cockatoos (presumably to access the insects for food). This branch is structurally defective at these points, but its removal would open the canopy to other potential branch failures (noting other similar branches would also require removal).*

*Figure 19. My photograph of part of the canopy of subject tree on the 7th of June 2022, looking approximately south from Wadham Lane. The superimposed yellow rectangle indicates the field of view in Figure 18, where a primary branch in the southern canopy of the tree is structurally defective. The removal of this branch would open the canopy to other potential branch failures.*

*Figure 20. My photograph of a primary leader in the upper, central canopy of the tree (refer to Figure 21) on the 7th of June 2022, with the superimposed yellow arrow indicating an entry/exit hole to longhorn borer pupal cells or galleries and surrounding damage to cambium by galahs/corellas/ cockatoos (presumably to access the insects for food). This leader is structurally defective at this point, but its removal would significantly open the canopy to other potential branch failures (noting other similar branches would also require removal).*

*Figure 21. My photograph of the canopy of subject tree on the 7th of June 2022, looking approximately west from the carpark in the allotment of 37-39 Wadham Lane. The superimposed yellow rectangle indicates the field of view in Figure 20, where a primary leader is structurally defective. The removal of this leader would open the canopy to other potential branch failures.*

## 3.0 RETENTION VALUE

The retention value of the tree is based on the following data:

- Historical significance (*National Trust of South Australia*);
- Tree origin;
- Current health;
- Further Actual Life Expectancy (ALE);
- Biodiversity value;
- Landscape value;
- Tree structure;
- Risk to safety; and
- Damage and nuisances.

The tree has been scored for each of these nine characteristics (see Table 1). The sum of scores for the tree provides a total score: the higher the total score, the more valuable the tree (see Table 2). The total score for a tree can vary from -160 (lowest point value for all nine characteristics) to 140 points (highest point value for all nine characteristics).

**In this case, the tree has a score of 26 (see Table 1), and is therefore assessed to be of low value (see Table 2).**

***Table 1. Scoring for retention value.*** *The characteristics and character states used to score the tree to determine its retention value. The character states for the subject tree are highlighted green.*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Historical significance (*NTSA*[6])** | *National importance* **Score: 40** | *State importance* **Score: 30** | *Regional importance* **Score: 20** | *Local importance* **Score: 10** | *Not listed on NTSA* [4] **Score: 0** | | | |
| **Origin** | *Remnant* **Score: 20** | *Remnant/semi* **Score: 15** | *Semi-remnant* **Score: 10** | *Semi- / planted* **Score: 5** | *Planted* **Score: 0** | *Planted / weed* **Score: -5** | *Weed* **Score: -10** | |
| **Health** | *Excellent* **Score: 10** | *Above average* **Score: 8** | *Average* **Score: 5** | *Below average* **Score: 3** | *Poor* **Score: 0** | | *Very poor* **Score: -10** | *Dead* **Score: -20** |
| **Further ALE** | *30+ years* **Score: 10** | *20+ years* **Score: 8** | *10–20+ years* **Score: 5** | *10–20 years* **Score: 2** | *<10–20 years* **Score: 0** | *<5–10 years* **Score: -5** | *<5 years* **Score: -10** | *<2 years* **Score: -20** |
| **Biodiversity** | *Very high* **Score: 10** | *High* **Score: 8** | *Moderate* **Score: 5** | *Low* **Score: 2** | *Negligible* **Score: 0** | | *Invasive* **Score: -10** | |
| **Landscape** | *Very high* **Score: 10** | *High* **Score: 8** | *Mod to high* **Score: 5** | *Moderate* **Score: 3** | *Low to mod* **Score: 0** | | *Low* **Score: -10** | *Very low* **Score: -20** |
| **Structure** | *Excellent* **Score: 15** | | *Above average* **Score: 10** | | *Average* **Score: 5** | *Below average* **Score: -5** | *Poor* **Score: -10** | *Very poor* **Score: -20** |
| **Risk to safety** | *Very low* **Score: 15** | *Low* **Score: 10** | *Low to mod* **Score: 5** | *Moderate & stable* **Score: 0** | *Moderate, increasing* **Score: -10** | *Mod to high* **Score: -20** | *High* **Score: -30** | *Very high* **Score: -40** |
| **Damage & nuisances** | *None* **Score: 10** | | *No damage but some nuisances (eg leaf debris)* **Score: 5** | *No damage, but minor maintenance issues (eg lifted pavers)* **Score: 0** | *Damage to minor structures (eg paths/ driveways* **Score: -5** | *Damage to moderate structures (eg masonry walls* **Score: -10** | *Damage to substantial structures (eg dwellings)* **Score: -20** | |

[6] *National Trust of South Australia* register of significant trees.

***Table 2. Retention value categories.*** *The five retention value categories, for each category the score required, the general description, and the development constraints appropriate. The retention value category of the subject tree (assuming the tree is pruned as recommended; score of 26) is highlighted green.*

| Retention value | Score | General description | Development constraints |
|---|---|---|---|
| **Priority 1A** ***Very high value*** | >60 points | Remnant or semi-remnant trees in sound health, with a long further Useful Life Expectancy, of superior structure, and with a significant biodiversity value and landscape value | Trees of very highly value are relatively rare and should be retained by appropriate development design and construction. |
| **Priority 1** ***High value*** | 46 to 60 points | Trees in sound health and/or with a long further Useful Life Expectancy, of generally sound structure (or where defects can be practically mitigated or managed), and usually with a significant biodiversity value &/or landscape value | Trees of high value should be retained by appropriate development design and construction. |
| **Priority 2** ***Moderate value*** | 35 to 45 points | Trees in sound healthy and/or with an expected moderate to long further Useful Life Expectancy, of reasonable structure (or where defects can be mostly mitigated or managed), and of moderate to high biodiversity value &/or landscape value | Trees of moderate value should be retained whenever possible, by appropriate development design and construction. |
| **Priority 3** ***Low value*** | 20 to 34 points | Trees often of reduced health and/or having a short to moderate further Useful Life Expectancy, and/or may have some structural flaws, and are generally of lower biodiversity value &/or lower landscape value | Trees of low value should not constrain site development but may be retained if the proposed design and construction allows. |
| **Priority 4** ***No value*** | <20 points | Trees in poor health and/or having a short or exceeded Useful Life Expectancy, and/or have significant structural flaws that cannot be practically mitigated or managed, &/or are of no of little biodiversity value &/or landscape value | Trees of no value should not constrain site development and should be removed in the case of site development, even if they do not constrain the development. |

These retention value tables serve only as a summary of my professional judgement on the various criteria that I consider relevant to the question of whether the tree is worthy of retention. I use these retention value tables widely when assessing trees, regardless of whether the provisions of the Planning and Design Code Overlay are applicable or not.

Independently of assessing the retention value of the tree, I have also assessed the tree in the context of the following provisions of the Planning and Design Code Overlay. Some (but not all) of the criteria I have used to assess the retention value of the tree partly overlap with the criteria used to assess the provisions of the Planning and Design Code Overlay. My summary of findings and recommendations are the result of my assessment of the tree in the context of the identified Code provisions.

## 4.0 PLANNING AND DESIGN CODE
**adopted 30 March 2023**

**Regulated and Significant Tree Overlay – Assessment Provisions**

## 4.1 DESIRED OUTCOMES

***DO 1*** ***Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss.***

The tree is significant as defined by the *Planning, Development and Infrastructure Act 2016* and the *Planning, Development and Infrastructure (General) Regulations 2017.*

The tree provides significant aesthetic and environmental benefits, as detailed in the Section 4.2 (*Performance Outcomes*) below.

## 4.2 PERFORMANCE OUTCOMES – Tree Retention and Health

***PO 1.2*** ***Significant trees are retained where they:***

***(a) make an important visual contribution to the character or amenity of the local area***

I acknowledge that this matter may fall outside the area of my expertise. However, in my opinion the tree does make an important visual contribution to the character or amenity of the local area.

***(b) are indigenous to the local area and are listed under the* National Parks and Wildlife Act 1972 *as a rare or endangered native species***

The tree is of a species that is indigenous to the locality, but is not classified as rare or endangered under the *Act*.

***(c) represent an important habitat for native fauna***

The tree does represent an *important* habitat for native fauna. The tree is a large, reproductively mature specimen of a locally indigenous species. some small faunal-habitable hollows are evident in the tree, suitable as nesting sites by small birds such as pardalotes.

***(d) are part of a wildlife corridor of a remnant area of native vegetation***

The tree is not part of a wildlife corridor of remnant native vegetation.

***(e) are important to the maintenance of biodiversity in the local environment***

The tree is important to the maintenance of biodiversity in the local environment. The tree is a large, reproductively mature specimen of a locally indigenous species. some small faunal-habitable hollows are evident in the tree, suitable as nesting sites by small birds such as pardalotes.

***and / or***

***(f) form a notable visual element to the landscape of the local area.***

I acknowledge that this matter may fall outside the area of my expertise. However, in my opinion the tree does form a notable visual element to the landscape of the local area.

***PO 1.3 A tree damaging activity not in connection with other development satisfies (a) and (b):***

***(a) tree damaging activity is only undertaken to:***

***(i) remove a diseased tree where its life expectancy is short***

The tree is unusually diseased, in that the borers present (which in itself is typical of mature individuals of the species) have caused relatively large-diameter holes and galleries in the wood of a number of primary and secondary branches. The Useful Life Expectancy of the tree has been exceeded due to the unacceptable (and increasing) and unmanageable risk that the tree represents to safety and to property, associated with the branch structure of the tree.

***(ii) mitigate an unacceptable risk to public or private safety due to limb drop or the like***

The tree currently represents a moderate and marginally unacceptable, and increasing risk to safety.

The risk to safety is associated with both the increased (and continuously increasing) *likelihood* of branch failure events (associated with the over-extended and end-weighted branches forming the canopy in conjunction with structural defects at various points in some branches), and the increased (and continuously increasing) *consequence* of branch failure events (associated with the canopy size and height and the under-canopy use of the site).

***(iii) rectify or prevent extensive damage to a building of value as comprising any of the following:***

***A. a Local Heritage Place***
***B. a State Heritage Place***
***C. a substantial building of value***

The tree is not currently causing or threatening to cause extensive damage to a building of value of any of the above.

There is, however, damage to carpark surface and concrete edging both in the Britannia Hotel carpark and the carpark in the allotment of 37-39 Wadham Lane (Figure 11), where closest to the tree. This carpark damage alone would not justify the removal of the tree in my opinion.

***(iv) reduce an unacceptable hazard associated with a tree within 20 m of an existing residential, tourist accommodation or other habitable building from a bushfire***

The tree is not a bushfire hazard.

***(v) treat disease or otherwise in the general interests of the health of the tree***

Not applicable.

***and / or***

***(vi) maintain the aesthetic appearance and structural integrity of the tree***

Not applicable.

***(b) in relation to a significant tree, tree damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective.***

The significantly elevated and increasing risk to safety is associated with both the increased (and continuously increasing) *likelihood* of branch failure events (associated with the over-extended and end-weighted branches forming the canopy in conjunction with structural defects at various points in some branches), and the increased (and continuously increasing) *consequence* of branch failure events (associated with the canopy size and height and the under-canopy use of the site). The increasingly over-extended and end-weighted branches forming the canopy is associated with the rapid growth of the tree. Slower-growing specimens of the species typically have shorter, less end-weighted branches and have a much lower likelihood of branch failure and thus a lower associated risk to safety (regardless of the under-canopy use).

Risk mitigation techniques, including exclusion zones, under-canopy protective structures, pruning techniques, and branch cabling have been considered but are not considered to be viable solutions in this case, for the reasoning detailed below.

*Exclusion zones:*
The target area of the tree is approximately 14 metres radius from the centre of the tree (based on an average canopy spread of 11 radius and some lateral movement of falling limbs via wind-load). An exclusion zone would require this area (14 m radius = 616 $m^2$) to be significantly modified to be of low use (i.e. the removal of 8 x carparks at the Britannia Hotel and 3 x carparks at 37-39 Wadham Lane). This solution is unlikely to be viable considering the large target area and the existing site constraints.

*Under-canopy structures:*
Under-canopy protective structures would be required over the whole of the target area (14 m radius = 616 $m^2$) to significantly reduce the risk to safety associated with the tree. The canopy size of the tree (both height and spread) will continue to increase over time. Therefore the target area and the area requiring under-canopy protective structures will also increase over time. The target area may increase to be as much as 20 metres in radius over the next 20 to 30 years (assuming a canopy size of 26 metres tall x 26 metres spread), which will result in a target area of 1257 $m^2$, which is over double the area of the current target area. Under-canopy protective structures are unlikely to be viable considering the large area requiring an under-canopy protective structure (both now and in the future) and the costs associated with construction of such structures.

*Pruning:*
The pruning of the tree that occurred on the 2nd of February 2023 has not, in my opinion, significantly reduced the *likelihood* of branch failure to an extent that the risk to safety represented by the tree is reduced to an acceptable risk in its current situation. It should be noted that the branch failure that occurred on the 18th February 2023, which missed hitting a person getting into their car by less than a few seconds (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site), occurred only a couple of weeks after the pruning of the tree. Such branch failures are likely to be ongoing, regardless of the pruning of the tree.

Pruning is not a viable method to reduce and maintain the risk associated with the tree at an acceptable level in this individual due to a number of structurally defective branches in the canopy of the tree (Figures 14 to 16 and 18 to 21) and most remaining branches being over-extended (even following the February 2023 pruning) and lacking internal pruning points in which to maintain a viable canopy. The extent of pruning that would be required to mitigate the structural defects in the tree (both the point-defects from borer/bird damage and

the more generic defects of increasingly over-extended and end-weighted branches) is such that the bulk of the tree's canopy would require removal. Such pruning would immediately reduce the risk to safety associated with the tree to a lower and acceptable level, but is not recommended for the following reasons:

- Such pruning will significantly reduce the landscape value of the tree, to an extent that tree removal is a more reasonable option; and
- Such pruning will significantly reduce the biodiversity value of the tree, to an extent that tree removal is a more reasonable option; and
- Such pruning will destroy the structure of the tree and result in the vigorous growth of weakly-attached reshoots of epicormic origin, which will present major management issues in the medium to long-term, including a longer-term increased risk to safety associated with the tree; and
- Such pruning will not alleviate the ongoing displacement to the bitumen-sealed surface of both the carpark at the Britannia Hotel carpark and the carpark in the allotment of 37-39 Wadham Lane, caused by an ongoing increase in the diameter of the roots of the tree.

*Branch cabling:*

Branch cabling is not an viable solution due to the vigour of the tree (the canopy size increasing rapidly over time, resulting in the balance of branches, and therefore the required cabling positions, changing over time), the wood characteristics of the species (the wood being relatively brittle and more subject to point-fractures than in many other species), most branches being over-extended and end-weighted (meaning extensive cabling to ensure every over-extended branch is cabled), and the high under-canopy use of the site. The combination of these factors will mean that cabling would either be ineffective, or, more troublingly, may result in a single branch failure causing the structural failure of other branches that are cable-attached to it.

## 5.0 SUMMARY of FINDINGS

### 5.1 *Legal status of the tree*

The tree is significant as defined by the *PDI Act 2016* and the *PDI (General) Regulations 2017*. Development approval is therefore required to remove or otherwise damage the tree.

### 5.2 *Arboricultural assessment*

The tree has high value from a biodiversity and landscape amenity viewpoint. However, the tree currently represents an elevated and increasing risk to safety, associated with both the amplified (and continuously increasing) *likelihood* of branch failure events (associated with the over-extended and end-weighted branches forming the canopy in conjunction with structural defects at various points in some branches, and the recent history of a major branch failure event), and the amplified (and continuously increasing) *consequence* of branch failure events (associated with the canopy size and height of the tree and the under-canopy use of the site).

The tree is atypical for a specimen of this species (*Eucalyptus camaldulensis* – river red gum), in its combination of over-extended and end-weighted branches (associated with its very rapid growth throughout its 25 to 50 year life) in conjunction with the numerous structural defects caused by atypical borer damage in the primary and secondary branches. These atypical features, in conjunction with the high under-canopy use of the site, results in this individual representing a much higher risk to safety than other river red gums without these features and/or with a lower under-canopy use.

This risk to safety represented by the tree cannot be effectively mitigated by pruning or other practicable means (as detailed under *Performance Outcomes* 1.3 (b)). The pruning of the tree that occurred on the 2nd of February 2023 has not, in my opinion, significantly reduced the *likelihood* of branch failure such that the tree represents an acceptable risk in its current situation. It should be noted that the branch failure that occurred on the 18th February 2023, which missed hitting a person getting into their car by less than a few seconds (as evidenced in video of the branch falling from the tree captured by CCTV footage at the site), occurred only a couple of weeks after the pruning of the tree. Such branch failures are likely to be ongoing, regardless of the pruning of the tree.

### 5.3 *Planning and Design Code - Performance Outcomes*

The tree satisfies *Performance Outcomes* 1.2 (a), (c), (e) and (f) of the Regulated and Significant Tree Overlay Assessment Provisions in the Code.

Tree damaging activity (in the form of tree removal) satisfies *Performance Outcomes* 1.3 (a) (i) and (ii), and (b).

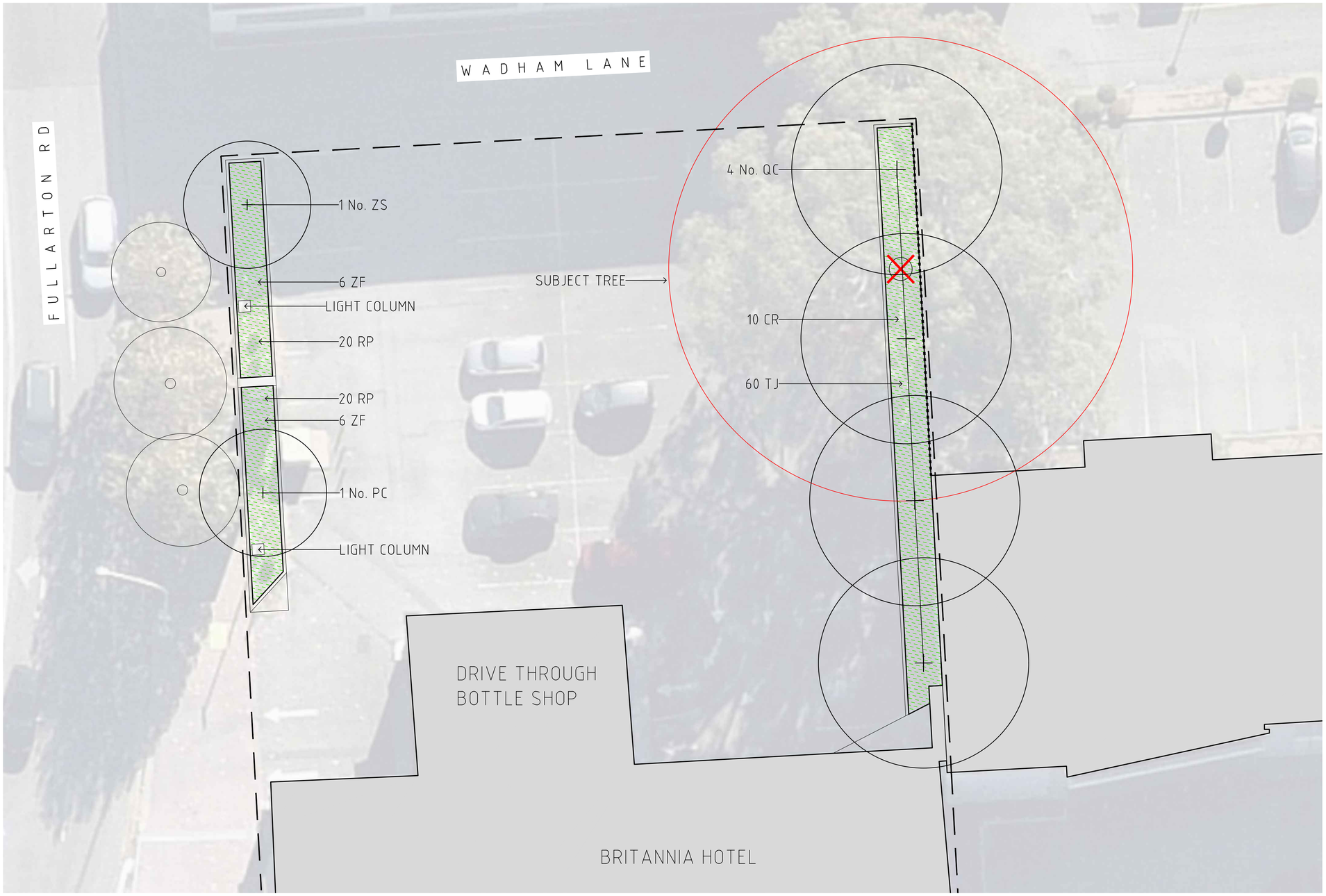
## 6.0 RECOMMENDATIONS

In its current situation, I am supportive of any development application to remove the subject tree.

I could only support the retention of the tree if the target area on the site (currently approximately 12 metres radius from the center of the tree, but likely to increase in size over time with ongoing growth of the tree) is significantly modified to be of low use (requiring the removal of at least 8 x carparks at the Britannia Hotel and 3 x carparks at 37-39 Wadham Lane), *or* if under-canopy, overhead protective structures are constructed over the whole of the target area. Both of these alternative solutions may not be practical considering the existing site constraints.

I thank you for the opportunity to provide this arboricultural assessment and report.
If you require further information or clarification please contact me for assistance.

Dean Nicolle
OAM, BAppSc Natural Resource Management, BSc Botany (Hons), Ph.D




## LEGEND

NEW

NEW TREE

PLANTING

EXISTING

EXISTING TREE

TREE FOR DEMOLITION

## TREE SCHEDULE

| CODE | BOTANIC NAME | SPACING | SIZE | QTY |
|---|---|---|---|---|
| PC | Pistacia chinensis | AS SHOWN | 45L | 1 |
| QC | Quercus cerris | AS SHOWN | 45L | 4 |
| ZS | Zelkova serrata | AS SHOWN | 45L | 1 |

## PLANT SCHEDULE

| CODE | BOTANIC NAME | SPACING | SIZE | QTY |
|---|---|---|---|---|
| CR | Cycas revoluta | 1/m$^2$ | 150mm | 18 |
| RP | Rosmarinus officinalis prostratus | 3/m$^2$ | 150mm | 40 |
| TJ | Trachelospermum jasminoides | 3/m$^2$ | 150mm | 60 |
| ZF | Zamia furfuracea | 1/m$^2$ | 150mm | 12 |

## NOTES

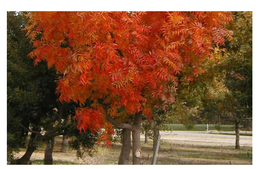
EXISTING SERVICES
THE CONTRACTOR MUST LOCATE AND MARK ALL UNDERGROUND SERVICES BEFORE COMMENCING WORK ON SITE.

TREE PLANTING
PREPARE TREE HOLES TO A MINIMUM SIZE OF THE DEPTH OF THE ROOTBALL x 1m WIDE AND BREAK THE SUBGRADE TO A MINIMUM DEPTH OF 200MM BELOW. TAKE PARTICULAR CARE TO BREAK UP ANY GLAZING TO SIDES OF TREE HOLE. FINISH THE ROOTBALL LEVEL WITH THE FINAL SURROUNDING SOIL LEVEL AND BACKFILL THE PLANTING HOLE WITH SITE TOPSOIL BLENDED WITH 20% ORGANIC MIX. PROVIDE A 1m DIAMETER MULCHED WATERING BOWL TO THE BASE OF THE TREE. STAKE TREES WITH 2No. 2500x50x50 HARDWOOD STAKES AND TIE WITH 50mm HESSIAN TIES SECURELY STAPLED TO THE STAKES. ENSURE STAKES AND TIES REMAIN CLEAR OF BRANCHES, FOLIAGE AND ROOTBALL.

PLANTING BEDS
CULTIVATE EXISTING GROUND TO A MINIMUM DEPTH OF 300 MM AND PLACE 300MM IMPORTED 'ORGANIC MIX'. PLACE PLANTS IN THE CENTRE OF THE PLANTING HOLE AND FINISH THE TOP OF THE ROOT BALL LEVEL WITH THE FINISHED SURFACE OF THE SURROUNDING SOIL. APPLY TERRACOTTEM FERTILISER TO MANUFACTURERS RATES AT TIME OF PLANTING AND AFTER PLANTING PLACE A 100MM MINIMUM DEPTH OF COTTAGE MULCH. THOROUGHLY WATER PLANTS BEFORE AND IMMEDIATELY AFTER PLANTING, AND AS REQUIRED TO MAINTAIN HEALTH AND VIGOUR. AVERAGE 2 PLANTS/M$^2$

IRRIGATION
PROVIDE AN AUTOMATIC IN-LINE DRIP IRRIGATION SYSTEM TO ALL PLANTING BEDS AND TREES.
DRIP IRRIGATION SPECIFIED AS NETAFIM TECHLINE 16 POLY TUBE 1.6Lph @ 0.5M SPACINGS OR SIMILAR APPROVED.
FOR ALL TREE PLANTING INSTALL AT BASE OF TREE 4No 4Lph PC DRIP EMITTERS ON 13MM POLY LOOP (OR INLINE EQUIVALENT).
ALL POLY TUBING TO BE LAID ON SURFACE AND COVERED WITH MULCH.
PROVIDE BACKFLOW PREVENTION, AUTOMATIC CONTROLLER AND OTHER DEVICES AS REQUIRED.

***Zelkova serrata***
Japanese Elm
Height: 14m
Width: 10m



***Pistacia chinensis***
Chinese Pistachio
Height: 8-10m

***Quercus cerris***
*Turkey Oak*
Height: 12-18m

***Cycas revoluta***
Sago Palm
Height: 3m
Width: 2m

***Trachelospermum jasminoides***
Star Jasmine
Height: 0.4m
Width: 3-6m

***Zamia furfuracea***
Cardboard Palm
Height: 1m
Width: 1.5-2m

***Rosmarinus officinalis prostratus***
Rosemary
Height: 1.5m
Width: 1.2-1.5m

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| oxigen | Project<br>**BRITANNIA HOTEL** | Drawing Title<br>**SITEWORKS** | 1:100 (A1), 1:200 (A3)<br>0 1 2 3 4 5m N | Client<br>**HILDITCH LAWYERS** | Project number<br>**22.022** | Revision<br>**A** | Date<br>**19.07.22** |

# ENVIRONMENT, RESOURCES AND DEVELOPMENT COURT OF SOUTH AUSTRALIA



# DITARA PTY LTD v THE CORPORATION OF THE CITY OF NORWOOD PAYNEHAM & ST PETERS ASSESSMENT MANAGER

**[2022] SAERDC 19**

**Judgment of His Honour Judge Durrant and Commissioner Dyer**

**21 December 2022**

## ENVIRONMENT AND PLANNING - ENVIRONMENTAL PLANNING - DEVELOPMENT CONTROL

A falling tree limb damaged four parked cars - refusal to permit removal - whether risk of limb failure unacceptable - whether remedial measures available to mitigate risk - whether removal justified.

Held: The appellant has not justified removal of the tree. Appeal dismissed.

*Planning, Development and Infrastructure Act 2016* (SA); *Planning Development and Infrastructure (General) Regulations, 2017* (SA); *State Heritage Places Act, 1993* (SA), referred to.
*Lacey v City of Burnside* [2008] SAERDC 75; *Scott v Numurkah Corporation* [1954] HCA 14; (1954) CLR 300; *Goode v City of Burnside* [2009] SAERDC 5, considered.

**Appellant: DITARA PTY LTD Counsel: MR B HAYES KC - Solicitor: HILDITCH LAWYERS**

**Respondent: THE CORPORATION OF THE CITY OF NORWOOD PAYNEHAM & ST PETERS ASSESSMENT MANAGER Counsel: MR D BILLINGTON - Solicitor: NORMAN WATERHOUSE**

**Hearing Date/s: 19/09/2022, 26/09/2022**

**File No/s: ERD-22-2**

**B**

**DITARA PTY LTD v THE CORPORATION OF THE CITY OF NORWOOD PAYNEHAM & ST PETERS ASSESSMENT MANAGER**
**[2022] SAERDC 19**

**THE COURT DELIVERED THE FOLLOWING JUDGMENT:**

1 The canopy of a River Red Gum tree in Norwood covers in part the car parks of the Britannia Hotel and an office building. On Melbourne Cup Day 2021, a large limb of the tree fell damaging several cars in the hotel car park.[1]

2 The appellant owner of the hotel has appealed the refusal by the respondent to allow removal of the tree.[2]

3 This appeal requires our assessment of the risk posed by the tree and the reasonableness of available remedial measures, other than removal.[3]

## The hearing

4 To enable our understanding and to follow and apply the evidence, a view was undertaken of the car parks, the tree and surrounding properties.[4] http://www.austlii.edu.au/cgi-bin/viewdoc/au/cases/sa/SAERDC/2022/11.html - fn8

5 The evidence at trial was comprised of documents, written and oral expert evidence from Dr Dean Nicolle, Mr James Hayter and Mr Shane Selway and oral evidence from a director of the appellant Mr Chris Angelopoulos.[5]

## Established Facts

6 We find the following to have been established.

7 The appellant has owned and operated the Britannia Hotel at 1 Kensington Road Norwood since the mid-1990s.[6] The hotel comprises the usual elements expected of licensed premises, including a drive through bottle shop and car park. The hotel is a designated State Heritage Place.[7]

8 An office building fronts 39 Clarke Street to the east and its rear carpark abuts the Britannia car park.

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1 1 Kensington Road, Norwood.
2 Originating Application- Appeal against Administrative Decision (FDN1); *Planning, Development and Infrastructure Act, 2016*, s 202(1)(b); Exhibit R17, [70]- [71].
3 Planning and Design Code Regulated and Significant Tree Overlay PO 1.3(a) and PO 1.3(b).
4 *Scott v Numurkah Corporation* [1954] HCA 14; (1954) 91 CLR 300, [313].
5 Exhibits A1, A2, A3, R6, R7 and R8.
6 T32.8-10.
7 *State Heritage Places Act 1993*.

9 The base of the tree, located on the boundary between the car parks about 10m south of Wadham Lane, is dissected by a Colorbond fence. The tree is of relatively uniform shape and is visible, broken by other trees and buildings, from Fullarton Rd, Wakefield Rd, Dequetteville Tce, and Kensington Rd.[8]

10 In the Britannia car park, the western canopy of the tree is over eight 90-degree car park spaces and part of a dual aisle which provides access to the drive-through bottle shop[9] and southern entry. The car park is busiest Tuesday to Friday.[10] On 39 Clarke St, the eastern canopy overhangs an aisle and three car park spaces.

11 At 3:51pm on Melbourne Cup Day 2021, a large limb fell damaging four cars in the Britannia car park.[11] Since, spaces under the canopy have been cordoned to prevent use. Notwithstanding, patrons have moved the cordon to park.[12]

## Relevant legislation

12 A 'regulated tree' is:[13]

(a) a tree, or a tree within a class of trees, declared to be regulated by the regulations (whether or not the tree also constitutes a significant tree under the regulations); or

(b) a tree declared to be a significant tree, or a tree within a stand of trees declared to be significant trees, under the Planning and Design Code (whether or not the tree is also declared to be a regulated tree, or also falls within a class of trees declared to be regulated trees, by the regulations);

13 Regulations prescribe the criteria for identification of significant trees:[14]

3F—Regulated and significant trees

(1) Subject to this regulation, the following are declared to constitute classes of regulated trees for the purposes of paragraph (a) of the definition of regulated tree in section 3(1) of the Act, namely trees within a designated regulated tree overlay that have a trunk with a circumference of 2 m or more or, in the case of trees that have multiple trunks, that have trunks with a total circumference of 2 m or more and an average circumference of 625 mm or more, measured at a point 1 m above natural ground level.

(2) Subject to this regulation—

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8 Exhibit A2 at [4.0].
9 The bottle shop drive through has one way access entering via the car park from Wadham Lane and exiting to Fullarton Road.
10 T32.10-12.
11 Exhibit A5.
12 T33.37.
13 *Planning, Development and Infrastructure Act 2016*, s 3.
14 *Planning, Development and Infrastructure (General) Regulations 2017*, r3F.

(a) a prescribed criterion for the purposes of paragraph (b) of the definition of significant tree in section 3(1) of the Act is that a regulated tree under subregulation (1) has a trunk with a circumference of 3 m or more or, in the case of a tree with multiple trunks, has trunks with a total circumference of 3 m or more and an average circumference of 625 mm or more, measured at a point 1 m above natural ground level; and

(b) regulated trees under subregulation (1) that are within the prescribed criterion under paragraph (a) are to be taken to be significant trees for the purposes of the Act.

(3) For the purposes of subregulations (1) and (2), the measurement of the circumference of the trunks of a tree with multiple trunks is to be undertaken on the basis of the actual circumference of each trunk and without taking into account any space between the trunks.

14 The subject land is within the Suburban Business Zone.[15] The State Heritage Place and Heritage Adjacency Overlays apply to maintain the heritage and cultural value of the original hotel building and its setting and provide for referral to the Minister for direction.[16] Relevant Zone and Overlay provisions and General Development Policies provide context and have been considered.[17] The most pertinent is the Regulated and Significant Trees Overlay:

| Desired Outcome | |
|---|---|
| DO 1 | Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss. |

| Performance Outcome | Deemed-to-Satisfy Criteria/Designated Performance Feature |
|---|---|
| **Tree Retention and Health** | |
| PO 1.2 Significant trees are retained where they:<br>(a) make an important contribution to the character or amenity of the local area<br>(b) are indigenous to the local area and are listed under the *National Parks and Wildlife Act 1*972 as a rare or endangered native species<br>(c) represent an important habitat for native fauna | DTS/DPF 1.2<br><br>None applicable |

[15] The relevant Code is Version 2021.16 operative between 4 November 2021, and 15 December 2021.

[16] The Minister is the Minister responsible for the administration of the *State Heritage Places Act, 1993*. State Heritage Place Overlay, Heritage Adjacency Overlay.

[17] Generally applicable Overlays include Airport Building Heights (Regulated), Future Road Widening, Hazards (Flooding – General), Major Urban Transport Routes, Traffic Generating Development, and Prescribed Wells Area.

| | |
|---|---|
| (d) are part of a wildlife corridor of a remnant area of native vegetation<br>(e) are important to the maintenance of biodiversity in the local environment and/or<br>(f) form a notable visual element to the landscape of the local area | |
| PO 1.3 A tree damaging activity not in connection with other development satisfies (a) and (b)<br>(a) tree damaging activity is only undertaken to:<br>(i) remove a diseased tree where its life expectancy is short<br>(ii) mitigate an unacceptable risk to public or private safety due to limb drop or the like<br>(iii) rectify or prevent extensive damage to a building of value as comprising any of the following:<br>A. a Local Heritage Place<br>B. a State Heritage Place<br>C. a substantial building of value<br>and there is no reasonable alternative to rectify or prevent such damage other than to undertake a tree damaging activity<br>(iv) reduce an unacceptable hazard associated with a tree within 20m of an existing residential, tourist accommodation or other habitable building from bushfire<br>(v) treat disease or otherwise in the general interests of the health of the tree and/or<br>(vi) maintain the aesthetic appearance and structural integrity of the tree<br>(b) In relation to a significant tree, tree-damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective | DTS/DPF 1.3<br><br>None applicable |

## Expert Evidence

15 In 2017, botanist Dr Nicolle advised the appellant that removal of the tree was not warranted.[18] Following the failure, Dr Nicolle re-inspected the tree and compared measurements taken in 2017:[19]

| Year | Circumference (m) | Height (m) | Spread (m) |
|---|---|---|---|
| 2022 | 3.7 | 24.5 | 23.25 |
| 2017 | 3.15 | 18 | 21 |

[18] B.Ap.Sc (1995); PhD (2008); Exhibit A1 p 5 at [3.0].

[19] Relying upon measurements taken by Mr Palamountain at the time Dr Nicole had remeasured the tree just prior to the hearing using a laser hysometer and determined the increase in the size of the tree in the intervening period to be 36% taller, the canopy 11% wider and the truck 17.5% larger. T62.29-31 and T64.8-22.

16 Dr Nicolle assessed the tree as being of above average health and moderate to high vigour with a larger canopy and longer, more end-weighted and vigorous branches. He noted borer activity and large heartwood galleries and pupal chambers in the failure scar and pupal cell entry in other large branches.[20]

17 While Dr Nicolle considered the tree might live for a further 30 years, in his opinion, it had exceeded its useful life because of unacceptable and unmanageable risk of further failure.[21] Particularly, he noted the failed limb had been healthy and had failed at an internodal point during non-extreme weather due to over-extension and excessive end weight. He reported that "*in the case of mature Eucalyptus camaldulensis trees in the Adelaide Region, it is often the healthiest and most vigorous trees that are the most prone to sudden limb failures, due to their rapid growth of end weighted branches*".[22]

18 Dr Nicolle considered borers had contributed to and exacerbated the failure by weakening the limb structure.[23] He was particularly concerned by the relatively unusual presence of larger 3cm galleries formed by wood moth borers.[24] In that respect, it was put to Dr Nicolle there would be no material difference in the strength of a limb, so long as the timber shell as a ratio of the cross section was greater than 30%. He did not agree.[25]

19 By application of PO 1.3(a)(ii), Dr Nicolle considered the tree represented a moderate and increasing risk to safety that was unacceptable.[26] While he considered whole of tree failure unlikely, Dr Nicolle assessed future branch failure to be of moderate risk, albeit with an unknown frequency.[27] In coming to that view, he disavowed any industry tree risk assessment tool, preferring a method he had developed to assess the likelihood and consequence of failure.

20 The risk to safety in this case, opined Dr Nicolle, was associated with both an increased likelihood of branch failure and the high and public use of the under-canopy site.[28] Further, he considered the unusually diseased state of the tree due to borer activity, and the resultant relatively large diameter holes and galleries in the wood of several primary and secondary branches, to be of particular importance.

21 While alternatives to removal were available – including establishment of an exclusion zone, under canopy protective structures, pruning and branch

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[20] Exhibit A1 p 9 at [4.0].
[21] Exhibit A1 pp 8-9 at [4.0], he later revised the vigour to moderate T75.1-7.
[22] Exhibit A1 at pp 9 and 10 at [4.0].
[23] Exhibit A1 pp 10 and 11 at [4.0] and T108.12-15.
[24] T103.16-21; T97.1-9; For consistency the larger gallery borers were referred to as wood moth borers.
[25] T108.2.
[26] Exhibit A1 p 26 at [5.2].
[27] Exhibit A1 pp10 and 11 at [4.0].
[28] Exhibit A1 at [6] at 2.0; T119.11-23.

cabling – Dr Nicolle said no such measures were viable.[29] He calculated a target area of 616m$^2$ across both properties as an effective exclusion zone, increasing to up to 1257m$^2$ following future growth. Any under-canopy protection option, said Dr Nicolle, would need to cover the entirety of that target zone and was too large an area to protect and therefore of questionable practicability.[30] That would sterilise a number of car parks within the target area and render some others to be of limited use.

22 Dr Nicolle considered the number of over-extended and end-weighted branches without internal pruning points, along with some structurally deficient branches due to borer activity, rendered the canopy unable to be viably maintained as the pruning required to achieve an acceptable level of risk reduction would be so severe as to constitute effective lopping. That would, he considered, significantly reduce landscape and biodiversity value and promote epicormic regrowth. While that would improve amenity, epicormic regrowth would increase the long-term risk to safety due to weaker branch junctions.[31]

23 As for cabling, Dr Nicolle considered over-extension and end-weighting meant the majority of branches would require cabling. As the tree was vigorous, frequent re-positioning of the cables would be required to retain effectiveness. Of most concern was the consequence of the relatively brittle wood of the species, making it prone to point fractures. That meant failure of one cabled branch could cause the structural failure of multiple cable attached branches, rendering that approach ineffective.[32]

24 Mr Shane Selway, an arborist, conducted a climbing assessment.[33] He considered the tree to be in good basic health with typical foliage density slightly reduced within the upper canopy, a moderate amount of small diameter deadwood and epicormic growth, and some wounding within its form. He considered tree function to be normal with no indication of health decline or tree stress. He also identified wounds attributable to longhorn and wood moth borers[34] and estimated the useful life expectancy of the tree, considering among other matters risk, amenity, site conditions and health, to be 10-20 years.[35]

25 Mr Selway said the failed branch had been well attached to the main stem and had failed from a height of 6m. Although three wood borer galleries were visible in the failure stub, Mr Selway said he observed no evidence of internal hollowing. He noted signs of brown rot fungus and a wood pattern to suggest an

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29 Exhibit A1 at [28]-[29] at 5.2;
30 Exhibit A1 at [28] at 5.2; Exhibit A1, [35] at 7.0; T84.8-29.
31 Exhibit A1 at [28] at 5.2; Epicormic meaning reshooting out of hard wood.
32 Exhibit A1 at [28]-[29] at 5.2.
33 Exhibit R6 at [5], [6], [11].
34 Exhibit R6 at [11]- [12].
35 Exhibit R6 at [11].

historical crack on the underside of the failed limb; caused by excessive uploading caused by wind pushing the branch upward.[36] Mr Selway said substantial elongation of the failed branch was the likely reason for its failure.[37]

26 Mr Selway had undertaken a push wire test on some of the borer galleries and had compared the size of the galleries to the surrounding wall wood in the failure stub.[38] He said it was established that a wall thickness ratio of 30-35% or greater meant a branch would withstand failure.[39] By his measurement, a cavity of 30 mm could cause branch failure in a diameter of 45 mm or less. Mr Selway considered improbable any contribution to the failure due to wood borers.[40]

27 Mr Selway also calculated the cavity angle opening sufficient to cause branch failure as being over 120° and said that branches or limbs with wounds and cavities in the tree had angles of 60° or less.[41] Mr Selway acknowledged other factors – tree species and wood properties, health, structure, height, sail area, the proportion of thin walls and exposure to prevailing winds – would also contribute to failure.

28 Mr Selway used the industry recognised TRAQ model when undertaking his risk assessment. That resulted in the possible likelihood of medium-large diameter branch failure and a probable likelihood for small diameter branches.[42] By correlation of the likelihood of failure against the likelihood of impact with a target to produce a pre-determined value,[43] the model resulted in an unlikelihood of medium-large diameter branch impact with a target and a somewhat likelihood of small diameter branch impact with a target. Likelihood against consequence, for both a minor and moderate-large branch strike to people, cars and buildings ratings, was in the view of Mr Selway low risk in each of those scenarios.[44]

29 Mr Selway elaborated the main difference with Dr Nicolle to be methodological; Dr Nicolle did not separate the consequence from target frequency and TRAQ did.[45] Mr Selway opined that even if he assessed risk to be moderate – the rating achieved if Dr Nicolle's failure likelihood was input – that risk would still be acceptable because it would be manageable.[46]

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[36] Exhibit R6 at [33]- [34].
[37] Exhibit R6 at [37].
[38] T137.29-38; Exhibit R6 at [40]- [41].
[39] Exhibit R6 at [40].
[40] T184.12-13; Exhibit R6 at [38]-[39] and [41].
[41] Exhibit R6 at [41].
[42] TRAQ's defined parameters for probability of failure are imminent, probable, possible or improbable.
[43] TRAQ defines a target to be a person or a substantial structure of value and the defined parameters for likelihood of impacting a target as very low, low, medium or high.
[44] Likelihood in this instance is the likelihood of failure and impact. TRAQ's defined parameters for consequence are negligible, minor, significant severe. Exhibit R6 at [48]. T180.5-21.
[45] T180.5-21.
[46] T194.9-16; T195.4-15.

30 By elaboration, although Mr Selway maintained that no pruning (or any other treatment) was immediately required because the tree was low risk, he said pruning would maintain acceptably low levels of risk.[47] Effective pruning could conform AS 4373-2007[48] if his tree pruning plan to retain height of and canopy shape was carried out.[49] The opportunity for pruning, in his view, therefore rendered other mitigation treatments excessive and inappropriate.[50]

31 Specifically, Mr Selway said cabling was not warranted given the present low risk and the availability other more effective management options. Correspondingly, while establishment of a target protection zone or exclusion zone could adequately mitigate risk, the construction of a large structure, or the relocation of car parks, would be unreasonable in the circumstances.[51]

32 Landscape architect Mr Hayter said the tree made an important contribution to character and amenity and formed a notable visual element.[52] He considered the pruning as recommended by Dr Nicolle would result in an "*unattractive and out of proportion* [tree] *in respect to the size of the trunk and the canopy*."[53]

33 Mr Hayter said cabling would have no impact on the visibility of the tree and the landscape perspective would be unaffected. As for catch netting, he likewise considered that would provide some limited views from Fullarton Road looking east but generally would have no impact from within the locality.[54]

34 Mr Hayter conceded shortcomings in his assessment, notably a discrepancy between the loss of canopy in Dr Nicolle's images and his. He accepted his images were an approximation only.[55] While he had not had time to analyse the more precise pruning recommended by Mr Selway, he thought that approach would likely reduce the overall height and bulk of the tree and diminish its visibility and contribution to the character of the local area. While he was unable to quantify or qualify such diminution, Mr Hayter conceded if the tree remained visible, above two-storeys, its amenity influence would not dramatically alter.[56]

35 Finally, Mr Hayter provided a planting plan for numerous exotic species, should the tree be removed.[57]

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47 T139.13-30; T157.36-38 and T158.1-6.
48 Exhibit R6 at [49] and [50].
49 Exhibit R7.
50 Exhibit R6 at [50].
51 Exhibit R6 at [50].
52 T42.7-16.
53 Exhibit A2 at [6.0].
54 T49.1-14.
55 T50.9-27.
56 T43.25-38 and T44.2-6; T45.3-10; T48.19-22.
57 T52.19-21.

**Discussion**

36 We find the tree is a *'significant tree'* for the purposes of the Act and that no exemptions apply to it.[58] We also find the tree damaging activity proposed by the appellant is a form of development to be performance assessed.[59]

37 To determine this appeal three questions must be answered. Is the significant tree worthy of retention? Is the intended tree damaging activity warranted? Are remedial treatments or measures available and reasonable?

38 PO 1.2 requires a significant tree be retained where it makes an important contribution to the character or amenity of the local area and forms a notable visual element to the landscape.

39 Both parties contended the tree meets these provisions. We agree and find the tree worthy of retention.

40 PO 1.3 sets out circumstances under which tree damaging activity may occur if unconnected with other development. It provides a significant tree may be removed to mitigate unacceptable risk to public or private safety.[60]

41 Dr Nicolle qualitatively assessed the risk posed by the tree by considering the correlation between the propensity of the tree to drop limbs (including in the context of its species and biology) and the consequent impact to persons.[61] He took account of the numerous over-extended end-weighted branches, the damage by borers and the tree's characteristics in concluding it will continue to drop significant limbs. He gave weight to the high level of human activity associated with publicly accessible car parks and driveways beneath a canopy and assessed the tree as an increasing and unacceptable moderate risk.

42 Mr Selway used the TRAQ model to assess a low risk. He acknowledged models such as TRAQ are sensitive to difference in inputs,[62] for example, an assumed (as per Dr Nicolle) chance of a medium or larger branch failure of probable would result in a moderate risk.

43 In this case, the conditions under which the limb failed in November 2021, were not extreme. Further, there was no evidence of a prior history of medium or large diameter branch failure. As Mr Angelopoulos said, patrons continue to park under the tree notwithstanding efforts to prevent it, given the nature of the

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58 *Planning, Development and Infrastructure (General) Regulations, 2016*.

59 *Planning, Development and Infrastructure Act, 2016*, ss 105 and 107.

60 PO 1.3(a) (ii).

61 Dr Nicolle's retention value model, that was the subject of much evidence is not of itself an assessment of risk. It does not assist the Court to determine the risk posed by the tree and it has not influenced our findings.

62 T168.2 and *Goode v City of Burnside* [2007] SAERDC 5; *Lacey v City of Burnside* [2008] SAERDC 75.

premises and limited car parking in the area. Both experts acknowledged the nature of a car park means congregation under the growing canopy. That is exacerbated in this case by principal access and exit points via the car park.

44 Dr Nicolle holds impressive academic qualifications and has botanical expertise concerning eucalypts one species of which is the River Red Gum. He had also examined the tree in 2017 and reviewed and modified his conclusions based on further facts. In doing so, he gave significant weight to the risk to the safety of persons.

45 In assessing the footage of the failure event, we have not reasoned that any future failure will be to an equivalent extent. We also have kept in mind that the pruning recommended by Dr Nicolle in 2017 was not done and may have avoided that event. We do however prefer his approach to the setting of the tree when compared with a similar tree located in different circumstances.

46 Particularly, we accept the opinion of Dr Nicolle that often the most healthy and vigorous River Red Gums are most prone to sudden limb failure even in calm conditions, due to their rapid growth of end-weighted branches. We also accept his opinion that the presence of wood moth borer in the tree is unusual and poses an additional (if unquantified) risk in relation to limb drop.

47 In our view, Mr Selway tended to frame his assessment of risk by reference to whether the risk could be managed. He sometimes conflated questions 2 and 3. Mr Selway initially disregarded borer activity, likely influenced by his initial brief, saying he thought they were only longhorn (phoracantha) beetles; a beetle usually found in River Red Gums and not something that warrants any real assessment.[63]

48 In respect of risk, we prefer the approach of Dr Nicolle and find the tree poses at least a moderate risk to private and public safety that is increasing, given its potential impact to persons using or moving through the two car parks. Accordingly, we find removal is warranted.

49 That leaves the third question; whether all reasonable remedial treatments and measures can be determined to be ineffective. Alternatives to removal were identified by the experts as cabling, implementation of an exclusion zone, construction of an under-canopy structure, and pruning.

50 Cabling would be ineffective given the wood structure of River Red Gums and the tendency for point fractures. Further, the number of over-extended and end weighted branches and the vigorous nature of the tree would require the majority of branches to be cabled and for the cabling to be regularly repositioned.

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[63] T155.5-18, see Exhibit R17 at p32.

51 In respect of either an exclusion zone or the construction of an under-canopy structure, both experts agreed this would effectively mitigate against the risk of branch failure but be unreasonable because the subject land operated as offices and a hotel.

52 Both businesses rely upon on-site car parking under the canopy. A reduction would likely have either off-site impacts with cars parked on the surrounding streets or patronage to the businesses may reduce due to car parking constraints. The size of the exclusion zone might also lead to reconfigured access, including to the bottle-shop. We consider the construction of a canopy covering an area of between 616m$^2$ and 1257m$^2$ would be an extreme and unreasonable response. We find neither an exclusion zone nor an under-canopy structure to be reasonable treatments in this case, due the impact on commercial land uses.

53 The experts were divided as to the efficacy of pruning. We found Mr Selway in that respect particularly helpful and prefer his approach. His practical experience in similar situations lends weight to his assessment and he prepared a thoughtful pruning plan he considered would meet relevant standards, retain overall height and canopy form and manage risk. Mr Hayter accepted the tree might be appropriately pruned so that visibility and amenity is not unduly compromised.

54 On the other hand, Dr Nicolle thought the only pruning option was to lop the tree, thereby resulting in a loss of amenity and subsequent epicormic regrowth and additional risk of weak attachment points. We have kept in mind that in 2017, the appellant was advised maintenance pruning should be carried out and we are not able to assess what benefit that would have provided.

55 In all the circumstances, we find the appellant has not demonstrated tree pruning would be ineffective.

**Findings**

56 We find:

- the tree is a significant tree that warrants protection as that it makes an important contribution to the character and amenity of the local area and forms a notable visual element to the landscape of the local area;
- the tree poses an unacceptable risk to public and private safety due to limb drop;
- pruning is a reasonable remedial treatment, and the appellant has not demonstrated that would be ineffective; and
- the tree does not warrant removal in the first instance.

**Decision**

57 The appeal is dismissed and there will be an order to that effect.

**Address:** 1 KENSINGTON RD NORWOOD SA 5067

Click to view a detailed interactive in SAILIS

To view a detailed interactive property map in SAPPA click on the map below


## Property Zoning Details

**Zone**

Suburban Business

**Overlay**

Airport Building Heights (Regulated) *(All structures over 45 metres)*
Future Road Widening
Hazards (Flooding - General)
Major Urban Transport Routes
Prescribed Wells Area
Regulated and Significant Tree
State Heritage Place *(6023)*
Traffic Generating Development

**Local Variation (TNV)**

Maximum Building Height (Levels) *(Maximum building height is 3 levels)*

## Selected Development(s)

Tree-damaging activity

**This development may be subject to multiple assessment pathways. Please review the document below to determine which pathway may be applicable based on the proposed development compliances to standards.**
*If no assessment pathway is shown this mean the proposed development will default to performance assessed. Please contact your local council in this instance. Refer to Part 1 - Rules of Interpretation - Determination of Classes of Development*

## Property Policy Information for above selection

# Tree-damaging activity - Code Assessed - Performance Assessed

# Part 2 - Zones and Sub Zones

# Suburban Business Zone

## Assessment Provisions (AP)

Desired Outcome (DO)

| Desired Outcome | |
|---|---|
| DO 1 | A business and innovation precinct that includes a range of emerging businesses which have low level off-site impacts. Residential development within the area is subordinate to employment uses and generally includes medium-density housing designed to complement and not prejudice the operation of existing businesses. |
| DO 2 | A zone characterised by low-rise buildings with additional height in well serviced and accessible locations. |

## Table 5 - Procedural Matters (PM) - Notification

The following table identifies, pursuant to section 107(6) of the *Planning, Development and Infrastructure Act 2016*, classes of performance assessed development that are excluded from notification. The table also identifies any exemptions to the placement of notices when notification is required.

### Interpretation

Notification tables exclude the classes of development listed in Column A from notification provided that they do not fall within a corresponding exclusion prescribed in Column B.

Where a development or an element of a development falls within more than one class of development listed in Column A, it will be excluded from notification if it is excluded (in its entirety) under any of those classes of development. It need not be excluded under all applicable classes of development.

Where a development involves multiple performance assessed elements, all performance assessed elements will require notification (regardless of whether one or more elements are excluded in the applicable notification table) unless every performance assessed element of the application is excluded in the applicable notification table, in which case the application will not require notification.

| Class of Development<br><br>(Column A) | Exceptions<br><br>(Column B) |
|---|---|
| 1. Development which, in the opinion of the relevant authority, is of a minor nature only and will not unreasonably impact on the owners or occupiers of land in the locality of the site of the development. | None specified. |
| 2. Any kind of development where the site of the development is **not** adjacent land to a site (or land) used for residential purposes in a neighbourhood-type zone. | Except any of the following:<br><br>1. the demolition of a State or Local Heritage Place<br>2. the demolition of a building (except an ancillary building) in a Historic Area Overlay. |

| | |
|---|---|
| 3. Any development involving any of the following (or of any combination of any of the following):<br>(a) advertisement<br>(b) air handling unit, air conditioning system or exhaust fan<br>(c) ancillary accommodation<br>(d) building work on railway land<br>(e) carport<br>(f) community facility<br>(g) dwelling<br>(h) fence<br>(i) outbuilding<br>(j) private bushfire shelter<br>(k) residential flat building<br>(l) shade sail<br>(m) solar photovoltaic panels (roof mounted)<br>(n) student accommodation<br>(o) swimming pool or spa pool<br>(p) verandah<br>(q) water tank. | Except development that exceeds the maximum building height specified in Suburban Business Zone DTS/DPF 3.1 or does not satisfy any of the following:<br>1. Suburban Business Zone DTS/DPF 3.2<br>2. Suburban Business Zone DTS/DPF 3.3. |
| 4. Any development involving any of the following (or of any combination of any of the following):<br>(a) consulting room<br>(b) office<br>(c) shop. | Except development that exceeds the maximum building height specified in Suburban Business Zone DTS/DPF 3.1 or does not satisfy any of the following:<br>1. Suburban Business Zone DTS/DPF 1.2<br>2. Suburban Business Zone DTS/DPF 3.2<br>3. Suburban Business Zone DTS/DPF 3.3. |
| 5. Any development involving any of the following (or of any combination of any of the following):<br>(a) internal building works<br>(b) land division<br>(c) replacement building<br>(d) temporary accommodation in an area affected by bushfire.<br>(e) tree damaging activity. | None specified. |
| 6. Demolition. | Except any of the following:<br>1. the demolition of a State or Local Heritage Place<br>2. the demolition of a building (except an ancillary building) in a Historic Area Overlay. |

## Placement of Notices - Exemptions for Performance Assessed Development

None specified.

## Placement of Notices - Exemptions for Restricted Development

None specified.

# Part 3 - Overlays

## Regulated and Significant Tree Overlay

### Assessment Provisions (AP)

Desired Outcome (DO)

| Desired Outcome | |
|---|---|
| DO 1 | Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss. |

Performance Outcomes (PO) and Deemed to Satisfy (DTS) / Designated Performance Feature (DPF) Criteria

| Performance Outcome | Deemed-to-Satisfy Criteria / Designated Performance Feature |
|---|---|
| Tree Retention and Health | |
| PO 1.1<br>Regulated trees are retained where they:<br>(a) make an important visual contribution to local character and amenity<br>(b) are indigenous to the local area and listed under the *National Parks and Wildlife Act 1972* as a rare or endangered native species<br>and / or<br>(c) provide an important habitat for native fauna. | DTS/DPF 1.1<br>None are applicable. |
| PO 1.2<br>Significant trees are retained where they:<br>(a) make an important contribution to the character or amenity of the local area<br>(b) are indigenous to the local area and are listed under the *National Parks and Wildlife Act 1972* as a rare or endangered native species<br>(c) represent an important habitat for native fauna<br>(d) are part of a wildlife corridor of a remnant area of native vegetation<br>(e) are important to the maintenance of biodiversity in the local environment<br>and / or<br>(f) form a notable visual element to the landscape of the local area. | DTS/DPF 1.2<br>None are applicable. |
| PO 1.3 | DTS/DPF 1.3 |

| | |
|---|---|
| A tree damaging activity not in connection with other development satisfies (a) and (b):<br><br>(a) tree damaging activity is only undertaken to:<br>(i) remove a diseased tree where its life expectancy is short<br>(ii) mitigate an unacceptable risk to public or private safety due to limb drop or the like<br>(iii) rectify or prevent extensive damage to a building of value as comprising any of the following:<br>A. a Local Heritage Place<br>B. a State Heritage Place<br>C. a substantial building of value<br><br>and there is no reasonable alternative to rectify or prevent such damage other than to undertake a tree damaging activity<br>(iv) reduce an unacceptable hazard associated with a tree within 20m of an existing residential, tourist accommodation or other habitable building from bushfire<br>(v) treat disease or otherwise in the general interests of the health of the tree<br>and / or<br>(vi) maintain the aesthetic appearance and structural integrity of the tree<br><br>(b) in relation to a significant tree, tree-damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective. | None are applicable. |
| PO 1.4<br><br>A tree-damaging activity in connection with other development satisfies all the following:<br><br>(a) it accommodates the reasonable development of land in accordance with the relevant zone or subzone where such development might not otherwise be possible<br>(b) in the case of a significant tree, all reasonable development options and design solutions have been considered to prevent substantial tree-damaging activity occurring. | DTS/DPF 1.4<br><br>None are applicable. |
| Ground work affecting trees | |
| PO 2.1<br><br>Regulated and significant trees, including their root systems, are not unduly compromised by excavation and / or filling of land, or the sealing of surfaces within the vicinity of the tree to support their retention and health. | DTS/DPF 2.1<br><br>None are applicable. |
| Land Division | |
| PO 3.1<br><br>Land division results in an allotment configuration that enables its subsequent development and the retention of regulated and significant trees as far as is reasonably practicable. | DTS/DPF 3.1<br><br>Land division where:<br><br>(a) there are no regulated or significant trees located within or adjacent to the plan of division |

| | |
|---|---|
| | or<br>(b) the application demonstrates that an area exists to accommodate subsequent development of proposed allotments after an allowance has been made for a tree protection zone around any regulated tree within and adjacent to the plan of division. |

### Procedural Matters (PM) - Referrals

The following table identifies classes of development / activities that require referral in this Overlay and the applicable referral body. It sets out the purpose of the referral as well as the relevant statutory reference from Schedule 9 of the Planning, Development and Infrastructure (General) Regulations 2017.

| Class of Development / Activity | Referral Body | Purpose of Referral | Statutory Reference |
|---|---|---|---|
| None | None | None | None |

## State Heritage Place Overlay

### Assessment Provisions (AP)

Desired Outcome (DO)

| Desired Outcome | |
|---|---|
| DO 1 | Development maintains the heritage and cultural values of State Heritage Places through conservation, ongoing use and adaptive reuse consistent with Statements of Significance and other relevant documents prepared and published by the administrative unit of the Public Service that is responsible for assisting a Minister in the administration of the *Heritage Places Act 1993*. |

Performance Outcomes (PO) and Deemed-to-Satisfy (DTS) Criteria / Designated Performance Feature (DPF)

| Performance Outcome | Deemed-to-Satisfy Criteria / Designated Performance Feature |
|---|---|
| Landscape Context and Streetscape Amenity | |
| PO 5.1<br><br>Individually heritage listed trees, parks, historic gardens and memorial avenues retained unless:<br><br>(a) trees / plantings are, or have the potential to be, a danger to life or property<br>or<br>(b) trees / plantings are significantly diseased and their life expectancy is short. | DTS/DPF 5.1<br><br>None are applicable. |

## Procedural Matters (PM) - Referrals

The following table identifies classes of development / activities that require referral in this Overlay and the applicable referral body. It sets out the purpose of the referral as well as the relevant statutory reference from Schedule 9 of the Planning, Development and Infrastructure (General) Regulations 2017.

| Class of Development / Activity | Referral Body | Purpose of Referral | Statutory Reference |
|---|---|---|---|
| Except where:<br>(a) the development is to be undertaken in accordance with a Heritage Agreement under the *Heritage Places Act 1993* or<br>(b) the development is, in the opinion of the relevant authority, minor in nature or like for like maintenance and would not warrant a referral when considering the purpose of the referral<br><br>any of the following classes of development:<br>(a) demolition of internal or external significant building fabric<br>(b) freestanding advertisements, signs and associated structures that are visible from a public street, road or thoroughfare that abuts the State Heritage Place<br>(c) alterations or additions to buildings that:<br>(i) are visible from a public street, road or thoroughfare that abuts the State Heritage Place or<br>(ii) may materially affect the context of a State Heritage Place or<br>(iii) involve substantive physical impact to the fabric of significant buildings;<br><br>(d) new buildings that:<br>(i) are visible from a public street, road or thoroughfare that abuts the State Heritage Place or<br>(ii) may materially affect the context of the State Heritage Place<br><br>(e) conservation repair works that are not representative of 'like for like' maintenance<br>(f) solar panels that are visible from a public street, road or thoroughfare that abuts the State Heritage Place<br>(g) land division<br>(h) the removal, alteration or installation of fencing where visible from a public street, road or thoroughfare that abuts the State Heritage Place | Minister responsible for the administration of the *Heritage Places Act 1993.* | To provide expert assessment and direction to the relevant authority on the potential impacts of development on State Heritage Places. | Development of a class to which Schedule 9 clause 3 item 17 of the Planning, Development and Infrastructure (General) Regulations 2017 applies. |

| | | | |
|---|---|---|---|
| (i) the removal of an individual tree or a tree within a garden or park of identified heritage significance. | | | |

## 8. ERD COURT APPEALS

## 9. OTHER BUSINESS
(Of an urgent nature only)

## 10. CONFIDENTIAL REPORTS

## 11. CLOSURE